```
Program PWSCF v.5.1 starts
     This program is part of the open-source Quantum ESPRESSO suite
     for quantum simulation of materials; please cite
         "P. Giannozzi et al., J. Phys.:Condens. Matter 21 395502 (2009);
          URL http://www.quantum-espresso.org",
     in publications or presentations arising from this work. More details at
     http://www.quantum-espresso.org/quote
     Parallel version (MPI), running on
                                            8 processors
     R & G space division: proc/nbgrp/npool/nimage =
                                                             8
     Waiting for input...
     Reading input from standard input
Warning: card &IONS ignored
Warning: card ION_DYNAMICS = 'BFGS' ignored
Warning: card / ignored
     Current dimensions of program PWSCF are:
     Max number of different atomic species (ntypx) = 10
     Max number of k-points (npk) = 40000
     Max angular momentum in pseudopotentials (lmaxx) = 3
     Atomic positions and unit cell read from directory:
     ./tmp-hetero/A.save/
               file C.pbe-rrkjus.UPF: wavefunction(s) 2S 2P renormalized
     Subspace diagonalization in iterative solution of the eigenvalue problem:
     scalapack distributed-memory algorithm (size of sub-group: 2* 2 procs)
     Parallelization info
     sticks: dense smooth
                                PW
                                                   dense
                                                                        PW
                                        G-vecs:
                                                            smooth
                                                   256124
                                                                      9013
     Min
              1118
                      446
                                119
                                                             64802
     Max
               1119
                         447
                                120
                                                   256141
                                                             64831
                                                                      9030
               8947
                                                  2049049
                        3571
                                955
                                                            518527
     Sum
                                                                     72155
     Generating pointlists ...
     new r_m : 0.0595 (alat units) 1.0721 (a.u.) for type new r_m : 0.0595 (alat units) 1.0719 (a.u.) for type
                                                                 1
                                                                 2
     new r_m : 0.0595 (alat units) 1.0719 (a.u.) for type
     bravais-lattice index =
     lattice parameter (alat) =
                                      18.0060 a.u.
                       = 15167.1375 (a.u.)^3
     unit-cell volume
     number of atoms/cell
                              =
                                           64
     number of atomic types =
number of electrons =
                                            3
                                       256.00
     number of Kohn-Sham states=
                                          154
     kinetic-energy cutoff =
                                      40.0000 Ry
     charge density cutoff =
Exchange-correlation = PE
                                     400.0000 Ry
                               = PBE (1 4 3 4 0)
     celldm(1) = 18.006000 celldm(2) =
                                         0.000000 celldm(3)=
                                                                 3.000000
     celldm(4) = 0.000000 celldm(5) =
                                         0.000000 celldm(6)=
                                                                 0.000000
     crystal axes: (cart. coord. in units of alat)
               a(1) = (1.000000 0.000000
                                                0.000000)
               a(2) = (-0.500000 \quad 0.866025
                                                 0.000000)
```

```
a(3) = (
                      0.000000
                                  0.000000
                                              3.000000)
reciprocal axes: (cart. coord. in units 2 pi/alat)
          b(1) = (1.000000 0.577350 - 0.000000)
          b(2) = (0.000000 1.154701 0.000000)
          b(3) = (0.000000 - 0.000000 0.333333)
PseudoPot. # 1 for C read from file:
./pseudo/C.pbe-rrkjus.UPF
MD5 check sum: 00fb224312de0c5b6853bd333518df6f
Pseudo is Ultrasoft, Zval = 4.0
Generated by new atomic code, or converted to UPF format
Using radial grid of 627 points, 4 beta functions with:
           l(1) =
                   0
           l(2) =
                     0
           l(3) =
                     1
           l(4) =
                     1
Q(r) pseudized with 0 coefficients
PseudoPot. # 2 for B read from file:
./pseudo/B.pbe-n-rrkjus psl.0.1.UPF
MD5 check sum: 82e190d381d3269bb317afd43cf1db29
Pseudo is Ultrasoft + core correction, Zval = 3.0
Generated using "atomic" code by A. Dal Corso (Quantum ESPRESSO distribution)
Using radial grid of 1059 points, 4 beta functions with:
           l(1) =
           l(2) =
           l(3) =
                     1
           l(4) =
Q(r) pseudized with 0 coefficients
PseudoPot. # 3 for N read from file:
./pseudo/N.pbe-n-rrkjus psl.0.1.UPF
MD5 check sum: c8986a496cba5b831c7822586319e126
Pseudo is Ultrasoft + core correction, Zval = 5.0
Generated using "atomic" code by A. Dal Corso (Quantum ESPRESSO distribution)
Using radial grid of 1085 points, 4 beta functions with:
           l(1) =
           l(2) =
                     0
           l(3) =
                     1
           l(4) =
                     1
Q(r) pseudized with 0 coefficients
atomic species
                  valence
                                       pseudopotential
                              mass
   C
                   4.00
                            12.01000
                                          C(1.00)
                                          B( 1.00)
   В
                   3.00
                            10.81000
   Ν
                   5.00
                            14.01000
                                           N( 1.00)
Starting magnetic structure
atomic species
                 magnetization
   C
                 0.500
   В
                -0.500
   N
                 0.000
```

```
isym = 1
                     identity
          s(1) = (
                         0
                                     1
                                                 0
                                                        )
                         0
                                     0
          s(1) = (1.0000000 0.0000000 0.0000000)
 cart.
                      0.0000000 1.0000000 0.0000000 )
                      0.0000000 0.0000000 1.0000000 )
     point group C_1 (1)
     there are 1 classes
     the character table:
       Ε
       1.00
Α
     the symmetry operations in each class:
   Cartesian axes
                  atom
                                         positions (alat units)
     site n.
                      C
                                  1) = (
                                          -0.3722375
                                                        0.7921450
                                                                     1.5717749
         1
                          tau(
         2
                      C
                          tau(
                                  2) = (
                                          -0.2473937
                                                        0.7200621
                                                                     1.5623312
                      C
         3
                          tau(
                                  3) = (
                                          -0.2474672
                                                        0.5755947
                                                                     1.5610503
                      C
         4
                          tau(
                                  4) = (
                                          -0.1224101
                                                        0.5034082
                                                                     1.5545272
                      C
         5
                          tau(
                                  5) = (
                                          -0.1223487
                                                        0.3591504
                                                                     1.5625054
                      C
                          tau(
                                  6) = (
                                           0.0027039
                                                        0.2869919
                                                                     1.5671389
         7
                      C
                          tau(
                                  7) = (
                                           0.1277631
                                                        0.3591980
                                                                     1.5678735
                      C
         8
                          tau(
                                  8) = (
                                           0.2525680
                                                        0.2870921
                                                                     1.5788444
                      C
         9
                          tau(
                                  9) = (
                                           0.1278264
                                                        0.5033915
                                                                     1.5583770
                      C
                                 10) = (
                                           0.0027713
                                                        0.5755675
        10
                          tau(
                                                                     1.5496450
                      C
        11
                          tau(
                                 11) = (
                                           0.0026935
                                                        0.7201541
                                                                     1.5517755
                      C
        12
                                 12) = (
                                           -0.1223495
                                                        0.7923689
                                                                     1.5590566
                          tau(
                      C
                                 13) = (
        13
                          tau(
                                           0.1277242
                                                        0.7922795
                                                                     1.5584410
                      C
                                 14) = (
        14
                                           0.2527545
                          tau(
                                                        0.7200131
                                                                     1.5636008
                      C
        15
                                 15) = (
                                           0.2527616
                                                        0.5755804
                          tau(
                                                                     1.5658001
                      C
                          tau(
                                 16) = (
                                           0.3775246
                                                        0.5035911
        16
                                                                     1.5781177
                      C
                                           0.3776089
        17
                          tau(
                                 17) = (
                                                        0.3592186
                                                                     1.5826729
        18
                      C
                          tau(
                                 18) = (
                                           0.5027638
                                                        0.2869259
                                                                     1.5823156
        19
                      C
                          tau(
                                 19) = (
                                           0.3776228
                                                        0.7921513
                                                                     1.5714527
                                           0.5026924
                      C
                                 20) = (
                                                        0.7200085
                                                                     1.5742543
        20
                          tau(
                      C
                                 21) = (
                                           0.5027082
                                                        0.5756984
                                                                     1.5772995
        21
                          tau(
        22
                      C
                          tau(
                                 22) = (
                                           0.6278335
                                                        0.5035639
                                                                     1.5733955
        23
                      C
                                 23) = (
                                           0.6277597
                                                        0.3591836
                                                                     1.5767004
                          tau(
        24
                      C
                                 24) = (
                                           0.7527147
                                                        0.2870630
                                                                     1.5705184
                          tau(
        25
                      C
                          tau(
                                 25) = (
                                           0.7526826
                                                        0.1426472
                                                                     1.5707590
        26
                      C
                          tau(
                                 26) = (
                                           0.8776967
                                                        0.0704876
                                                                     1.5715409
                      C
                                 27) = (
                                           0.6276465
        27
                          tau(
                                                        0.0704622
                                                                     1.5677100
                      C
                                 28) = (
                                           0.5027096
                                                        0.1426048
        28
                          tau(
                                                                     1.5746582
                      C
                                                                     1.5713144
        29
                          tau(
                                 29) = (
                                           0.3777101
                                                        0.0703786
                      C
        30
                          tau(
                                 30) = (
                                           0.2527081
                                                        0.1426074
                                                                     1.5773510
        31
                      C
                                 31) = (
                                           0.1277052
                                                        0.0704799
                                                                     1.5750035
                          tau(
                      C
        32
                          tau(
                                 32) = (
                                           0.0026733
                                                        0.1427159
                                                                     1.5735559
                      В
        33
                          tau(
                                 33) = (
                                          -0.3722930
                                                        0.7921719
                                                                     1.0499985
        34
                      N
                          tau(
                                 34) = (
                                          -0.2472939
                                                        0.7200032
                                                                     1.0499987
                      В
        35
                          tau(
                                 35) = (
                                          -0.2473184
                                                        0.5756731
                                                                     1.0499987
        36
                      N
                          tau(
                                 36) = (
                                          -0.1223232
                                                        0.5035014
                                                                     1.0499977
        37
                          tau(
                                 37) = (
                                          -0.1223036
                                                        0.3591545
                                                                     1.0499986
```

```
38
                                    0.0027018
                                                 0.2870027
                                                              1.0499986
              N
                  tau(
                         38) = (
                         39) = (
39
              В
                  tau(
                                    0.1276928
                                                 0.3591775
                                                              1.0499986
40
              N
                  tau(
                         40) = (
                                   0.2526728
                                                 0.2870002
                                                              1.0499988
41
              Ν
                  tau(
                         41) = (
                                   0.1277082
                                                 0.5034989
                                                              1.0499979
              В
                         42) = (
                                   0.0027070
                                                 0.5756602
42
                  tau(
                                                              1.0499991
43
              Ν
                         43) = (
                                   0.0026889
                                                 0.7200266
                                                              1.0499976
                  tau(
44
              В
                         44) = (
                                   -0.1223171
                                                 0.7921996
                                                              1.0499987
                  tau(
45
              В
                         45) = (
                                                 0.7921930
                  tau(
                                   0.1277154
                                                              1.0499986
              N
                         46) = (
                                                 0.7200017
46
                  tau(
                                   0.2526964
                                                              1.0499982
              В
                         47) = (
                                   0.2526871
                                                 0.5756705
47
                  tau(
                                                              1.0499986
48
              N
                         48) = (
                                                 0.5035212
                                                              1.0499988
                  tau(
                                   0.3776797
49
              В
                  tau(
                         49) = (
                                   0.3776924
                                                 0.3591732
                                                              1.0499978
                         50) = (
                                                              1.0499988
50
              N
                  tau(
                                   0.5027047
                                                 0.2869886
                                                              1.0499980
              В
                  tau(
                         51) = (
                                   0.3776931
                                                 0.7921707
51
                         52) = (
              N
                  tau(
                                   0.5027012
                                                 0.7200196
                                                              1.0499986
52
                         53) = (
53
              В
                  tau(
                                   0.5026998
                                                 0.5756503
                                                              1.0499979
54
              Ν
                  tau(
                         54) = (
                                   0.6277079
                                                 0.5035044
                                                              1.0499985
              В
55
                  tau(
                         55) = (
                                   0.6277035
                                                 0.3591749
                                                              1.0499979
                                   0.7527054
              Ν
                  tau(
                         56) = (
                                                 0.2869984
                                                              1.0499984
56
              В
                                   0.7526904
                                                 0.1426600
57
                  tau(
                         57) = (
                                                              1.0499982
              N
                         58) = (
                                   0.8777103
                                                 0.0704830
                                                              1.0499986
58
                  tau(
59
              N
                  tau(
                         59) = (
                                   0.6276960
                                                 0.0704893
                                                              1.0499983
60
              В
                  tau(
                         60) = (
                                   0.5026952
                                                 0.1426459
                                                              1.0499981
              N
                         61) = (
                                   0.3777058
                                                 0.0704853
                                                              1.0499984
61
                  tau(
              В
                         62) = (
                                   0.2527205
                                                 0.1426623
                                                              1.0499979
62
                  tau(
              N
                         63) = (
                                   0.1276933
                                                 0.0704829
                                                              1.0499987
63
                  tau(
64
              В
                  tau(
                         64) = (
                                   0.0027020
                                                 0.1426665
                                                              1.0499981
```

## Crystallographic axes

```
site n.
             atom
                                     positions (cryst. coord.)
                                                  0.9146903
                 C
                      tau(
                             1) = (
                                      0.0851076
                                                              0.5239250
    2
                 C
                      tau(
                             2) = (
                                      0.1683343
                                                  0.8314561
                                                              0.5207771
    3
                 C
                      tau(
                             3) = (
                                      0.0848525
                                                  0.6646395
                                                              0.5203501
                 C
                             4) = (
                                      0.1682328
                                                  0.5812857
    4
                      tau(
                                                              0.5181757
                 C
    5
                             5) = (
                                      0.0850069
                                                  0.4147111
                      tau(
                                                              0.5208351
                 C
    6
                             6) = (
                                      0.1683988
                                                  0.3313897
                                                              0.5223796
                      tau(
                 C
    7
                             7) = (
                                      0.3351462
                                                  0.4147662
                      tau(
                                                              0.5226245
                 C
    8
                      tau(
                             8) = (
                                      0.4183207
                                                  0.3315054
                                                              0.5262815
                 C
                                      0.4184596
                      tau(
                             9) = (
                                                  0.5812664
                                                              0.5194590
    q
   10
                 C
                      tau(
                            10) = (
                                      0.3350754
                                                  0.6646081
                                                              0.5165483
                 C
                                      0.4184747
   11
                      tau(
                            11) = (
                                                  0.8315623
                                                              0.5172585
   12
                 C
                      tau(
                            12) = (
                                      0.3351248
                                                  0.9149488
                                                              0.5196855
                                                  0.9148455
   13
                 C
                      tau(
                            13) = (
                                      0.5851470
                                                              0.5194803
                            14) = (
   14
                 C
                                      0.6684543
                                                  0.8313995
                                                              0.5212003
                      tau(
   15
                 C
                            15) = (
                                      0.5850731
                                                  0.6646230
                      tau(
                                                              0.5219334
                                                              0.5260392
   16
                 C
                     tau(
                            16) = (
                                      0.6682730
                                                  0.5814969
                 C
                                                              0.5275576
   17
                     tau(
                            17) = (
                                      0.5850039
                                                  0.4147900
                 C
   18
                     tau(
                            18) = (
                                      0.6684206
                                                  0.3313135
                                                              0.5274385
                 C
                            19) = (
   19
                      tau(
                                      0.8349716
                                                  0.9146975
                                                              0.5238176
   20
                 C
                      tau(
                            20) = (
                                      0.9183895
                                                  0.8313942
                                                              0.5247514
                 C
                                      0.8350878
   21
                      tau(
                            21) = (
                                                  0.6647592
                                                              0.5257665
                 C
                            22) = (
                                      0.9185663
                                                  0.5814655
                                                              0.5244652
   22
                      tau(
                 C
   23
                      tau(
                            23) = (
                                      0.8351344
                                                  0.4147495
                                                              0.5255668
                 C
   24
                      tau(
                            24) = (
                                      0.9184506
                                                  0.3314718
                                                              0.5235061
   25
                 C
                            25) = (
                                      0.8350400
                                                  0.1647148
                                                              0.5235863
                      tau(
                 C
   26
                      tau(
                            26) = (
                                      0.9183927
                                                  0.0813920
                                                              0.5238470
                 C
   27
                            27) = (
                                      0.6683279
                                                  0.0813627
                                                              0.5225700
                      tau(
                 C
   28
                      tau(
                            28) = (
                                      0.5850426
                                                  0.1646659
                                                              0.5248861
                 C
   29
                      tau(
                            29) = (
                                      0.4183432
                                                  0.0812662
                                                              0.5237715
   30
                 C
                      tau(
                            30) = (
                                      0.3350425
                                                  0.1646688
                                                              0.5257837
   31
                      tau(
                            31) = (
                                      0.1683968
                                                  0.0813831
                                                              0.5250012
```

32) = (

tau(

C

32

0.5245186

```
33
                 В
                     tau(
                            33) = (
                                     0.0850676
                                                 0.9147213
                                                             0.3499995
   34
                 N
                     tau(
                            34) = (
                                     0.1684001
                                                 0.8313880
                                                             0.3499996
   35
                 В
                     tau(
                            35) = (
                                     0.0850466
                                                 0.6647301
                                                             0.3499996
                 Ν
                            36) = (
                                     0.1683735
                                                 0.5813934
                                                             0.3499992
                     tau(
   36
                 В
                            37) = (
                                     0.0850543
                                                 0.4147159
                                                             0.3499995
   37
                     tau(
                 N
                     tau(
                            38) = (
                                     0.1684028
                                                 0.3314021
                                                             0.3499995
   38
                 В
                            39) = (
                                     0.3350640
                                                 0.4147425
                                                             0.3499995
   39
                     tau(
                 N
                            40) = (
                                     0.4183724
                                                 0.3313993
                                                             0.3499996
   40
                     tau(
                 N
                            41) = (
                                     0.4184034
                                                 0.5813905
                                                             0.3499993
   41
                     tau(
                 В
                     tau(
                            42) = (
                                     0.3350646
                                                 0.6647152
                                                             0.3499997
   42
   43
                 N
                     tau(
                            43) = (
                                     0.4183964
                                                 0.8314151
                                                             0.3499992
                            44) = (
   44
                 В
                     tau(
                                     0.3350596
                                                 0.9147533
                                                             0.3499996
   45
                 В
                     tau(
                            45) = (
                                     0.5850883
                                                 0.9147457
                                                             0.3499995
   46
                 N
                     tau(
                            46) = (
                                     0.6683896
                                                 0.8313864
                                                             0.3499994
                                                 0.6647271
   47
                 В
                     tau(
                            47) = (
                                     0.5850506
                                                             0.3499995
   48
                 Ν
                     tau(
                            48) = (
                                     0.6683878
                                                 0.5814163
                                                             0.3499996
                 В
                                     0.5850611
                                                 0.4147375
   49
                     tau(
                            49) = (
                                                             0.3499993
                            50) = (
                                     0.6683977
                                                 0.3313859
   50
                 Ν
                     tau(
                                                             0.3499996
                 В
                                     0.8350530
                                                 0.9147199
                                                             0.3499993
   51
                     tau(
                            51) = (
                 N
                     tau(
                            52) = (
                                     0.9184048
                                                 0.8314070
                                                             0.3499995
   52
   53
                 В
                     tau(
                            53) = (
                                     0.8350516
                                                 0.6647037
                                                             0.3499993
   54
                 N
                     tau(
                            54) = (
                                     0.9184063
                                                 0.5813968
                                                             0.3499995
   55
                 В
                     tau(
                            55) = (
                                     0.8350732
                                                 0.4147395
                                                             0.3499993
                 N
                     tau(
                            56) = (
                                     0.9184040
                                                 0.3313972
                                                             0.3499995
   56
   57
                 В
                     tau(
                            57) = (
                                     0.8350552
                                                 0.1647295
                                                             0.3499994
   58
                 N
                     tau(
                            58) = (
                                     0.9184036
                                                 0.0813868
                                                             0.3499995
   59
                 N
                     tau(
                            59) = (
                                     0.6683931
                                                 0.0813941
                                                             0.3499994
   60
                 В
                     tau(
                            60) = (
                                     0.5850518
                                                 0.1647133
                                                             0.3499994
   61
                 N
                     tau(
                            61) = (
                                     0.4184006
                                                 0.0813894
                                                             0.3499995
   62
                 В
                     tau(
                            62) = (
                                     0.3350866
                                                 0.1647322
                                                             0.3499993
   63
                 N
                     tau(
                            63) = (
                                     0.1683866
                                                 0.0813866
                                                             0.3499996
                            64) = (
                                     0.0850706
                                                 0.1647371
   64
                 В
                     tau(
                                                             0.3499994
number of k points=
                       400 Marzari-Vanderbilt smearing, width (Ry)= 0.0010
                   cart. coord. in units 2pi/alat
   k(
         1) = (
                   0.0000000
                                0.0000000
                                             0.0000000), wk =
                                                                  0.0050000
         2) =
                   0.0000000
                               -0.0079089
                                             0.0000000), wk =
                                                                  0.0050000
   k(
                                             0.0000000), wk =
         3) = (
                   0.0000000
                               -0.0158178
                                                                  0.0050000
   k(
                               -0.0237267
                                             0.0000000), wk =
         4) = (
                   0.0000000
                                                                  0.0050000
   k(
         5) = (
                   0.0000000
                               -0.0316356
                                             0.0000000), wk =
                                                                  0.0050000
   k(
         6) = (
                               -0.0395445
                                             0.0000000), wk =
   k(
                   0.0000000
                                                                  0.0050000
         7) = (
                   0.0000000
                               -0.0474534
                                             0.0000000), wk =
                                                                  0.0050000
   k(
         8) = (
                   0.0000000
                               -0.0553624
                                             0.0000000), wk =
                                                                  0.0050000
   k(
         9) = (
                   0.0000000
                               -0.0632713
                                             0.0000000), wk =
   k(
                                                                  0.0050000
        10) = (
                   0.0000000
                               -0.0711802
                                             0.0000000), wk =
                                                                  0.0050000
   k(
   k(
        11) = (
                   0.0000000
                               -0.0790891
                                             0.0000000), wk =
                                                                  0.0050000
        12) = (
                   0.0000000
                               -0.0869980
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        13) = (
                   0.0000000
                               -0.0949069
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        14) = (
                   0.0000000
                               -0.1028158
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        15) =
                   0.0000000
                               -0.1107247
                                             0.0000000), wk =
                                                                  0.0050000
   k(
   k(
        16) =
                   0.0000000
                               -0.1186336
                                             0.0000000), wk =
                                                                  0.0050000
        17) =
                   0.000000
                               -0.1265425
                                             0.0000000), wk =
                                                                  0.0050000
   k(
   k(
        18) =
                   0.0000000
                               -0.1344514
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        19) =
                   0.0000000
                               -0.1423603
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        20) = (
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                               -0.1502692
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        21) = (
                   0.0000000
                               -0.1581782
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        22) = (
                   0.0000000
                               -0.1660871
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        23) = (
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                               -0.1739960
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        (24) = (
                   0.0000000
                               -0.1819049
                                             0.0000000), wk =
                                                                  0.0050000
   k(
        25) = (
                   0.0000000
                               -0.1898138
                                             0.0000000), wk =
                                                                  0.0050000
                   0.0000000
        26) = (
                               -0.1977227
                                             0.0000000), wk =
                                                                  0.0050000
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0.0850703

0.1647941

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-0.2056316
                0.000000
                                          0.0000000), wk =
                                                              0.0050000
k(
     27) = (
k(
     28) = (
                0.0000000
                            -0.2135405
                                          0.0000000), wk =
                                                              0.0050000
     29) = (
                0.0000000
                            -0.2214494
                                          0.0000000), wk =
                                                              0.0050000
     30) = (
                0.0000000
                            -0.2293583
                                          0.0000000), wk =
                                                              0.0050000
     31) = (
                                          0.0000000), wk =
                0.0000000
                            -0.2372672
k(
                                                              0.0050000
     32) = (
                                          0.0000000), wk =
                0.0000000
                            -0.2451761
k(
                                                              0.0050000
                0.000000
     33) = (
                            -0.2530850
                                          0.0000000), wk =
                                                              0.0050000
k(
     34) = (
                0.0000000
                            -0.2609940
k(
                                          0.0000000), wk =
                                                              0.0050000
                                          0.0000000), wk =
     35) = (
                0.0000000
                            -0.2689029
k(
                                                              0.0050000
                                          0.0000000), wk =
     36) =
                0.0000000
                            -0.2768118
k(
           (
                                                              0.0050000
     37) =
                0.0000000
                            -0.2847207
                                          0.0000000), wk =
                                                              0.0050000
k(
           (
k(
     38) =
                0.0000000
                            -0.2926296
                                          0.0000000), wk =
                                                              0.0050000
k(
     39) =
                0.0000000
                            -0.3005385
                                          0.0000000), wk =
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     40) =
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                            -0.3084474
                                          0.0000000), wk =
                                                              0.0050000
k(
                                          0.00000000), wk =
k(
     41) =
                0.0000000
                            -0.3163563
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                                          0.0000000), wk =
k(
     42) =
                0.0000000
                            -0.3242652
                                                              0.0050000
k(
     43) =
                0.0000000
                            -0.3321741
                                          0.0000000), wk =
                                                              0.0050000
     44) =
                                          0.0000000), wk =
k(
                0.0000000
                            -0.3400830
                                                              0.0050000
     45) =
                            -0.3479919
                                          0.0000000), wk =
k(
                0.0000000
                                                              0.0050000
                0.0000000
     46) =
                            -0.3559009
                                          0.0000000), wk =
                                                              0.0050000
k(
     47) =
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                            -0.3638098
                                          0.0000000), wk =
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k(
k(
     48) =
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                            -0.3717187
                                          0.0000000), wk =
                                                              0.0050000
k(
     49) =
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                            -0.3796276
                                          0.0000000), wk =
                                                              0.0050000
     50) =
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                            -0.3875365
                                          0.0000000), wk =
                                                              0.0050000
k(
     51) =
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                            -0.3954454
                                          0.0000000), wk =
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k(
k(
     52) =
                0.0000000
                            -0.4033543
                                          0.0000000), wk =
                                                              0.0050000
k(
     53) =
                0.0000000
                            -0.4112632
                                          0.0000000), wk =
                                                              0.0050000
     54) =
k(
                0.0000000
                            -0.4191721
                                          0.0000000), wk =
                                                              0.0050000
k(
     55) =
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                            -0.4270810
                                          0.0000000), wk =
                                                              0.0050000
     56) =
                0.0000000
                            -0.4349899
                                          0.0000000), wk =
                                                              0.0050000
     57) =
                            -0.4428988
                0.0000000
                                          0.0000000), wk =
                                                              0.0050000
     58) =
                0.0000000
                            -0.4508077
                                          0.0000000), wk =
                                                              0.0050000
     59) =
                            -0.4587167
                                          0.0000000), wk =
                0.0000000
                                                              0.0050000
k(
     60) =
                0.0000000
                            -0.4666256
                                          0.0000000), wk =
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     61) =
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                            -0.4745345
                                          0.0000000), wk =
k(
                                                              0.0050000
     62) =
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                0.0000000
                                          0.0000000), wk =
                                                              0.0050000
k(
     63) =
                0.0000000
                            -0.4903523
                                          0.0000000), wk =
                                                              0.0050000
k (
     64) =
                            -0.4982612
                                          0.0000000), wk =
k(
                0.0000000
                                                              0.0050000
     65) =
                0.0000000
                            -0.5061701
                                          0.0000000), wk =
k(
                                                              0.0050000
                            -0.5140790
                                          0.0000000), wk =
                                                              0.0050000
     66) =
                0.0000000
k(
     67) =
                0.0000000
                            -0.5219879
                                          0.0000000), wk =
                                                              0.0050000
k(
     68) =
                            -0.5298968
                                          0.0000000), wk =
k(
                0.0000000
                                                              0.0050000
     69) =
                0.0000000
                            -0.5378057
                                          0.0000000), wk =
                                                              0.0050000
k(
     70) =
                0.0000000
                            -0.5457146
                                          0.0000000), wk =
                                                              0.0050000
k(
                                          0.0000000), wk =
     71) = (
                            -0.5536235
k(
                0.0000000
                                                              0.0050000
     72) = (
                0.0000000
                            -0.5615325
                                          0.0000000), wk =
                                                              0.0050000
k(
k(
     73) = (
                0.0000000
                            -0.5694414
                                          0.0000000), wk =
                                                              0.0050000
     74) = (
                0.0000000
                            -0.5773503
                                          0.0000000), wk =
                                                              0.0050000
k(
     75) =
                0.0079364
                            -0.5773504
                                          0.0000000), wk =
                                                              0.0050000
k(
                            -0.5773505
     76) =
                0.0158729
                                          0.0000000), wk =
                                                              0.0050000
k(
k(
     77) =
                0.0238093
                            -0.5773507
                                          0.0000000), wk =
                                                              0.0050000
     78) =
                0.0317457
                            -0.5773508
k(
                                          0.0000000), wk =
                                                              0.0050000
     79) =
                0.0396821
                            -0.5773510
                                          0.0000000), wk =
                                                              0.0050000
k(
k(
     = (08)
                0.0476186
                            -0.5773511
                                          0.0000000), wk =
                                                              0.0050000
k(
     81) =
                0.0555550
                            -0.5773512
                                          0.0000000), wk =
                                                              0.0050000
k(
     82) =
                0.0634914
                            -0.5773514
                                          0.0000000), wk =
                                                              0.0050000
k(
     83) = (
                0.0714279
                            -0.5773515
                                          0.0000000), wk =
                                                              0.0050000
k(
     84) = (
                0.0793643
                            -0.5773516
                                          0.0000000), wk =
                                                              0.0050000
k(
     85) = (
                0.0873007
                            -0.5773518
                                          0.0000000), wk =
                                                              0.0050000
k(
     86) = (
                0.0952371
                            -0.5773519
                                          0.0000000), wk =
                                                              0.0050000
k(
     87) = (
                0.1031736
                            -0.5773521
                                          0.0000000), wk =
                                                              0.0050000
     88) = (
                0.1111100
                            -0.5773522
                                          0.0000000), wk =
                                                              0.0050000
```

```
89) = (
                0.1190464
                                         0.0000000), wk =
                                                              0.0050000
k(
                           -0.5773523
     90) = (
k(
                0.1269829
                           -0.5773525
                                         0.0000000), wk =
                                                              0.0050000
     91) = (
                0.1349193
                           -0.5773526
                                         0.0000000), wk =
                                                              0.0050000
     92) = (
                0.1428557
                           -0.5773527
                                         0.0000000), wk =
                                                              0.0050000
     93) = (
               0.1507921
                                         0.0000000), wk =
k(
                           -0.5773529
                                                              0.0050000
     94) = (
                                         0.0000000), wk =
               0.1587286
                           -0.5773530
k(
                                                              0.0050000
     95) = (
               0.1666650
                           -0.5773532
                                         0.0000000), wk =
                                                              0.0050000
k(
     96) = (
               0.1746014
k(
                           -0.5773533
                                         0.0000000), wk =
                                                              0.0050000
     97) = (
                                         0.0000000), wk =
               0.1825379
k(
                           -0.5773534
                                                              0.0050000
     98) = (
                                         0.0000000), wk =
               0.1904743
k(
                           -0.5773536
                                                              0.0050000
     99) =
               0.1984107
                                         0.00000000), wk =
                                                              0.0050000
k(
                           -0.5773537
k(
    100) =
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                           -0.5773538
                                         0.0000000), wk =
                                                              0.0050000
k(
    101) =
               0.2142836
                           -0.5773540
                                         0.0000000), wk =
                                                              0.0050000
k(
    102) =
               0.2222200
                           -0.5773541
                                         0.0000000), wk =
                                                              0.0050000
k(
    103) =
               0.2301564
                           -0.5773543
                                         0.0000000), wk =
                                                              0.0050000
                                         0.0000000), wk =
k(
    104) =
               0.2380929
                           -0.5773544
                                                              0.0050000
k(
    105) =
               0.2460293
                           -0.5773545
                                         0.0000000), wk =
                                                              0.0050000
    106) =
               0.2539657
                                         0.0000000), wk =
k(
                           -0.5773547
                                                              0.0050000
    107) =
               0.2619021
                                         0.0000000), wk =
k(
                           -0.5773548
                                                              0.0050000
    108) =
                0.2698386
                           -0.5773549
                                         0.0000000), wk =
                                                              0.0050000
k(
    109) =
                0.2777750
                           -0.5773551
                                         0.0000000), wk =
                                                              0.0050000
k(
k(
    110) =
                0.2857114
                           -0.5773552
                                         0.0000000), wk =
                                                              0.0050000
k(
    111) =
                0.2936479
                           -0.5773554
                                         0.0000000), wk =
                                                              0.0050000
    112) =
                0.3015843
                           -0.5773555
                                         0.0000000), wk =
                                                              0.0050000
k(
    113) =
                0.3095207
                           -0.5773556
                                         0.0000000), wk =
                                                              0.0050000
k(
    114) =
k(
                0.3174571
                           -0.5773558
                                         0.0000000), wk =
                                                              0.0050000
k(
    115) =
                0.3253936
                           -0.5773559
                                         0.0000000), wk =
                                                              0.0050000
    116) =
                0.3333300
                           -0.5773560
                                         0.0000000), wk =
                                                              0.0050000
    117) =
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                           -0.5704828
                                         0.0000000), wk =
                                                              0.0050000
    118) =
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                           -0.5636095
                                         0.0000000), wk =
                                                              0.0050000
    119) =
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                           -0.5567362
                                         0.0000000), wk =
                                                              0.0050000
    120) =
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                           -0.5498629
                                         0.0000000), wk =
                                                              0.0050000
    121) =
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                                         0.0000000), wk =
                                                              0.0050000
    122) =
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                           -0.5361163
                                         0.0000000), wk =
                                                              0.0050000
    123) =
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                            -0.5292430
                                         0.0000000), wk =
                                                              0.0050000
    124) =
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                                                              0.0050000
    125) =
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k (
    126) =
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                            -0.5086232
                                         0.0000000), wk =
k(
                                                              0.0050000
    127) =
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                                         0.0000000), wk =
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k(
                                                              0.0050000
                                         0.0000000), wk =
                                                              0.0050000
    128) =
                0.2857114
                            -0.4948766
k(
                           -0.4880033
    129) =
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                                         0.0000000), wk =
                                                              0.0050000
k(
    130) =
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                           -0.4811300
                                         0.0000000), wk =
k(
                                                              0.0050000
    131) =
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                           -0.4742567
                                         0.0000000), wk =
                                                              0.0050000
k(
    132) =
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                                         0.0000000), wk =
                                                              0.0050000
k(
                                         0.0000000), wk =
    133) =
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                           -0.4605102
k(
                                                              0.0050000
    134) =
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                           -0.4536369
                                         0.0000000), wk =
                                                              0.0050000
k(
                                         0.0000000), wk =
k(
    135) =
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                           -0.4398903
                                         0.0000000), wk =
                                                              0.0050000
k(
    137) =
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                                         0.0000000), wk =
                                                              0.0050000
k(
    138) =
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                                                              0.0050000
k(
k(
    139) =
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                                         0.0000000), wk =
                                                              0.0050000
    140) =
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    141) =
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                                         0.0000000), wk =
                                                              0.0050000
k(
k(
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                                         0.0000000), wk =
                                                              0.0050000
k(
    143) =
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k(
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k(
    145) =
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                                                              0.0050000
k(
    146) = (
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                                         0.0000000), wk =
                                                              0.0050000
k(
    147) = (
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                                         0.0000000), wk =
                                                              0.0050000
k(
    148) = (
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                                         0.0000000), wk =
                                                              0.0050000
k(
    149) = (
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                                         0.0000000), wk =
                                                              0.0050000
    150) = (
                0.1984107
                           -0.3436643
                                         0.0000000), wk =
                                                              0.0050000
```

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0.0000000), wk =
                                                              0.0050000
    151) = (
                0.1944425
                           -0.3367910
    152) = (
                0.1904743
                           -0.3299177
                                         0.0000000), wk =
                                                              0.0050000
    153) = (
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                           -0.3230445
                                         0.0000000), wk =
                                                              0.0050000
    154) =
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                           -0.3161712
                                         0.0000000), wk =
                                                              0.0050000
    155) = (
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                           -0.3092979
                                         0.0000000), wk =
k(
                                                              0.0050000
    156) = (
                                         0.0000000), wk =
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                           -0.3024246
k(
                                                              0.0050000
    157) =
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                           -0.2955513
                                         0.0000000), wk =
                                                              0.0050000
k(
    158) =
k(
               0.1666650
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                                         0.0000000), wk =
                                                              0.0050000
                                         0.0000000), wk =
    159) =
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k(
                                                              0.0050000
                                         0.0000000), wk =
    160) =
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k(
               0.1587286
                                                              0.0050000
    161) =
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                           -0.2680582
                                         0.0000000), wk =
                                                              0.0050000
k(
k(
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                           -0.2611849
                                         0.0000000), wk =
                                                              0.0050000
    163) =
k(
               0.1468239
                           -0.2543116
                                         0.0000000), wk =
                                                              0.0050000
k(
    164) =
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                           -0.2474383
                                         0.0000000), wk =
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                                         0.00000000), wk =
k(
    165) =
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                           -0.2405650
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                                         0.0000000), wk =
k(
    166) =
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                           -0.2336917
                                                              0.0050000
k(
    167) =
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                                         0.0000000), wk =
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                                         0.0000000), wk =
k(
    168) =
                           -0.2199452
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    169) =
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k(
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k(
    171) =
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k(
k(
    172) =
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                                         0.0000000), wk =
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k(
    173) =
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                                         0.0000000), wk =
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    174) =
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k(
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k(
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k(
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k(
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k(
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k(
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k(
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k(
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k(
k(
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k(
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Dense grid: 2049049 G-vectors
                                     FFT dimensions: ( 120, 120, 360)
                                     FFT dimensions: ( 75, 75, 225)
Smooth grid:
               518527 G-vectors
Largest allocated arrays
                              est. size (Mb)
                                                  dimensions
   Kohn-Sham Wavefunctions
                                   19.08 Mb
                                                      8119,
                                                             154)
                                   63.43 Mb
   NL pseudopotentials
                                                      8119,
                                                             512)
   Each V/rho on FFT grid
                                   19.78 Mb
                                                    648000,
                                                              2)
   Each G-vector array
                                    1.95 Mb
                                                    256128)
   G-vector shells
                                    0.06 Mb
                                                      7983)
Largest temporary arrays
                              est. size (Mb)
                                                  dimensions
   Auxiliary wavefunctions
                                   76.31 Mb
                                                      8119,
                                                             616)
   Each subspace H/S matrix
                                    1.45 Mb
                                                             308)
                                                       308,
   Each <psi_i|beta_j> matrix
                                    1.20 Mb
                                                       512,
                                                             154)
                                                        0.000000
Check: negative/imaginary core charge=
                                          -0.000004
The potential is recalculated from file:
./tmp-hetero/A.save/charge-density.dat
negative rho (up, down): 9.152E-04 9.150E-04
Starting wfc are 256 randomized atomic wfcs
Band Structure Calculation
Davidson diagonalization with overlap
Computing kpt #:
total cpu time spent up to now is
                                        635.2 secs
```

Computing kpt #: total cpu time spent up to now is 1243.1 secs Computing kpt #: total cpu time spent up to now is 1811.4 secs Computing kpt #: total cpu time spent up to now is 2377.9 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 2988.2 secs Computing kpt #: total cpu time spent up to now is 3542.6 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 4170.5 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 4767.1 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 5363.8 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 5953.1 secs Computing kpt #: 11 c bands: 1 eigenvalues not converged total cpu time spent up to now is 6546.5 secs Computing kpt #: 12 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 7141.4 secs Computing kpt #: 13 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 7734.2 secs Computing kpt #: 14 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 8328.8 secs Computing kpt #: 15 total cpu time spent up to now is 8919.2 secs Computing kpt #: total cpu time spent up to now is 9483.3 secs Computing kpt #: 17 total cpu time spent up to now is 9969.0 secs Computing kpt #: 18 total cpu time spent up to now is 10421.3 secs Computing kpt #: 19

total cpu time spent up to now is 10868.6 secs Computing kpt #: 20 total cpu time spent up to now is 11318.1 secs Computing kpt #: 21 total cpu time spent up to now is 11765.6 secs Computing kpt #: 22 total cpu time spent up to now is 12207.2 secs Computing kpt #: 23 total cpu time spent up to now is 12644.3 secs Computing kpt #: 24 total cpu time spent up to now is 13132.2 secs Computing kpt #: 25 total cpu time spent up to now is 13621.6 secs Computing kpt #: total cpu time spent up to now is 14149.6 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 14731.5 secs Computing kpt #: total cpu time spent up to now is 15315.9 secs Computing kpt #: total cpu time spent up to now is 15805.0 secs Computing kpt #: total cpu time spent up to now is 16289.1 secs Computing kpt #: 31 total cpu time spent up to now is 16771.2 secs Computing kpt #: 32 total cpu time spent up to now is 17235.0 secs Computing kpt #: 33 total cpu time spent up to now is 17681.1 secs Computing kpt #: 34 total cpu time spent up to now is 18171.3 secs Computing kpt #: 35 total cpu time spent up to now is 18612.8 secs Computing kpt #: 36 total cpu time spent up to now is 19057.1 secs Computing kpt #: total cpu time spent up to now is 19506.7 secs Computing kpt #: total cpu time spent up to now is 19963.2 secs Computing kpt #: 39 total cpu time spent up to now is 20409.0 secs Computing kpt #: 40 total cpu time spent up to now is 20852.5 secs Computing kpt #: 41 total cpu time spent up to now is 21303.7 secs Computing kpt #: 42 total cpu time spent up to now is 21759.9 secs Computing kpt #: 43 total cpu time spent up to now is 22160.0 secs Computing kpt #: 44 total cpu time spent up to now is 22568.3 secs Computing kpt #: 45 22970.0 secs total cpu time spent up to now is Computing kpt #: 46 total cpu time spent up to now is 23391.1 secs Computing kpt #: total cpu time spent up to now is 23790.8 secs Computing kpt #: total cpu time spent up to now is 24192.3 secs Computing kpt #: total cpu time spent up to now is 24684.1 secs Computing kpt #: total cpu time spent up to now is 25297.0 secs Computing kpt #: 51 c bands: 1 eigenvalues not converged total cpu time spent up to now is 25904.2 secs Computing kpt #: 52 c bands: 1 eigenvalues not converged total cpu time spent up to now is 26513.9 secs Computing kpt #: 53 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 27142.0 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 27746.0 secs Computing kpt #: 55 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 28353.5 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 28970.1 secs Computing kpt #: 57 total cpu time spent up to now is 29574.1 secs Computing kpt #: 58

total cpu	time spent up	to now	is	30180.3	secs
	kpt #: 59 time spent up	to now	is	30701.1	secs
	kpt #: 60 time spent up	to now	ıis	31200.6	secs
	<pre>kpt #: 61 time spent up</pre>	to now	is	31702.0	secs
	<pre>kpt #: 62 time spent up</pre>	to now	is	32173.2	secs
	<pre>kpt #: 63 time spent up</pre>	to now	is	32657.3	secs
	kpt #: 64 time spent up	to now	ıis	33103.8	secs
	<pre>kpt #: 65 time spent up</pre>	to now	is	33548.8	secs
	<pre>kpt #: 66 time spent up</pre>	to now	is	33985.0	secs
	<pre>kpt #: 67 time spent up</pre>	to now	ıis	34437.9	secs
	kpt #: 68 time spent up	to now	ıis	34892.2	secs
	kpt #: 69 time spent up	to now	ıis	35336.7	secs
	kpt #: 70 time spent up	to now	ıis	35781.1	secs
	<pre>kpt #: 71 time spent up</pre>	to now	ıis	36219.6	secs
Computing total cpu	kpt #: 72 time spent up	to now	ıis	36642.7	secs
	<pre>kpt #: 73 time spent up</pre>	to now	ıis	37047.6	secs
	kpt #: 74 time spent up	to now	ıis	37448.6	secs
	kpt #: 75 time spent up	to now	ıis	37858.0	secs
	kpt #: 76 time spent up	to now	ıis	38316.4	secs
	kpt #: 77 time spent up	to now	ıis	38766.6	secs
	kpt #: 78 time spent up	to now	is	39169.9	secs

Computing kpt #: 79 total cpu time spent up to now is 39576.7 secs Computing kpt #: 80 total cpu time spent up to now is 40025.1 secs Computing kpt #: 81 total cpu time spent up to now is 40492.1 secs Computing kpt #: 82 total cpu time spent up to now is 40944.0 secs Computing kpt #: 83 total cpu time spent up to now is 41392.0 secs Computing kpt #: 84 total cpu time spent up to now is 41851.3 secs Computing kpt #: 85 42319.5 secs total cpu time spent up to now is Computing kpt #: total cpu time spent up to now is 42762.8 secs Computing kpt #: total cpu time spent up to now is 43202.6 secs Computing kpt #: total cpu time spent up to now is 43647.9 secs Computing kpt #: total cpu time spent up to now is 44111.2 secs Computing kpt #: total cpu time spent up to now is 44574.1 secs Computing kpt #: 91 total cpu time spent up to now is 45019.5 secs Computing kpt #: 92 total cpu time spent up to now is 45474.5 secs Computing kpt #: 93 total cpu time spent up to now is 45929.8 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 46577.2 secs Computing kpt #: total cpu time spent up to now is 46991.0 secs Computing kpt #: total cpu time spent up to now is 47412.1 secs Computing kpt #: total cpu time spent up to now is 47842.7 secs Computing kpt #: 98 total cpu time spent up to now is 48276.7 secs 99 Computing kpt #:

total cpu time spent up to now is 48702.8 secs Computing kpt #: 100 total cpu time spent up to now is 49164.4 secs Computing kpt #: 101 total cpu time spent up to now is 49637.3 secs Computing kpt #: 102 total cpu time spent up to now is 50248.0 secs Computing kpt #: 103 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 50863.1 secs Computing kpt #: 104 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 51499.0 secs Computing kpt #: 105 total cpu time spent up to now is 52007.7 secs Computing kpt #: 106 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 52617.6 secs Computing kpt #: 107 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 53242.1 secs Computing kpt #: 108 total cpu time spent up to now is 53841.0 secs Computing kpt #: 109 c bands: 1 eigenvalues not converged total cpu time spent up to now is 54434.3 secs Computing kpt #: 110 c bands: 1 eigenvalues not converged total cpu time spent up to now is 55032.7 secs Computing kpt #: 111 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 55655.7 secs Computing kpt #: 112 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 56260.7 secs Computing kpt #: 113 total cpu time spent up to now is 56764.6 secs Computing kpt #: 114 total cpu time spent up to now is 57225.9 secs Computing kpt #: 115 total cpu time spent up to now is 57698.3 secs Computing kpt #: 116 total cpu time spent up to now is 58151.8 secs Computing kpt #: 117

total cpu time spent up to now is 58606.3 secs Computing kpt #: 118 total cpu time spent up to now is 59066.3 secs Computing kpt #: 119 total cpu time spent up to now is 59542.2 secs Computing kpt #: 120 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 60156.3 secs Computing kpt #: 121 total cpu time spent up to now is 60613.8 secs Computing kpt #: 122 total cpu time spent up to now is 61139.8 secs Computing kpt #: 123 total cpu time spent up to now is 61648.3 secs Computing kpt #: 124 total cpu time spent up to now is 62198.9 secs Computing kpt #: 125 total cpu time spent up to now is 62668.8 secs Computing kpt #: 126 total cpu time spent up to now is 63142.3 secs Computing kpt #: 127 total cpu time spent up to now is 63648.4 secs Computing kpt #: 128 total cpu time spent up to now is 64155.5 secs Computing kpt #: 129 total cpu time spent up to now is 64720.2 secs Computing kpt #: 130 total cpu time spent up to now is 65317.4 secs Computing kpt #: 131 total cpu time spent up to now is 65831.8 secs Computing kpt #: 132 total cpu time spent up to now is 66361.2 secs Computing kpt #: 133 total cpu time spent up to now is 66908.7 secs Computing kpt #: 134 total cpu time spent up to now is 67460.1 secs Computing kpt #: 135 c bands: 1 eigenvalues not converged total cpu time spent up to now is 68064.2 secs Computing kpt #: total cpu time spent up to now is 68622.4 secs Computing kpt #: 137

total cpu time spent up to now is 69136.4 secs Computing kpt #: 138 c bands: 1 eigenvalues not converged total cpu time spent up to now is 69751.7 secs Computing kpt #: 139 total cpu time spent up to now is 70313.5 secs Computing kpt #: 140 total cpu time spent up to now is 70907.0 secs Computing kpt #: 141 total cpu time spent up to now is 71514.9 secs Computing kpt #: 142 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 72118.7 secs Computing kpt #: 143 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 72738.2 secs Computing kpt #: 144 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 73341.6 secs Computing kpt #: 145 c bands: 1 eigenvalues not converged total cpu time spent up to now is 73945.9 secs Computing kpt #: 146 c bands: 1 eigenvalues not converged total cpu time spent up to now is 74571.7 secs Computing kpt #: 147 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 75178.9 secs Computing kpt #: 148 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 75787.7 secs Computing kpt #: 149 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 76406.9 secs Computing kpt #: 150 c bands: 1 eigenvalues not converged total cpu time spent up to now is 77015.8 secs Computing kpt #: 151 c bands: 1 eigenvalues not converged total cpu time spent up to now is 77622.6 secs Computing kpt #: 152 c bands: 1 eigenvalues not converged total cpu time spent up to now is 78231.6 secs Computing kpt #: 153 c bands: 1 eigenvalues not converged total cpu time spent up to now is 78857.1 secs

Computing kpt #: 154

c bands: 1 eigenvalues not converged

total cpu time spent up to now is 79463.5 secs

Computing kpt #: 155

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 80074.8 secs

Computing kpt #: 156

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 80695.7 secs

Computing kpt #: 157

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 81306.6 secs

Computing kpt #: 158

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 81922.5 secs

Computing kpt #: 159

total cpu time spent up to now is 82392.4 secs

Computing kpt #: 160

total cpu time spent up to now is 82895.3 secs

Computing kpt #: 161

total cpu time spent up to now is 83358.4 secs

Computing kpt #: 162

total cpu time spent up to now is 83885.6 secs

Computing kpt #: 163

total cpu time spent up to now is 84355.5 secs

Computing kpt #: 164

total cpu time spent up to now is 84818.0 secs

Computing kpt #: 165

total cpu time spent up to now is 85320.8 secs

Computing kpt #: 166

total cpu time spent up to now is 85838.5 secs

Computing kpt #: 167

c\_bands: 2 eigenvalues not converged

total cpu time spent up to now is 86463.0 secs

Computing kpt #: 168

c\_bands: 2 eigenvalues not converged

total cpu time spent up to now is 87086.2 secs

Computing kpt #: 169

total cpu time spent up to now is 87653.0 secs

Computing kpt #: 170

total cpu time spent up to now is 88157.2 secs

Computing kpt #: 171

total cpu time spent up to now is 88710.5 secs

Computing kpt #: 172 total cpu time spent up to now is 89281.1 secs Computing kpt #: 173 total cpu time spent up to now is 89835.8 secs Computing kpt #: 174 total cpu time spent up to now is 90400.9 secs Computing kpt #: 175 total cpu time spent up to now is 90918.9 secs Computing kpt #: 176 total cpu time spent up to now is 91481.2 secs Computing kpt #: 177 total cpu time spent up to now is 91980.7 secs Computing kpt #: 178 total cpu time spent up to now is 92609.6 secs Computing kpt #: 179 total cpu time spent up to now is 93191.7 secs Computing kpt #: 180 c bands: 2 eigenvalues not converged total cpu time spent up to now is 93814.3 secs Computing kpt #: 181 c bands: 1 eigenvalues not converged total cpu time spent up to now is 94438.6 secs Computing kpt #: 182 c bands: 1 eigenvalues not converged 95054.5 secs total cpu time spent up to now is Computing kpt #: 183 c bands: 1 eigenvalues not converged total cpu time spent up to now is 95657.4 secs Computing kpt #: 184 total cpu time spent up to now is 96241.0 secs Computing kpt #: 185 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 96851.6 secs Computing kpt #: 186 c bands: 1 eigenvalues not converged total cpu time spent up to now is 97463.1 secs Computing kpt #: 187 total cpu time spent up to now is 98064.5 secs Computing kpt #: 188 total cpu time spent up to now is 98577.5 secs Computing kpt #: 189 total cpu time spent up to now is 99029.9 secs Computing kpt #: 190 total cpu time spent up to now is 99579.3 secs Computing kpt #: 191 total cpu time spent up to now is 100126.7 secs Computing kpt #: 192 total cpu time spent up to now is 100698.8 secs Computing kpt #: 193 total cpu time spent up to now is 101163.1 secs Computing kpt #: 194 total cpu time spent up to now is 101621.4 secs Computing kpt #: 195 total cpu time spent up to now is 102087.3 secs Computing kpt #: 196 total cpu time spent up to now is 102606.2 secs Computing kpt #: 197 total cpu time spent up to now is 103150.9 secs Computing kpt #: 198 c\_bands: 2 eigenvalues not converged total cpu time spent up to now is 103797.6 secs Computing kpt #: 199 c bands: 1 eigenvalues not converged total cpu time spent up to now is 104429.2 secs Computing kpt #: 200 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 105056.9 secs Computing kpt #: 201 total cpu time spent up to now is 105639.6 secs Computing kpt #: 202 total cpu time spent up to now is 106261.1 secs Computing kpt #: 203 total cpu time spent up to now is 106778.6 secs Computing kpt #: 204 total cpu time spent up to now is 107309.8 secs Computing kpt #: 205 c bands: 1 eigenvalues not converged total cpu time spent up to now is 107934.4 secs Computing kpt #: 206 c\_bands: 2 eigenvalues not converged total cpu time spent up to now is 108560.2 secs Computing kpt #: 207 c bands: 1 eigenvalues not converged total cpu time spent up to now is 109174.7 secs Computing kpt #: 208 c bands: 1 eigenvalues not converged total cpu time spent up to now is 109802.3 secs Computing kpt #: 209

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 110409.7 secs

Computing kpt #: 210

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 111021.9 secs

Computing kpt #: 211

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 111645.6 secs

Computing kpt #: 212

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 112246.0 secs

Computing kpt #: 213

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 112855.5 secs

Computing kpt #: 214

c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 113484.1 secs

Computing kpt #: 215

c bands: 1 eigenvalues not converged

total cpu time spent up to now is 114096.4 secs

Computing kpt #: 216

total cpu time spent up to now is 114597.2 secs

Computing kpt #: 217

total cpu time spent up to now is 115122.5 secs

Computing kpt #: 218

total cpu time spent up to now is 115575.8 secs

Computing kpt #: 219

total cpu time spent up to now is 116033.9 secs

Computing kpt #: 220

total cpu time spent up to now is 116487.1 secs

Computing kpt #: 221

total cpu time spent up to now is 116958.5 secs

Computing kpt #: 222

total cpu time spent up to now is 117406.3 secs

Computing kpt #: 223

total cpu time spent up to now is 117864.6 secs

Computing kpt #: 224

total cpu time spent up to now is 118362.8 secs

Computing kpt #: 225

total cpu time spent up to now is 118872.2 secs

Computing kpt #: 226

total cpu time spent up to now is 119410.1 secs

Computing kpt #: 227

total cpu time spent up to now is 120007.5 secs Computing kpt #: 228 c bands: 1 eigenvalues not converged total cpu time spent up to now is 120603.8 secs Computing kpt #: 229 total cpu time spent up to now is 121156.2 secs Computing kpt #: 230 total cpu time spent up to now is 121641.7 secs Computing kpt #: 231 total cpu time spent up to now is 122129.0 secs Computing kpt #: 232 total cpu time spent up to now is 122584.8 secs Computing kpt #: 233 total cpu time spent up to now is 123033.2 secs Computing kpt #: 234 total cpu time spent up to now is 123495.6 secs Computing kpt #: 235 total cpu time spent up to now is 123947.1 secs Computing kpt #: total cpu time spent up to now is 124398.0 secs Computing kpt #: 237 total cpu time spent up to now is 124850.9 secs Computing kpt #: 238 total cpu time spent up to now is 125293.5 secs Computing kpt #: 239 total cpu time spent up to now is 125736.2 secs Computing kpt #: 240 total cpu time spent up to now is 126196.3 secs

total cpu time spent up to now is 126596.4 secs

Computing kpt #: 242
total cpu time spent up to now is 126995.1 secs

Computing kpt #: 243
total cpu time spent up to now is 127436.0 secs

Computing kpt #: 241

Computing kpt #: 244 total cpu time spent up to now is 127836.8 secs

Computing kpt #: 245 total cpu time spent up to now is 128236.6 secs

Computing kpt #: 246 total cpu time spent up to now is 128642.9 secs

Computing kpt #: 247 total cpu time spent up to now is 129052.6 secs

Computing kpt #: 248 total cpu time spent up to now is 129453.4 secs Computing kpt #: 249 total cpu time spent up to now is 129949.9 secs Computing kpt #: 250 total cpu time spent up to now is 130500.8 secs Computing kpt #: 251 c\_bands: 1 eigenvalues not converged 131106.1 secs total cpu time spent up to now is Computing kpt #: 252 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 131734.0 secs Computing kpt #: 253 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 132344.2 secs Computing kpt #: 254 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 132950.8 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 133559.9 secs Computing kpt #: 256 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 134180.9 secs Computing kpt #: 257 total cpu time spent up to now is 134787.4 secs Computing kpt #: 258 total cpu time spent up to now is 135388.8 secs Computing kpt #: 259 total cpu time spent up to now is 135941.4 secs Computing kpt #: 260 total cpu time spent up to now is 136457.4 secs Computing kpt #: 261 total cpu time spent up to now is 136921.8 secs Computing kpt #: 262 total cpu time spent up to now is 137385.5 secs Computing kpt #: 263 total cpu time spent up to now is 137840.3 secs Computing kpt #: total cpu time spent up to now is 138311.2 secs Computing kpt #: total cpu time spent up to now is 138768.3 secs Computing kpt #: 266

total cpu time spent up to now is 139222.6 secs Computing kpt #: 267 total cpu time spent up to now is 139679.4 secs Computing kpt #: 268 total cpu time spent up to now is 140135.6 secs Computing kpt #: 269 total cpu time spent up to now is 140604.0 secs Computing kpt #: 270 total cpu time spent up to now is 141067.0 secs Computing kpt #: 271 total cpu time spent up to now is 141476.5 secs Computing kpt #: 272 total cpu time spent up to now is 141931.3 secs Computing kpt #: 273 total cpu time spent up to now is 142337.6 secs Computing kpt #: 274 total cpu time spent up to now is 142743.6 secs Computing kpt #: 275 total cpu time spent up to now is 143149.2 secs Computing kpt #: 276 total cpu time spent up to now is 143552.4 secs Computing kpt #: 277 total cpu time spent up to now is 143955.7 secs Computing kpt #: 278 total cpu time spent up to now is 144366.5 secs 279 Computing kpt #: total cpu time spent up to now is 144811.4 secs Computing kpt #: 280 total cpu time spent up to now is 145259.7 secs Computing kpt #: 281 total cpu time spent up to now is 145708.5 secs Computing kpt #: 282 total cpu time spent up to now is 146137.0 secs Computing kpt #: 283 total cpu time spent up to now is 146592.9 secs Computing kpt #: 284 total cpu time spent up to now is 147091.1 secs Computing kpt #: 285 total cpu time spent up to now is 147536.1 secs Computing kpt #: 286 total cpu time spent up to now is 147944.2 secs Computing kpt #: 287 total cpu time spent up to now is 148397.8 secs Computing kpt #: 288 total cpu time spent up to now is 148868.6 secs Computing kpt #: 289 total cpu time spent up to now is 149330.6 secs Computing kpt #: 290 total cpu time spent up to now is 149786.3 secs Computing kpt #: 291 total cpu time spent up to now is 150240.5 secs Computing kpt #: 292 total cpu time spent up to now is 150702.2 secs Computing kpt #: 293 total cpu time spent up to now is 151180.3 secs Computing kpt #: 294 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 151804.8 secs Computing kpt #: 295 total cpu time spent up to now is 152222.1 secs Computing kpt #: 296 total cpu time spent up to now is 152686.9 secs Computing kpt #: 297 total cpu time spent up to now is 153115.2 secs Computing kpt #: 298 total cpu time spent up to now is 153536.5 secs Computing kpt #: 299 total cpu time spent up to now is 153995.9 secs Computing kpt #: 300 total cpu time spent up to now is 154410.0 secs Computing kpt #: 301 total cpu time spent up to now is 154884.9 secs Computing kpt #: 302 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 155502.5 secs Computing kpt #: 303 total cpu time spent up to now is 155919.3 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 156541.4 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 157157.3 secs

Computing kpt #:

306

total cpu time spent up to now is 157667.1 secs Computing kpt #: 307 total cpu time spent up to now is 158223.6 secs Computing kpt #: 308 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 158840.2 secs Computing kpt #: 309 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 159454.3 secs Computing kpt #: 310 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 160079.0 secs Computing kpt #: 311 total cpu time spent up to now is 160631.4 secs Computing kpt #: 312 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 161238.8 secs Computing kpt #: total cpu time spent up to now is 161741.8 secs Computing kpt #: 314 total cpu time spent up to now is 162224.6 secs Computing kpt #: 315 total cpu time spent up to now is 162687.3 secs Computing kpt #: 316 total cpu time spent up to now is 163144.6 secs Computing kpt #: 317 total cpu time spent up to now is 163653.4 secs Computing kpt #: 318 total cpu time spent up to now is 164157.9 secs Computing kpt #: 319 total cpu time spent up to now is 164689.1 secs Computing kpt #: 320 total cpu time spent up to now is 165299.8 secs Computing kpt #: 321 total cpu time spent up to now is 165808.4 secs Computing kpt #: 322 total cpu time spent up to now is 166360.9 secs Computing kpt #: 323 total cpu time spent up to now is 166837.1 secs Computing kpt #: 324 total cpu time spent up to now is 167437.1 secs Computing kpt #: 325

total cpu time spent up to now is

168010.6 secs

Computing kpt #: 326 total cpu time spent up to now is 168492.1 secs Computing kpt #: 327 total cpu time spent up to now is 169054.6 secs Computing kpt #: 328 total cpu time spent up to now is 169528.5 secs Computing kpt #: 329 total cpu time spent up to now is 170036.3 secs Computing kpt #: 330 total cpu time spent up to now is 170546.8 secs Computing kpt #: 331 total cpu time spent up to now is 171169.2 secs Computing kpt #: 332 total cpu time spent up to now is 171780.6 secs Computing kpt #: 333 total cpu time spent up to now is 172329.8 secs Computing kpt #: 334 total cpu time spent up to now is 172846.3 secs Computing kpt #: 335 c bands: 1 eigenvalues not converged total cpu time spent up to now is 173460.0 secs Computing kpt #: 336 c bands: 1 eigenvalues not converged total cpu time spent up to now is 174064.7 secs Computing kpt #: 337 total cpu time spent up to now is 174648.4 secs Computing kpt #: 338 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 175247.6 secs Computing kpt #: 339 total cpu time spent up to now is 175845.4 secs Computing kpt #: 340 total cpu time spent up to now is 176433.3 secs Computing kpt #: 341 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 177029.0 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 177623.0 secs Computing kpt #: 343 total cpu time spent up to now is 178172.9 secs Computing kpt #: 344 c\_bands: 1 eigenvalues not converged

total cpu time spent up to now is 178787.9 secs Computing kpt #: 345 c bands: 1 eigenvalues not converged total cpu time spent up to now is 179385.0 secs Computing kpt #: 346 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 179983.8 secs Computing kpt #: 347 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 180584.1 secs Computing kpt #: 348 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 181205.0 secs Computing kpt #: 349 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 181807.7 secs Computing kpt #: 350 c bands: 1 eigenvalues not converged total cpu time spent up to now is 182337.0 secs Computing kpt #: c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 182816.7 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 183300.7 secs Computing kpt #: 353 c bands: 1 eigenvalues not converged total cpu time spent up to now is 183778.4 secs Computing kpt #: 354 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 184259.0 secs Computing kpt #: 355 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 184737.3 secs Computing kpt #: 356 c bands: 1 eigenvalues not converged total cpu time spent up to now is 185228.8 secs Computing kpt #: 357 c bands: 1 eigenvalues not converged total cpu time spent up to now is 185708.4 secs Computing kpt #: c bands: 1 eigenvalues not converged total cpu time spent up to now is 186184.0 secs Computing kpt #: 359 total cpu time spent up to now is 186565.7 secs Computing kpt #: 360

total cpu time spent up to now is 186934.1 secs Computing kpt #: 361 total cpu time spent up to now is 187329.1 secs Computing kpt #: 362 total cpu time spent up to now is 187735.5 secs Computing kpt #: 363 total cpu time spent up to now is 188146.3 secs Computing kpt #: 364 total cpu time spent up to now is 188582.7 secs Computing kpt #: 365 total cpu time spent up to now is 188978.9 secs Computing kpt #: 366 total cpu time spent up to now is 189390.4 secs Computing kpt #: 367 total cpu time spent up to now is 189875.7 secs Computing kpt #: 368 c\_bands: 2 eigenvalues not converged total cpu time spent up to now is 190361.0 secs Computing kpt #: 369 total cpu time spent up to now is 190797.8 secs Computing kpt #: 370 total cpu time spent up to now is 191267.9 secs Computing kpt #: 371 total cpu time spent up to now is 191665.3 secs Computing kpt #: 372 total cpu time spent up to now is 192122.5 secs Computing kpt #: 373 total cpu time spent up to now is 192511.3 secs Computing kpt #: 374 total cpu time spent up to now is 192949.4 secs Computing kpt #: 375 total cpu time spent up to now is 193386.0 secs Computing kpt #: 376 total cpu time spent up to now is 193818.8 secs Computing kpt #: 377 total cpu time spent up to now is 194266.9 secs Computing kpt #: 378 total cpu time spent up to now is 194703.1 secs Computing kpt #: 379 total cpu time spent up to now is 195165.1 secs Computing kpt #: c\_bands: 2 eigenvalues not converged

total cpu time spent up to now is 195654.3 secs Computing kpt #: 381 c bands: 1 eigenvalues not converged total cpu time spent up to now is 196141.3 secs Computing kpt #: 382 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 196626.9 secs Computing kpt #: 383 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 197123.9 secs Computing kpt #: 384 c\_bands: 1 eigenvalues not converged total cpu time spent up to now is 197619.7 secs Computing kpt #: 385 total cpu time spent up to now is 198052.1 secs Computing kpt #: 386 total cpu time spent up to now is 198456.8 secs Computing kpt #: 387 total cpu time spent up to now is 198900.8 secs Computing kpt #: 388 c\_bands: 2 eigenvalues not converged total cpu time spent up to now is 199387.2 secs Computing kpt #: 389 total cpu time spent up to now is 199823.5 secs Computing kpt #: 390 total cpu time spent up to now is 200245.4 secs Computing kpt #: 391 total cpu time spent up to now is 200685.4 secs Computing kpt #: 392 total cpu time spent up to now is 201128.3 secs Computing kpt #: 393 total cpu time spent up to now is 201505.6 secs Computing kpt #: 394 total cpu time spent up to now is 201881.3 secs Computing kpt #: 395 total cpu time spent up to now is 202246.8 secs Computing kpt #: 396 total cpu time spent up to now is 202669.7 secs Computing kpt #: 397 total cpu time spent up to now is 203122.3 secs Computing kpt #: 398 c\_bands: 2 eigenvalues not converged total cpu time spent up to now is 203632.9 secs

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399
    Computing kpt #:
    total cpu time spent up to now is
                                          204088.9 secs
    Computing kpt #:
                        400
    total cpu time spent up to now is
                                          204536.9 secs
    ethr = 3.91E-10, avg # of iterations = 78.5
    total cpu time spent up to now is
                                          204537.0 secs
   End of band structure calculation
----- SPIN UP -----
         k = 0.0000 \ 0.0000 \ 0.0000 \ (64705 \ PWs) bands (ev):
  -21.5840 -21.4724 -20.1857 -20.1849 -20.1840 -20.1836 -20.1832 -20.1819
  -20.0352 -20.0347 -20.0334 -20.0300 -20.0288 -20.0285 -18.0865 -18.0859
 -18.0845 -18.0840 -18.0832 -18.0827 -17.9322 -17.9311 -17.9302 -17.0361 -17.0351 -17.0344 -17.0340 -17.0314 -17.0296 -15.8730 -15.8679 -15.8658 -15.1619 -15.1613 -15.1602 -12.3856 -12.3849 -12.3841 -12.0358 -12.0288 -12.0221 -12.0198 -12.0136 -12.0096 -11.0283 -11.0280 -11.0280 -11.0273
  -8.8706
                                                                     -8.1092
   -8.8820
            -8.8762
                     -8.8721
                                        -8.8704
                                                  -8.8608
                                                           -8.1098
                                        -7.9952
                                                  -7.9930
                                                           -7.9857
   -8.1084
            -8.1082
                     -8.1072
                               -8.1068
                                                                     -7.7098
                                        -7.7007
   -7.7079
            -7.7045
                     -7.7034
                               -7.7030
                                                  -7.2577
                                                           -7.2572
                                                                     -7.2568
                                                           -6.5071
   -7.1816
            -7.1811
                     -7.1806
                               -7.1796
                                        -7.1795
                                                  -7.1775
                                                                     -6.5066
   -6.5052
            -6.5046
                     -6.4979
                               -6.4975
                                        -5.9118
                                                  -5.9113
                                                            -5.9100
                                                                     -5.9095
   -5.9091
            -5.9072
                     -4.2968
                               -4.2920
                                        -4.2721
                                                  -4.2720
                                                            -4.2699
                                                                     -4.2665
   -4.2660
            -4.2630
                     -4.2105
                               -4.2102
                                         -4.2099
                                                  -4.2092
                                                            -4.2086
                                                                     -4.2084
   -4.0370
            -4.0367
                     -3.9517
                               -3.9509
                                         -3.9506
                                                  -3.8175
                                                            -3.8164
                                                                     -3.8153
   0.4509
             0.4522
                      0.4540
                                1.3470
                                          1.7545
                                                   1.7796
                                                             1.7962
                                                                      1.7973
    1.8078
             1.8166
                       1.8845
                                          2.2151
                                                   2.2154
                                                             2.2159
                                2.1192
                                                                      2.5855
             3.4241
                                3.4257
                                          3.4259
                                                   3.4264
                                                             3.4264
    2.6806
                       3.4245
                                                                      3.4620
    3.4700
             3.4745
         k = 0.0000 - 0.0079 \ 0.0000 \ (64671 \ PWs)
                                                   bands (ev):
  -21.5839 -21.4723 -20.2007 -20.1928 -20.1917 -20.1759 -20.1750 -20.1669
  -20.0534 -20.0425 -20.0416 -20.0221 -20.0208 -20.0098 -18.1016 -18.1003
  -18.0849 -18.0840 -18.0686 -18.0675 -17.9323 -17.9312 -17.9303 -17.0646
  -17.0614 -17.0340 -17.0336 -17.0050 -17.0016 -15.8735 -15.8700 -15.8663
  -15.1613 -15.1598 -15.1587 -12.3854 -12.3847 -12.3839 -12.0539 -12.0454
  -12.0226 -12.0217 -11.9967 -11.9916 -11.0454 -11.0448 -11.0279 -11.0273
  -11.0099 -11.0092 -10.7787 -10.7755 -10.7510 -10.7497 -10.7261 -10.7227
  -9.5966 -9.0548 -9.0543 -9.0359 -9.0353 -9.0173 -9.0169
                                                                     -8.9546
                                                           -8.1498
           -8.8981 -8.8937 -8.8515 -8.8462 -8.8228
  -8.9196
                                                                     -8.1293
           -8.0876 -8.0873 -8.0666 -7.9954 -7.9929
                                                           -7.9859
  -8.1289
                                                                     -7.7303
   -7.7188
           -7.7158 -7.6935 -7.6912 -7.6792 -7.2578
                                                           -7.2572
                                                                     -7.2569
   -7.2033
            -7.1920
                     -7.1910
                              -7.1687
                                        -7.1678
                                                  -7.1565
                                                           -6.5233
                                                                     -6.5161
   -6.5080
            -6.4975
                     -6.4891
                               -6.4857
                                        -5.9265
                                                  -5.9188
                                                           -5.9178
                                                                     -5.9022
   -5.9009
            -5.8931
                     -4.3030
                               -4.2982
                                        -4.2953
                                                  -4.2912
                                                            -4.2686
                                                                     -4.2677
   -4.2400
            -4.2361
                     -4.2346
                               -4.2341
                                         -4.2097
                                                  -4.2090
                                                            -4.1843
                                                                     -4.1835
   -4.0372
            -4.0369
                     -3.9519
                               -3.9511
                                         -3.9507
                                                  -3.8177
                                                            -3.8167
                                                                     -3.8154
   0.4511
             0.4526
                      0.4544
                               1.3471
                                         1.7359
                                                   1.7625
                                                             1.7866
                                                                      1.7976
    1.8277
             1.8413
                       1.8846
                                2.1193
                                          2.2153
                                                   2.2157
                                                             2.2162
                                                                      2.5856
    2.6807
             3.4010
                       3.4012
                                3.4250
                                          3.4256
                                                   3.4435
                                                             3.4499
                                                                      3.4502
    3.4653
             3.4733
         k = 0.0000 - 0.0158 \ 0.0000 \ (64661 \ PWs)
                                                   bands (ev):
```

```
-21.5837 -21.4721 -20.2174 -20.2010 -20.2000 -20.1673 -20.1664 -20.1501
-20.0739 -20.0528 -20.0522 -20.0110 -20.0101 -19.9888 -18.1180 -18.1168
-15.1594 -15.1579 -15.1520 -12.3850 -12.3843 -12.3832 -12.0792 -12.0711
-12.0245 -12.0243 -11.9729 -11.9668 -11.0631 -11.0624 -11.0288 -11.0281
-10.9920 -10.9914 -10.8040 -10.8007 -10.7486 -10.7471 -10.6993 -10.6960
           -9.0731
                    -9.0726
                               -9.0350
                                          -9.0343
                                                    -8.9983
                                                              -8.9978
 -9.5964
                                                                         -8.9666
 -8.9541
           -8.9217
                     -8.9172
                               -8.8280
                                          -8.8227
                                                     -8.7762
                                                               -8.1914
                                                                         -8.1501
 -8.1498
           -8.0669
                     -8.0666
                               -8.0251
                                          -7.9961
                                                    -7.9927
                                                               -7.9866
                                                                         -7.7548
                                                                         -7.2569
 -7.7310
           -7.7281
                     -7.6808
                               -7.6784
                                          -7.6543
                                                    -7.2583
                                                               -7.2575
 -7.2263
           -7.2034
                     -7.2024
                               -7.1568
                                          -7.1559
                                                     -7.1331
                                                               -6.5417
                                                                         -6.5260
                                                               -5.9265
                                                                          -5.8944
 -6.5179
           -6.4889
                     -6.4805
                                -6.4672
                                          -5.9429
                                                     -5.9276
 -5.8932
           -5.8765
                     -4.3332
                                -4.3282
                                          -4.2970
                                                     -4.2925
                                                               -4.2689
                                                                          -4.2676
 -4.2598
           -4.2594
                     -4.2110
                                -4.2093
                                          -4.2089
                                                     -4.2048
                                                               -4.1586
                                                                          -4.1574
                                          -3.9508
                                                    -3.8188
                                                                         -3.8158
 -4.0379
           -4.0374
                     -3.9526
                                -3.9515
                                                               -3.8172
  0.4515
            0.4535
                       0.4559
                                 1.3474
                                           1.7036
                                                     1.7278
                                                                1.7858
                                                                           1.7971
  1.8596
            1.8766
                       1.8849
                                 2.1196
                                            2.2156
                                                      2.2162
                                                                2.2173
                                                                           2.5859
  2.6810
            3.3767
                       3.3769
                                 3.4185
                                            3.4246
                                                      3.4252
                                                                3.4527
                                                                           3.4575
  3.4746
            3.4749
        k = 0.0000 - 0.0237 \ 0.0000 \ (64643 \ PWs)
                                                      bands (ev):
-21.5833 -21.4718 -20.2339 -20.2091 -20.2081 -20.1587 -20.1577 -20.1331 -20.0946 -20.0630 -20.0624 -20.0001 -19.9992 -19.9675 -18.1345 -18.1333 -18.0848 -18.0839 -18.0363 -18.0351 -17.9335 -17.9316 -17.9307 -17.1236 -17.1205 -17.0334 -17.0330 -16.9451 -16.9417 -15.8870 -15.8774 -15.8704 -15.1563 -15.1548 -15.1410 -12.3843 -12.3837 -12.3818 -12.1055 -12.0976 -12.0288 -12.0282 -11.9484 -11.9420 -11.0806 -11.0800 -11.0302 -11.0295 -10.9741 -10.9734 -10.8289 -10.8256 -10.7445 -10.7428 -10.6720 -10.6687 -9.5961 -9.0912 -9.0907 -9.0334 -9.0327 -9.0134 -8.9790 -8.9786
 -8.9550
                                                    -8.7293
           -8.9447
                               -8.8044
                                          -8.7991
                     -8.9403
                                                               -8.2329
                                                                         -8.1710
                     -8.0460
                                -7.9972
                                          -7.9923
                                                     -7.9877
                                                               -7.9836
 -8.1706
           -8.0463
                                                                         -7.7793
           -7.7402
                     -7.6680
                                          -7.6290
                                                     -7.2591
                                                               -7.2583
 -7.7430
                                -7.6654
                                                                         -7.2566
           -7.2147
 -7.2492
                     -7.2137
                                -7.1448
                                          -7.1439
                                                     -7.1095
                                                               -6.5601
                                                                          -6.5364
                                -6.4484
                                                                          -5.8869
 -6.5283
           -6.4808
                     -6.4723
                                          -5.9594
                                                     -5.9367
                                                               -5.9356
 -5.8857
           -5.8598
                     -4.3644
                                -4.3593
                                          -4.2982
                                                     -4.2938
                                                               -4.2850
                                                                          -4.2846
                                -4.2088
                                          -4.1798
 -4.2680
           -4.2674
                     -4.2098
                                                     -4.1763
                                                               -4.1324
                                                                          -4.1307
 -4.0392
           -4.0381
                     -3.9542
                                -3.9517
                                          -3.9510
                                                     -3.8212
                                                               -3.8177
                                                                          -3.8161
  0.4523
            0.4545
                       0.4588
                                 1.3479
                                           1.6688
                                                      1.6919
                                                                1.7850
                                                                           1.7963
  1.8854
            1.8943
                       1.9127
                                 2.1202
                                            2.2163
                                                      2.2169
                                                                2.2194
                                                                           2.5864
                                                      3.4243
                                                                3.4394
  2.6816
            3.3525
                       3.3527
                                 3.3921
                                            3.4237
                                                                           3.4427
  3.4991
            3.4994
        k = 0.0000 - 0.0316 \ 0.0000 \ (64699 \ PWs)
                                                      bands (ev):
-21.5828 -21.4714 -20.2504 -20.2171 -20.2161 -20.1499 -20.1490 -20.1160
-20.1151 -20.0731 -20.0725 -19.9890 -19.9882 -19.9460 -18.1511 -18.1499
-18.0847 -18.0838 -18.0202 -18.0190 -17.9348 -17.9318 -17.9309 -17.1530
-17.1499 -17.0329 -17.0325 -16.9150 -16.9115 -15.9012 -15.8808 -15.8738
-15.1520 -15.1505 -15.1260 -12.3835 -12.3829 -12.3796 -12.1323 -12.1245
-12.0347 -12.0337 -11.9240 -11.9174 -11.0981 -11.0974 -11.0321 -11.0315
-10.9561 -10.9555 -10.8533 -10.8499 -10.7389 -10.7369 -10.6442 -10.6409
 -9.5957
                     -9.1086
                               -9.0606
                                          -9.0311
                                                    -9.0305
                                                               -8.9698
           -9.1090
                                                                         -8.9651
 -8.9595
           -8.9590
                     -8.9516
                                -8.7809
                                          -8.7755
                                                     -8.6823
                                                               -8.2745
                                                                          -8.1919
                                                     -7.9893
           -8.0257
                                -7.9988
                                          -7.9918
                                                               -7.9422
 -8.1916
                     -8.0254
                                                                          -7.8036
           -7.7521
                     -7.6549
                                -7.6523
                                          -7.6035
                                                     -7.2721
                                                               -7.2602
                                                                          -7.2595
 -7.7549
           -7.2258
                     -7.2248
                                -7.1327
                                          -7.1317
                                                     -7.0858
                                                               -6.5784
 -7.2561
                                                                          -6.5472
 -6.5391
           -6.4731
                     -6.4645
                               -6.4296
                                          -5.9757
                                                     -5.9461
                                                               -5.9450
                                                                         -5.8798
                     -4.3958 -4.3905
                                          -4.3099
                                                    -4.3095
                                                               -4.2998
 -5.8786
          -5.8430
                                                                         -4.2953
          -4.2671 -4.2095 -4.2086 -4.1507
                                                    -4.1478 -4.1055
 -4.2679
                                                                         -4.1032
```

```
-4.0410
          -4.0391
                    -3.9565
                               -3.9520
                                         -3.9512
                                                   -3.8247
                                                             -3.8181
                                                                       -3.8166
  0.4533
            0.4556
                     0.4632
                               1.3486
                                         1.6333
                                                   1.6557
                                                             1.7838
                                                                       1.7951
  1.8862
            1.9298
                      1.9490
                                2.1209
                                          2.2171
                                                    2.2178
                                                              2.2223
                                                                        2.5871
            3.3284
                                          3.4223
                                                    3.4228
                                                              3.4265
  2.6823
                      3.3286
                                3.3650
                                                                        3.4287
  3.5189
            3.5238
       k = 0.0000 - 0.0395 \ 0.0000 \ (64739 \ PWs)
                                                    bands (ev):
-21.5822 -21.4708 -20.2668 -20.2250 -20.2240 -20.1410 -20.1401 -20.1355
-20.0988 -20.0830 -20.0824 -19.9778 -19.9770 -19.9244 -18.1678 -18.1666
-18.0845 -18.0836 -18.0042 -18.0030 -17.9367 -17.9320 -17.9311 -17.1823 -17.1792 -17.0323 -17.0319 -16.8848 -16.8813 -15.9187 -15.8851 -15.8782 -15.1465 -15.1451 -15.1076 -12.3825 -12.3819 -12.3768 -12.1596 -12.1518 -12.0421 -12.0408 -11.8997 -11.8932 -11.1155 -11.1149 -11.0346 -11.0339
-10.9381 -10.9374 -10.8772 -10.8737 -10.7316 -10.7293 -10.6159 -10.6127 -9.5952 -9.1266 -9.1262 -9.1078 -9.0283 -9.0276 -8.9930 -8.9884
                    -8.9393 -8.7574
-8.0049 -8.0008
                                                            -8.3160
                                                                      -8.2129
 -8.9516
          -8.9398
                                        -8.7520
                                                  -8.6354
                                                            -7.9009
                                                                      -7.8278
          -8.0052
 -8.2125
                                        -7.9917
                                                  -7.9908
                                        -7.5779
                                                  -7.2948
 -7.7667
          -7.7639
                    -7.6416 -7.6391
                                                            -7.2617
                                                                      -7.2610
          -7.2367
                    -7.2357
                                                            -6.5967
 -7.2556
                              -7.1204
                                        -7.1194
                                                  -7.0620
                                                                       -6.5584
 -6.5504
          -6.4658
                    -6.4572
                              -6.4107
                                        -5.9920
                                                  -5.9559
                                                             -5.9548
                                                                       -5.8729
 -5.8718
                                                  -4.3343
          -5.8262
                    -4.4271
                              -4.4218
                                        -4.3346
                                                             -4.3020
                                                                       -4.2973
                                                   -4.1203
 -4.2676
          -4.2668
                    -4.2092
                              -4.2083
                                         -4.1225
                                                             -4.0779
                                                                       -4.0749
                    -3.9595
                                         -3.9515
 -4.0434
           -4.0403
                               -3.9523
                                                   -3.8293
                                                             -3.8187
                                                                       -3.8171
                      0.4689
  0.4547
           0.4570
                                1.3496
                                         1.5975
                                                    1.6194
                                                              1.7823
                                                                        1.7936
            1.9657
                      1.9854
                                2.1218
                                          2.2183
                                                    2.2189
  1.8871
                                                              2.2262
                                                                        2.5880
  2.6832
            3.3044
                      3.3046
                                3.3378
                                          3.4123
                                                    3.4144
                                                              3.4214
                                                                        3.4220
  3.5206
            3.5485
       k = 0.0000 - 0.0475 \ 0.0000 \ (64747 \ PWs)
                                                    bands (ev):
-21.5814 -21.4701 -20.2831 -20.2328 -20.2318 -20.1558 -20.1320 -20.1311
-20.0928 -20.0922 -20.0816 -19.9664 -19.9656 -19.9025 -18.1845 -18.1833
-18.0843 -18.0835 -17.9883 -17.9871 -17.9389 -17.9323 -17.9313 -17.2114
-17.2083 -17.0316 -17.0311 -16.8544 -16.8509 -15.9391 -15.8903 -15.8835
-15.1399 -15.1385 -15.0860 -12.3812 -12.3806 -12.3734 -12.1872 -12.1795 -12.0511 -12.0495 -11.8758 -11.8692 -11.1329 -11.1322 -11.0376 -11.0370
-10.9200 -10.9194 -10.9005 -10.8971 -10.7229 -10.7203 -10.5872 -10.5839
                              -9.1435 -9.0247
 -9.5946
          -9.1550
                    -9.1440
                                                  -9.0241
                                                            -9.0165
                                                                      -9.0119
 -8.9508
          -8.9198
                    -8.9193
                              -8.7340
                                        -8.7285
                                                  -8.5885
                                                            -8.3576
                                                                      -8.2339
          -8.0033
                    -7.9939
                              -7.9902
                                        -7.9847
                                                  -7.9844
                                                                      -7.8494
 -8.2335
                                                            -7.8618
                    -7.6282
                              -7.6256
 -7.7782
          -7.7754
                                        -7.5521
                                                  -7.3173
                                                            -7.2635
                                                                      -7.2628
                                                  -7.0381
 -7.2548
          -7.2475
                    -7.2465
                              -7.1079
                                        -7.1069
                                                            -6.6148
                                                                      -6.5701
                              -6.3917
                                        -6.0083
                                                  -5.9659
                                                            -5.9649
          -6.4590
                    -6.4503
 -6.5622
                                                                       -5.8664
          -5.8094
                    -4.4586
                              -4.4532
                                        -4.3594
                                                  -4.3590
                                                            -4.3049
 -5.8653
                                                                      -4.2995
          -4.2663
 -4.2672
                    -4.2089
                              -4.2080
                                        -4.0952
                                                  -4.0936
                                                            -4.0494
                                                                       -4.0463
                                                  -3.8348
 -4.0458
          -4.0418
                    -3.9631
                              -3.9527
                                        -3.9519
                                                            -3.8194
                                                                      -3.8178
                     0.4758
                               1.3507
           0.4586
                                         1.5615
                                                   1.5830
                                                             1.7805
  0.4563
                                                                        1.7917
  1.8882
            2.0017
                      2.0218
                                2.1229
                                          2.2196
                                                    2.2203
                                                              2.2308
                                                                        2.5891
  2.6843
            3.2805
                      3.2807
                                3.3106
                                          3.3993
                                                    3.4010
                                                              3.4195
                                                                        3.4201
  3.5220
            3.5698
       k = 0.0000 - 0.0554 \ 0.0000 \ (64767 \ PWs)
                                                    bands (ev):
-21.5804 -21.4693 -20.2993 -20.2405 -20.2395 -20.1760 -20.1229 -20.1220
-20.1024 -20.1018 -20.0643 -19.9550 -19.9542 -19.8806 -18.2013 -18.2001
-18.0841 -18.0832 -17.9725 -17.9713 -17.9417 -17.9325 -17.9316 -17.2405
-17.2374 -17.0307 -17.0302 -16.8240 -16.8205 -15.9619 -15.8963 -15.8896
-15.1322 -15.1309 -15.0618 -12.3798 -12.3792 -12.3693 -12.2152 -12.2075
-12.0614 -12.0595 -11.8521 -11.8455 -11.1501 -11.1494 -11.0411 -11.0405
```

```
-8.7050
 -8.9497
           -8.8996
                      -8.8991
                                 -8.7105
                                                      -8.5416
                                                                 -8.3991
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                      -7.9968
                                 -7.9893
 -8.2546
           -8.0062
                                           -7.9644
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           -7.7867
                                                                -7.2656
 -7.7896
                      -7.6147
                                 -7.6120
                                           -7.5262
                                                      -7.3398
                                                                           -7.2649
                                 -7.0953
                                           -7.0943
           -7.2572
                      -7.2539
                                                      -7.0140
                                                                 -6.6329
                                                                            -6.5823
 -7.2581
                                                                            -5.8602
 -6.5744
           -6.4525
                      -6.4439
                                 -6.3727
                                           -6.0245
                                                      -5.9764
                                                                 -5.9753
 -5.8590
           -5.7925
                      -4.4900
                                 -4.4846
                                           -4.3842
                                                      -4.3837
                                                                 -4.3085
                                                                            -4.3020
 -4.2667
            -4.2658
                      -4.2085
                                 -4.2076
                                           -4.0688
                                                      -4.0677
                                                                 -4.0497
                                                                            -4.0435
                                                                           -3.8186
 -4.0201
           -4.0160
                      -3.9675
                                -3.9532
                                           -3.9524
                                                      -3.8414
                                                                 -3.8201
                                                                            1.7895
  0.4583
            0.4606
                      0.4841
                                 1.3521
                                            1.5254
                                                       1.5467
                                                                  1.7783
  1.8895
             2.0379
                       2.0582
                                  2.1243
                                             2.2213
                                                       2.2219
                                                                  2.2364
                                                                             2.5905
  2.6857
             3.2566
                       3.2569
                                  3.2834
                                             3.3863
                                                        3.3879
                                                                  3.4174
                                                                             3.4180
  3.5234
             3.5859
        k = 0.0000 - 0.0633 \ 0.0000 \ (64767 \ PWs)
                                                       bands (ev):
-21.5793 -21.4683 -20.3154 -20.2480 -20.2471 -20.1960 -20.1137 -20.1128 -20.1118 -20.1113 -20.0468 -19.9434 -19.9425 -19.8584 -18.2181 -18.2169 -18.0839 -18.0830 -17.9568 -17.9556 -17.9448 -17.9328 -17.9319 -17.2694 -17.2664 -17.0296 -17.0292 -16.7934 -16.7899 -15.9867 -15.9031 -15.8965 -15.1235 -15.1223 -15.0353 -12.3781 -12.3775 -12.3645 -12.2436 -12.2359 -12.0732 -12.0710 -11.8286 -11.8220 -11.1672 -11.1665 -11.0452 -11.0446 -10.9457 -10.9422 -10.8837 -10.8830 -10.7010 -10.6979 -10.5284 -10.5252 -9.5933 -9.2492 -9.1779 -9.1775 -9.0635 -9.0589 -9.0159 -9.0159
           -9.2492
                                -9.1775
 -9.5933
                                                                -9.0159
                      -9.1779
                                           -9.0635
                                                      -9.0589
                                                                           -9.0152
                      -8.8787
                                                                 -8.4407
 -8.9485
           -8.8792
                                 -8.6871
                                           -8.6815
                                                      -8.4948
                                                                            -8.2760
                                                      -7.9438
 -8.2756
                      -8.0001
                                -7.9882
                                                                 -7.9003
                                                                           -7.8009
           -8.0096
                                           -7.9441
           -7.7759
                                 -7.5983
                                           -7.5001
 -7.7979
                      -7.6009
                                                      -7.3621
                                                                 -7.2686
                                                                           -7.2681
                                -7.0825
                                                      -6.9899
 -7.2677
           -7.2673
                      -7.2529
                                           -7.0816
                                                                 -6.6509
                                                                           -6.5948
                      -6.4378
                                                                 -5.9860
 -6.5871
           -6.4465
                                 -6.3536
                                           -6.0406
                                                      -5.9871
                                                                            -5.8543
           -5.7755
                      -4.5214
                                 -4.5159
                                           -4.4089
                                                      -4.4084
 -5.8532
                                                                 -4.3127
                                                                            -4.3048
 -4.2661
           -4.2652
                      -4.2080
                                 -4.2071
                                           -4.0536
                                                                            -4.0426
                                                      -4.0455
                                                                 -4.0432
 -3.9901
           -3.9855
                      -3.9724
                                 -3.9537
                                            -3.9529
                                                      -3.8490
                                                                 -3.8210
                                                                            -3.8195
  0.4605
             0.4628
                       0.4935
                                  1.3536
                                             1.4894
                                                       1.5104
                                                                  1.7759
                                                                             1.7870
  1.8910
             2.0740
                       2.0946
                                  2.1258
                                             2.2232
                                                        2.2238
                                                                  2.2428
                                                                             2.5920
                                  3.2563
                                                       3.3750
                                                                  3.4150
  2.6872
             3.2329
                       3.2332
                                             3.3734
                                                                             3.4156
  3.5250
             3.6016
        k = 0.0000 - 0.0712 \ 0.0000 \ (64767 \ PWs)
                                                       bands (ev):
-21.5780 -21.4673 -20.3314 -20.2555 -20.2545 -20.2159 -20.1212 -20.1206
-20.1044 -20.1034 -20.0294 -19.9316 -19.9308 -19.8362 -18.2350 -18.2338
-18.0836 -18.0827 -17.9486 -17.9412 -17.9399 -17.9330 -17.9322 -17.2982
-17.2952 \ -17.0285 \ -17.0280 \ -16.7628 \ -16.7592 \ -16.0134 \ -15.9106 \ -15.9041
-15.1138 -15.1127 -15.0069 -12.3763 -12.3757 -12.3591 -12.2723 -12.2646
-12.0862 -12.0838 -11.8055 -11.7989 -11.1843 -11.1836 -11.0498 -11.0492
-10.9675 -10.9640 -10.8654 -10.8648 -10.6880 -10.6846 -10.4984 -10.4952
 -9.5926
           -9.2962
                     -9.1945
                                -9.1941
                                          -9.0870
                                                     -9.0824
                                                                -9.0105
                                                                           -9.0099
 -8.9470
           -8.8586
                      -8.8581 -8.6637
                                           -8.6581
                                                      -8.4822
                                                                -8.4480
                                                                           -8.2971
 -8.2967
           -8.0134
                      -8.0040
                                -7.9869
                                           -7.9241
                                                      -7.9238
                                                                -7.9233
                                                                           -7.8119
 -7.8089
           -7.7346
                     -7.5870
                                -7.5844
                                           -7.4739
                                                      -7.3842
                                                                -7.2790
                                                                           -7.2780
 -7.2708
           -7.2701
                     -7.2517
                                -7.0696
                                           -7.0686
                                                      -6.9656
                                                                -6.6688
                                                                           -6.6078
                                                                            -5.8487
 -6.6002
           -6.4410
                      -6.4322
                                -6.3345
                                           -6.0566
                                                      -5.9982
                                                                 -5.9971
                                                                            -4.3078
 -5.8476
           -5.7585
                      -4.5528
                                -4.5472
                                           -4.4337
                                                      -4.4332
                                                                 -4.3176
 -4.2655
            -4.2645
                      -4.2075
                                 -4.2066
                                           -4.0581
                                                      -4.0478
                                                                 -4.0183
                                                                            -4.0180
                                            -3.9531
                                                       -3.8575
 -3.9783
            -3.9594
                      -3.9555
                                 -3.9536
                                                                 -3.8220
                                                                            -3.8205
  0.4631
            0.4653
                       0.5042
                                  1.3554
                                            1.4533
                                                       1.4741
                                                                  1.7730
                                                                             1.7842
  1.8928
             2.1102
                       2.1276
                                  2.1311
                                             2.2254
                                                        2.2260
                                                                  2.2500
                                                                             2.5937
                                  3.2294
                                                        3.3623
                                                                  3.4122
  2.6890
             3.2094
                        3.2096
                                             3.3608
                                                                             3.4128
  3.5268
             3.6177
        k = 0.0000 - 0.0791 \ 0.0000 \ (64785 \ PWs)
                                                       bands (ev):
-21.5767 -21.4661 -20.3474 -20.2628 -20.2619 -20.2356 -20.1304 -20.1298
```

```
-20.0950 -20.0940 -20.0118 -19.9197 -19.9189 -19.8138 -18.2519 -18.2507
-18.0833 -18.0824 -17.9525 -17.9337 -17.9326 -17.9255 -17.9244 -17.3269
-17.3239 -17.0272 -17.0267 -16.7321 -16.7285 -16.0414 -15.9188 -15.9124
-15.1032 -15.1022 -14.9768 -12.3742 -12.3736 -12.3532 -12.3014 -12.2937 -12.1004 -12.0978 -11.7826 -11.7760 -11.2012 -11.2005 -11.0549 -11.0543
-10.9888 -10.9852 -10.8472 -10.8465 -10.6738 -10.6701 -10.4680 -10.4648
           -9.3429
                      -9.2109
                                 -9.2105
                                           -9.1105
                                                       -9.1058
                                                                 -9.0046
 -9.5921
                                                                            -9.0039
 -8.9454
           -8.8377
                      -8.8372
                                 -8.6404
                                            -8.6347
                                                       -8.5237
                                                                  -8.4014
                                                                            -8.3182
 -8.3178
           -8.0177
                      -8.0082
                                 -7.9855
                                            -7.9474
                                                       -7.9038
                                                                  -7.9035
                                                                            -7.8227
                                                                            -7.2882
 -7.8196
           -7.6933
                      -7.5730
                                 -7.5703
                                            -7.4475
                                                       -7.4063
                                                                  -7.2891
 -7.2739
           -7.2732
                      -7.2504
                                 -7.0565
                                            -7.0556
                                                       -6.9412
                                                                  -6.6866
                                                                             -6.6213
 -6.6137
           -6.4359
                      -6.4271
                                 -6.3153
                                            -6.0726
                                                       -6.0095
                                                                  -6.0085
                                                                             -5.8435
 -5.8424
           -5.7415
                      -4.5841
                                 -4.5785
                                            -4.4584
                                                       -4.4579
                                                                  -4.3231
                                                                             -4.3111
 -4.2647
            -4.2637
                      -4.2069
                                 -4.2060
                                            -4.0631
                                                       -4.0504
                                                                  -3.9940
                                                                             -3.9938
                                                                  -3.8232
 -3.9845
           -3.9550
                      -3.9542
                                 -3.9283
                                            -3.9232
                                                       -3.8669
                                                                             -3.8216
  0.4659
             0.4682
                        0.5160
                                  1.3573
                                             1.4172
                                                        1.4379
                                                                   1.7699
                                                                              1.7810
                                             2.2277
  1.8947
             2.1296
                        2.1464
                                   2.1674
                                                        2.2284
                                                                   2.2581
                                                                              2.5956
  2.6909
             3.1860
                        3.1862
                                   3.2026
                                             3.3483
                                                        3.3498
                                                                   3.4092
                                                                              3.4098
  3.5287
             3.6340
        k = 0.0000 - 0.0870 \ 0.0000 \ (64797 \ PWs)
                                                        bands (ev):
-21.5751 -21.4648 -20.3632 -20.2701 -20.2691 -20.2552 -20.1394 -20.1388 -20.0855 -20.0845 -19.9941 -19.9077 -19.9068 -19.7913 -18.2689 -18.2677 -18.0829 -18.0821 -17.9569 -17.9340 -17.9330 -17.9102 -17.9090 -17.3555 -17.3526 -17.0257 -17.0252 -16.7012 -16.6976 -16.0706 -15.9276 -15.9213 -15.0918 -15.0908 -14.9452 -12.3719 -12.3713 -12.3465 -12.3308 -12.3230 -12.1158 -12.1130 -11.7599 -11.7534 -11.2180 -11.2173 -11.0605 -11.0599 -11.0096 -11.0060 -10.8288 -10.8282 -10.6584 -10.6545 -10.4372 -10.4340 -9.5919 -9.3893 -9.2269 -9.2265 -9.1340 -9.1201 -8.9981 -8.9974
 -9.5919
           -9.3893
                      -9.2269
                                -9.2265
                                           -9.1340
                                                      -9.1291
                                                                 -8.9981
                                                                            -8.9974
 -8.9436
                                 -8.6171
           -8.8167
                      -8.8161
                                            -8.6114
                                                       -8.5651
                                                                  -8.3548
                                                                             -8.3393
                                 -7.9839
                                            -7.9707
                                                                             -7.8333
 -8.3390
            -8.0224
                      -8.0129
                                                       -7.8839
                                                                  -7.8835
 -7.8301
                      -7.5587
                                 -7.5560
                                            -7.4282
           -7.6520
                                                       -7.4210
                                                                  -7.2991
                                                                             -7.2982
                      -7.2490
                                 -7.0433
 -7.2773
            -7.2766
                                            -7.0424
                                                       -6.9166
                                                                  -6.7043
                                                                             -6.6351
                      -6.4224
                                 -6.2960
                                                                  -6.0202
 -6.6277
            -6.4312
                                            -6.0886
                                                       -6.0212
                                                                             -5.8386
 -5.8374
            -5.7244
                      -4.6154
                                 -4.6098
                                            -4.4832
                                                       -4.4826
                                                                  -4.3292
                                                                             -4.3147
 -4.2639
            -4.2629
                      -4.2063
                                 -4.2054
                                            -4.0686
                                                       -4.0532
                                                                  -3.9914
                                                                             -3.9701
 -3.9700
            -3.9557
                      -3.9549
                                 -3.8972
                                            -3.8916
                                                       -3.8771
                                                                  -3.8244
                                                                             -3.8229
  0.4690
             0.4713
                        0.5291
                                  1.3595
                                             1.3811
                                                        1.4017
                                                                   1.7665
                                                                              1.7775
  1.8969
             2.1317
                        2.1825
                                   2.2037
                                             2.2304
                                                        2.2312
                                                                   2.2670
                                                                              2.5977
  2.6931
             3.1627
                        3.1629
                                   3.1760
                                             3.3361
                                                        3.3375
                                                                   3.4058
                                                                              3.4065
  3.5309
             3.6507
        k = 0.0000 - 0.0949 \ 0.0000 \ (64793 \ PWs)
                                                        bands (ev):
-21.5734 -21.4633 -20.3790 -20.2772 -20.2762 -20.2747 -20.1483 -20.1477
-20.0758 -20.0749 -19.9764 -19.8955 -19.8947 -19.7686 -18.2859 -18.2847
-18.0825 -18.0817 -17.9618 -17.9344 -17.9334 -17.8949 -17.8937 -17.3840
-17.3811 -17.0241 -17.0236 -16.6703 -16.6666 -16.1009 -15.9369 -15.9307
-15.0795 -15.0786 -14.9125 -12.3694 -12.3687 -12.3605 -12.3528 -12.3393
-12.1323 -12.1292 -11.7375 -11.7310 -11.2347 -11.2340 -11.0666 -11.0659
-11.0299 -11.0263 -10.8104 -10.8098 -10.6419 -10.6377 -10.4060 -10.4028
 -9.5925
            -9.4347
                      -9.2428
                                 -9.2424
                                            -9.1575
                                                       -9.1524
                                                                  -8.9910
                                                                             -8.9903
                                                       -8.5881
                                                                  -8.3605
            -8.7954
                      -8.7948
                                 -8.6066
                                            -8.5939
 -8.9416
                                                                             -8.3601
 -8.3083
                                 -7.9938
                                            -7.9822
                                                       -7.8646
                                                                  -7.8642
            -8.0275
                      -8.0181
                                                                             -7.8430
 -7.8399
            -7.6107
                      -7.5443
                                 -7.5416
                                            -7.4500
                                                       -7.3944
                                                                  -7.3090
                                                                             -7.3081
 -7.2811
            -7.2803
                      -7.2474
                                 -7.0299
                                            -7.0290
                                                       -6.8920
                                                                  -6.7220
                                                                             -6.6494
 -6.6421
            -6.4269
                      -6.4180
                                 -6.2767
                                            -6.1044
                                                       -6.0332
                                                                  -6.0322
                                                                             -5.8339
 -5.8328
            -5.7073
                      -4.6466
                                 -4.6410
                                            -4.5080
                                                       -4.5074
                                                                  -4.3359
                                                                             -4.3187
 -4.2630
           -4.2620
                      -4.2056
                                 -4.2046
                                            -4.0747
                                                       -4.0563
                                                                  -3.9990
                                                                             -3.9566
                                 -3.8890
                                            -3.8649
                                                       -3.8599
                                                                  -3.8257
 -3.9557
           -3.9466
                      -3.9465
                                                                             -3.8242
  0.4724
            0.4747
                      0.5433
                                 1.3451
                                            1.3618
                                                       1.3655
                                                                  1.7627
                                                                             1.7736
```

```
1.8992
                                                      2.2417
                                                                2.2768
                                                                           2.6000
            2.1341
                       2.2182
                                 2.2324
                                            2.2338
  2.6954
            3.1394
                       3.1397
                                 3.1495
                                            3.3240
                                                      3.3254
                                                                3.4022
                                                                           3.4028
  3.5332
            3.6672
        k = 0.0000 - 0.1028 \ 0.0000 \ (64787 \ PWs)
                                                      bands (ev):
-21.5716 -21.4617 -20.3946 -20.2940 -20.2842 -20.2832 -20.1570 -20.1565
-20.0661 -20.0651 -19.9586 -19.8832 -19.8823 -19.7458 -18.3029 -18.3017
-18.0821 \ -18.0813 \ -17.9670 \ -17.9348 \ -17.9339 \ -17.8798 \ -17.8786 \ -17.4124
-17.4094 -17.0224 -17.0219 -16.6393 -16.6356 -16.1319 -15.9468 -15.9407 -15.0665 -15.0656 -14.8787 -12.3905 -12.3828 -12.3666 -12.3660 -12.3314 -12.1497 -12.1465 -11.7153 -11.7089 -11.2513 -11.2506 -11.0731 -11.0725
-11.0497 \ -11.0460 \ -10.7920 \ -10.7914 \ -10.6244 \ -10.6200 \ -10.3744 \ -10.3712
                     -9.2583 -9.2580 -9.1810 -9.1757
 -9.5948
           -9.4783
                                                               -8.9833
                                                                         -8.9827
                                          -8.5707
                                                               -8.3817
 -8.9395
           -8.7739
                     -8.7734
                               -8.6479
                                                    -8.5649
                                                                         -8.3813
                                                                         -7.8414
 -8.2619
           -8.0332
                     -8.0238
                               -8.0166 -7.9803
                                                    -7.8568
                                                               -7.8538
                               -7.5270
 -7.8406
           -7.5694
                     -7.5298
                                          -7.4716
                                                    -7.3676
                                                               -7.3187
                                                                         -7.3178
           -7.2844
                                                    -6.8673
                                                               -6.7395
                                                                         -6.6641
 -7.2851
                     -7.2456
                               -7.0164
                                          -7.0155
           -6.4230
                                                    -6.0456
                                                               -6.0445
                                                                          -5.8296
 -6.6569
                     -6.4141
                               -6.2573
                                          -6.1202
                                -4.6721
                                          -4.5327
                                                               -4.3433
 -5.8285
           -5.6901
                     -4.6778
                                                     -4.5321
                                                                          -4.3229
 -4.2620
           -4.2610
                     -4.2048
                                -4.2039
                                          -4.0812
                                                     -4.0597
                                                               -4.0072
                                                                          -3.9574
 -3.9566
           -3.9235
                     -3.9234
                                -3.9009
                                          -3.8338
                                                     -3.8294
                                                               -3.8263
                                                                          -3.8246
                                           1.3293
                      0.5587
                                                                1.7586
  0.4761
            0.4784
                                 1.3091
                                                      1.3645
                                                                           1.7695
                       2.2357
                                 2.2365
                                            2.2554
                                                      2.2770
  1.9018
            2.1367
                                                                2.2876
                                                                           2.6026
  2.6980
            3.1164
                       3.1167
                                 3.1232
                                            3.3122
                                                      3.3136
                                                                3.3982
                                                                           3.3989
  3.5357
            3.6680
        k = 0.0000 - 0.1107 \ 0.0000 \ (64765 \ PWs)
                                                      bands (ev):
-21.5696 -21.4600 -20.4102 -20.3132 -20.2911 -20.2901 -20.1656 -20.1651 -20.0562 -20.0553 -19.9407 -19.8707 -19.8698 -19.7228 -18.3199 -18.3188 -18.0817 -18.0808 -17.9726 -17.9353 -17.9344 -17.8648 -17.8636 -17.4406 -17.4377 -17.0206 -17.0200 -16.6082 -16.6044 -16.1637 -15.9571 -15.9512 -15.0528 -15.0519 -14.8440 -12.4208 -12.4131 -12.3636 -12.3630 -12.3230
-12.1681 -12.1647 -11.6934 -11.6870 -11.2678 -11.2671 -11.0801 -11.0795
-11.0689 -11.0653 -10.7735 -10.7729 -10.6059 -10.6013 -10.3425 -10.3393
 -9.6018
                               -9.2733
          -9.5172
                     -9.2737
                                         -9.2045
                                                    -9.1988
                                                               -8.9751
                                                                         -8.9745
 -8.9372
           -8.7522
                     -8.7517
                               -8.6893
                                          -8.5476
                                                    -8.5417
                                                               -8.4028
                                                                         -8.4025
                     -8.0380
                               -8.0295
                                                               -7.8620
 -8.2157
           -8.0410
                                          -7.9783
                                                    -7.8657
                                                                         -7.8229
                                          -7.4931
 -7.8226
           -7.5283
                     -7.5151
                               -7.5123
                                                    -7.3407
                                                               -7.3283
                                                                         -7.3273
                                          -7.0018
 -7.2895
           -7.2888
                     -7.2438
                               -7.0028
                                                    -6.8424
                                                               -6.7569
                                                                          -6.6793
                     -6.4107
 -6.6722
           -6.4196
                               -6.2379
                                          -6.1359
                                                     -6.0583
                                                               -6.0572
                                                                          -5.8256
                                                     -4.5569
           -5.6729
                     -4.7089
                                -4.7031
                                          -4.5575
 -5.8244
                                                               -4.3512
                                                                          -4.3275
                                                     -4.0633
           -4.2599
                     -4.2039
                                -4.2030
                                          -4.0883
 -4.2609
                                                               -4.0161
                                                                          -3.9583
           -3.9144
                     -3.9007
                                -3.9000
                                          -3.8290
 -3.9575
                                                     -3.8275
                                                               -3.8012
                                                                          -3.7956
            0.4823
                      0.5752
  0.4801
                                 1.2731
                                           1.2933
                                                     1.3672
                                                                1.7542
                                                                           1.7650
  1.9045
            2.1395
                      2.2393
                                 2.2400
                                            2.2898
                                                      2.3003
                                                                2.3134
                                                                           2.6053
  2.7008
            3.0936
                      3.0939
                                 3.0971
                                           3.3005
                                                      3.3019
                                                                3.3940
                                                                           3.3946
  3.5384
            3.6418
        k = 0.0000 - 0.1186 \ 0.0000 \ (64769 \ PWs)
                                                      bands (ev):
-21.5675 -21.4582 -20.4256 -20.3323 -20.2979 -20.2969 -20.1741 -20.1736
-20.0463 -20.0453 -19.9228 -19.8581 -19.8572 -19.6997 -18.3370 -18.3359
-18.0812 -18.0803 -17.9787 -17.9359 -17.9349 -17.8498 -17.8486 -17.4687
-17.4659 -17.0186 -17.0180 -16.5769 -16.5732 -16.1961 -15.9679 -15.9620
-15.0384 -15.0376 -14.8085 -12.4515 -12.4438 -12.3605 -12.3599 -12.3139
-12.1874 -12.1838 -11.6717 -11.6653 -11.2841 -11.2834 -11.0878 -11.0875
-11.0869 -11.0840 -10.7551 -10.7544 -10.5865 -10.5817 -10.3103 -10.3070
 -9.6201
          -9.5448 -9.2887 -9.2883 -9.2279 -9.2217 -8.9664 -8.9657
                    -8.7303 -8.7297
                                          -8.5245
                                                    -8.5186
 -8.9347
          -8.7308
                                                               -8.4241
                                                                         -8.4237
 -8.1696 -8.0626 -8.0454 -8.0360 -7.9762 -7.8755 -7.8715
                                                                         -7.8034
```

```
-7.8031
           -7.5145
                      -7.5002
                                 -7.4973
                                                       -7.3377
                                                                  -7.3367
                                                                             -7.3137
                                             -7.4871
                                 -6.9889
           -7.2935
                                            -6.9880
 -7.2942
                      -7.2418
                                                       -6.8174
                                                                  -6.7743
                                                                             -6.6948
           -6.4165
                                                       -6.0713
                                                                  -6.0702
 -6.6879
                      -6.4076
                                 -6.2184
                                            -6.1516
                                                                             -5.8218
                       -4.7399
            -5.6557
                                                        -4.5817
 -5.8207
                                 -4.7341
                                            -4.5823
                                                                   -4.3598
                                                                             -4.3324
 -4.2597
                       -4.2031
                                 -4.2021
                                            -4.0959
                                                        -4.0672
                                                                  -4.0256
            -4.2587
                                                                             -3.9593
 -3.9585
            -3.9281
                      -3.8781
                                 -3.8776
                                            -3.8306
                                                       -3.8291
                                                                  -3.7692
                                                                             -3.7636
  0.4844
             0.4866
                       0.5928
                                  1.2373
                                             1.2572
                                                        1.3702
                                                                   1.7494
                                                                              1.7602
  1.9075
             2.1425
                        2.2430
                                   2.2437
                                              2.3095
                                                         2.3289
                                                                    2.3497
                                                                               2.6082
                                                         3.2904
  2.7038
             3.0709
                        3.0711
                                   3.0713
                                              3.2891
                                                                    3.3894
                                                                               3.3900
  3.5413
             3.6157
        k = 0.0000 - 0.1265 \ 0.0000 \ (64777 \ PWs)
                                                         bands (ev):
-21.5652 -21.4563 -20.4410 -20.3512 -20.3046 -20.3036 -20.1824 -20.1819
-21.5652 -21.4563 -20.4410 -20.3512 -20.3046 -20.3036 -20.1824 -20.1819 -20.0362 -20.0352 -19.9047 -19.8453 -19.8445 -19.6765 -18.3541 -18.3530 -18.0807 -18.0798 -17.9851 -17.9365 -17.9355 -17.8351 -17.8339 -17.4967 -17.4939 -17.0164 -17.0159 -16.5456 -16.5418 -16.2289 -15.9790 -15.9733 -15.0234 -15.0226 -14.7723 -12.4824 -12.4747 -12.3571 -12.3565 -12.3042 -12.2074 -12.2037 -11.6502 -11.6439 -11.3004 -11.2997 -11.1060 -11.1023 -11.0955 -11.0948 -10.7365 -10.7359 -10.5663 -10.5613 -10.2777 -10.2744 -9.6531 -9.5575 -9.3035 -9.3031 -9.2514 -9.2446 -8.9571 -8.9565 -8.9320 -8.7720 -8.7082 -8.7077 -8.5016 -8.4956 -8.4453 -8.4449
            -8.0850
                       -8.0523
                                            -7.9739
                                                                  -7.8808
                                 -8.0429
                                                       -7.8852
                                                                             -7.7839
 -8.1238
                                 -7.4823
                                            -7.4460
                                                       -7.3469
                                                                  -7.3459
 -7.7836
            -7.5357
                       -7.4852
                                                                             -7.2992
                      -7.2397
                                                       -6.7924
                                                                  -6.7916
                                                                             -6.7108
 -7.2985
           -7.2866
                                 -6.9750
                                            -6.9740
 -6.7041
                      -6.4049
                                 -6.1989
                                            -6.1671
                                                        -6.0846
                                                                   -6.0835
           -6.4139
                                                                             -5.8184
                       -4.7708
                                  -4.7650
 -5.8172
            -5.6384
                                             -4.6071
                                                        -4.6064
                                                                   -4.3689
                                                                              -4.3376
 -4.2585
                       -4.2021
            -4.2575
                                  -4.2012
                                             -4.1040
                                                        -4.0713
                                                                   -4.0357
                                                                              -3.9604
 -3.9596
            -3.9428
                       -3.8558
                                  -3.8552
                                             -3.8324
                                                        -3.8309
                                                                   -3.7371
                                                                              -3.7314
  0.4890
             0.4911
                        0.6115
                                   1.2014
                                              1.2213
                                                         1.3734
                                                                               1.7551
                                                                    1.7444
                                                         2.3646
  1.9106
             2.1457
                        2.2469
                                   2.2475
                                              2.3229
                                                                    2.3860
                                                                               2.6113
  2.7069
             3.0454
                        3.0483
                                   3.0486
                                              3.2778
                                                         3.2792
                                                                    3.3845
                                                                               3.3852
  3.5444
             3.5898
        k = 0.0000 - 0.1345 \ 0.0000 \ (64765 \ PWs)
                                                         bands (ev):
-21.5628 -21.4542 -20.4563 -20.3700 -20.3111 -20.3102 -20.1906 -20.1901
-20.0260 -20.0251 -19.8866 -19.8325 -19.8316 -19.6531 -18.3713 -18.3701
-18.0802 -18.0793 -17.9920 -17.9371 -17.9361 -17.8204 -17.8192 -17.5246
-17.5218 -17.0142 -17.0136 -16.5142 -16.5104 -16.2621 -15.9905 -15.9849
-15.0079 -15.0070 -14.7356 -12.5136 -12.5060 -12.3535 -12.3529 -12.2940
-12.2281 -12.2243 -11.6289 -11.6226 -11.3164 -11.3157 -11.1238 -11.1201
-11.1038 -11.1031 -10.7180 -10.7173 -10.5453 -10.5401 -10.2448 -10.2415
           -9.5619
                      -9.3181
                                 -9.3177
                                            -9.2748
                                                       -9.2672
                                                                  -8.9474
 -9.6945
                                                                             -8.9468
           -8.8132
                      -8.6859
                                 -8.6854
                                            -8.4787
                                                       -8.4727
                                                                  -8.4665
 -8.9292
                                                                             -8.4662
 -8.1072
           -8.0785
                      -8.0595
                                 -8.0502
                                            -7.9714
                                                       -7.8949
                                                                  -7.8898
                                                                             -7.7644
                                                                  -7.3550
           -7.5567
                      -7.4700
                                 -7.4670
                                            -7.4050
                                                       -7.3560
                                                                             -7.3045
 -7.7641
           -7.2594
                      -7.2374
                                 -6.9609
                                            -6.9599
                                                       -6.8087
                                                                  -6.7673
 -7.3038
                                                                             -6.7271
 -6.7206
           -6.4116
                      -6.4027
                                 -6.1826
                                            -6.1794
                                                       -6.0982
                                                                  -6.0971
                                                                             -5.8152
 -5.8141
           -5.6211
                      -4.8017
                                 -4.7958
                                            -4.6319
                                                        -4.6312
                                                                  -4.3786
                                                                             -4.3432
 -4.2572
            -4.2562
                      -4.2011
                                 -4.2002
                                             -4.1126
                                                        -4.0757
                                                                  -4.0464
                                                                             -3.9615
 -3.9607
            -3.9583
                       -3.8351
                                  -3.8346
                                             -3.8324
                                                        -3.8316
                                                                  -3.7049
                                                                             -3.6992
  0.4938
             0.4960
                        0.6313
                                   1.1656
                                              1.1854
                                                         1.3768
                                                                    1.7391
                                                                               1.7496
  1.9140
             2.1491
                        2.2510
                                   2.2517
                                              2.3367
                                                         2.4006
                                                                    2.4223
                                                                               2.6146
                                                                    3.3794
  2.7103
             3.0199
                        3.0260
                                   3.0263
                                              3.2668
                                                         3.2681
                                                                               3.3800
  3.5475
             3.5642
        k = 0.0000 - 0.1424 \ 0.0000 \ (64757 \ PWs)
                                                         bands (ev):
-21.5602 -21.4520 -20.4714 -20.3886 -20.3176 -20.3166 -20.1986 -20.1981
-20.0158 -20.0148 -19.8685 -19.8194 -19.8185 -19.6296 -18.3884 -18.3873
-18.0796 -18.0787 -17.9992 -17.9377 -17.9368 -17.8059 -17.8047 -17.5524
```

```
-17.5496 -17.0118 -17.0112 -16.4827 -16.4789 -16.2957 -16.0023 -15.9967
-14.9918 -14.9909 -14.6982 -12.5451 -12.5375 -12.3497 -12.3491 -12.2831
-12.2496 -12.2456 -11.6077 -11.6015 -11.3324 -11.3317 -11.1411 -11.1374
-8.9262
           -8.8545
                     -8.6635
                                -8.6629
                                          -8.4878
                                                     -8.4874
                                                                -8.4559
                                                                          -8.4499
                     -8.0581
                               -8.0332
                                          -7.9688
                                                     -7.9044
                                                               -7.8980
 -8.1292
           -8.0675
                                                                          -7.7450
                     -7.4547
                                -7.4516
                                          -7.3649
                                                               -7.3639
 -7.7448
           -7.5777
                                                     -7.3641
                                                                          -7.3101
                     -7.2321
                                -6.9467
                                          -6.9457
                                                     -6.8257
                                                               -6.7460
 -7.3094
           -7.2350
                                                                          -6.7403
 -6.7372
           -6.4098
                     -6.4008
                                -6.1980
                                          -6.1598
                                                     -6.1121
                                                               -6.1111
                                                                          -5.8124
 -5.8113
           -5.6038
                     -4.8325
                                -4.8266
                                          -4.6567
                                                     -4.6560
                                                                -4.3888
                                                                          -4.3490
           -4.2548
                                -4.1991
                                          -4.1217
 -4.2558
                     -4.2000
                                                     -4.0804
                                                                -4.0578
                                                                          -3.9745
 -3.9627
           -3.9619
                     -3.8364
                                          -3.8115
                                -3.8350
                                                     -3.8110
                                                                -3.6727
                                                                          -3.6670
  0.4989
            0.5011
                                 1.1300
                                            1.1496
                                                      1.3804
                       0.6521
                                                                 1.7334
                                                                           1.7439
  1.9176
            2.1527
                       2.2553
                                 2.2560
                                            2.3512
                                                      2.4367
                                                                 2.4585
                                                                           2.6182
  2.7139
            2.9945
                       3.0039
                                 3.0042
                                            3.2559
                                                      3.2573
                                                                 3.3739
                                                                            3.3746
  3.5380
            3.5517
        k = 0.0000 - 0.1503 \ 0.0000 \ (64779 \ PWs)
                                                      bands (ev):
-21.5575 -21.4497 -20.4865 -20.4071 -20.3239 -20.3229 -20.2065 -20.2060 -20.0054 -20.0044 -19.8503 -19.8063 -19.8054 -19.6060 -18.4056 -18.4045 -18.0790 -18.0781 -18.0068 -17.9384 -17.9374 -17.7916 -17.7904 -17.5801 -17.5773 -17.0092 -17.0086 -16.4512 -16.4473 -16.3295 -16.0143 -16.0089 -14.9752 -14.9743 -14.6604 -12.5769 -12.5693 -12.3456 -12.3450 -12.2717 -12.2716 -12.2676 -11.5868 -11.5806 -11.3482 -11.3475 -11.1580 -11.1543 -11.1215 -11.1209 -10.6807 -10.6801 -10.5013 -10.4958 -10.1782 -10.1748 -9.7852 -9.5629 -9.3463 -9.3460 -9.3216 -9.3117 -8.9264 -8.9258
                                          -9.3216
           -9.5629
                               -9.3460
                                                     -9.3117
 -9.7852
                     -9.3463
                                                                -8.9264
                                                                          -8.9258
                                          -8.5090
                                                     -8.5087
 -8.9230
           -8.8956
                     -8.6408
                                -8.6402
                                                                -8.4332
                                                                          -8.4272
 -8.1510
                     -8.0662
                                -7.9903
                                          -7.9661
                                                     -7.9138
                                                                -7.9043
                                                                          -7.7258
           -8.0756
 -7.7255
           -7.5985
                     -7.4393
                                -7.4361
                                          -7.3736
                                                     -7.3727
                                                                -7.3232
                                                                          -7.3161
           -7.2324
                     -7.2047
                                          -6.9313
                                                                -6.7614
 -7.3153
                                -6.9323
                                                     -6.8426
                                                                          -6.7551
 -6.7162
                     -6.3994
           -6.4083
                                -6.2133
                                          -6.1402
                                                     -6.1264
                                                                -6.1253
                                                                          -5.8098
                                           -4.6815
                                                                -4.3997
 -5.8086
           -5.5865
                      -4.8632
                                -4.8572
                                                     -4.6808
                                                                          -4.3552
           -4.2533
 -4.2543
                      -4.1989
                                -4.1980
                                           -4.1314
                                                     -4.0853
                                                                -4.0698
                                                                          -3.9915
 -3.9640
           -3.9632
                      -3.8385
                                -3.8371
                                           -3.7899
                                                     -3.7893
                                                                -3.6405
                                                                          -3.6347
  0.5043
                       0.6740
                                 1.0943
                                                                 1.7275
            0.5064
                                            1.1139
                                                      1.3843
                                                                           1.7379
  1.9213
            2.1565
                       2.2599
                                 2.2605
                                            2.3664
                                                      2.4727
                                                                 2.4948
                                                                            2.6219
  2.7177
            2.9693
                       2.9819
                                 2.9822
                                            3.2452
                                                      3.2466
                                                                 3.3682
                                                                            3.3689
  3.5129
            3.5552
        k = 0.0000 - 0.1582 \ 0.0000 \ (64771 \ PWs)
                                                      bands (ev):
-21.5546 -21.4472 -20.5015 -20.4254 -20.3301 -20.3292 -20.2143 -20.2138
-19.9949 -19.9940 -19.8320 -19.7930 -19.7920 -19.5822 -18.4228 -18.4217
-18.0784 -18.0775 -18.0147 -17.9391 -17.9381 -17.7774 -17.7762 -17.6076
-17.6049 -17.0066 -17.0059 -16.4196 -16.4156 -16.3635 -16.0265 -16.0212
-14.9582 -14.9572 -14.6221 -12.6089 -12.6013 -12.3414 -12.3408 -12.2942
-12.2901 -12.2597 -11.5660 -11.5599 -11.3638 -11.3631 -11.1743 -11.1706
-11.1310 -11.1304 -10.6621 -10.6614 -10.4784 -10.4728 -10.1445 -10.1410
 -9.8318
           -9.5623
                     -9.3601
                               -9.3597
                                          -9.3450
                                                     -9.3335
                                                               -8.9368
                                                                          -8.9196
 -8.9152
           -8.9146
                     -8.6180
                                -8.6174
                                           -8.5303
                                                     -8.5299
                                                                -8.4107
                                                                          -8.4046
 -8.1725
           -8.0842
                      -8.0748
                                -7.9632
                                           -7.9544
                                                     -7.9230
                                                                -7.9035
                                                                          -7.7066
           -7.6192
                                                     -7.3812
                                                                -7.3223
                      -7.4237
                                -7.4204
                                           -7.3822
 -7.7063
                                                                          -7.3216
           -7.2298
                                -6.9178
                                           -6.9167
                                                     -6.8594
                                                                -6.7789
 -7.2823
                      -7.1772
                                                                          -6.7730
 -6.6908
           -6.4073
                      -6.3983
                                -6.2285
                                           -6.1409
                                                     -6.1399
                                                                -6.1205
                                                                          -5.8075
 -5.8064
           -5.5691
                      -4.8938
                                -4.8877
                                           -4.7063
                                                     -4.7056
                                                                -4.4111
                                                                          -4.3616
 -4.2528
           -4.2517
                      -4.1977
                                -4.1968
                                           -4.1415
                                                      -4.0905
                                                                -4.0824
                                                                           -4.0092
 -3.9653
           -3.9645
                      -3.8407
                                -3.8393
                                           -3.7684
                                                     -3.7678
                                                                -3.6083
                                                                          -3.6025
  0.5100
            0.5121
                      0.6968
                                1.0588
                                           1.0783
                                                      1.3883
                                                                1.7212
                                                                           1.7315
                                                      2.5088
  1.9253
            2.1605
                       2.2647
                                 2.2653
                                            2.3824
                                                                 2.5310
                                                                           2.6258
                                 2.9605
                                            3.2348
                                                      3.2362
  2.7217
            2.9443
                       2.9602
                                                                 3.3622
                                                                           3.3628
```

```
3.4877
             3.5591
        k = 0.0000 - 0.1661 \ 0.0000 \ (64779 \ PWs)
                                                        bands (ev):
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-19.9844 -19.9834 -19.8136 -19.7795 -19.7786 -19.5583 -18.4400 -18.4389
-18.0777 -18.0768 -18.0231 -17.9399 -17.9389 -17.7633 -17.7621 -17.6350
-17.6323 -17.0037 -17.0030 -16.3984 -16.3872 -16.3838 -16.0390 -16.0338 -14.9407 -14.9397 -14.5835 -12.6412 -12.6336 -12.3369 -12.3363 -12.3173 -12.3131 -12.2471 -11.5454 -11.5393 -11.3793 -11.3786 -11.1903 -11.1866
-11.1408 -11.1402 -10.6434 -10.6428 -10.4550 -10.4492 -10.1105 -10.1070
           -9.5616 -9.3736 -9.3732 -9.3684 -9.3547
 -9.8788
                                                                 -8.9778
                                                                            -8.9161
                                                                            -8.3822
 -8.9036
           -8.9030
                      -8.5950
                                 -8.5944
                                           -8.5515
                                                      -8.5512
                                                                 -8.3885
                      -8.0838 -7.9602 -7.9416
-7.4081 -7.4047 -7.3905
                                                                            -7.6876
 -8.1936
           -8.0932
                                                      -7.9320
                                                                 -7.8794
                                                      -7.3895
                                                                            -7.3281
 -7.6873
           -7.6397
                                                                 -7.3289
 -7.2415
           -7.2269
                      -7.1498
                                 -6.9033
                                           -6.9021
                                                      -6.8759
                                                                 -6.7967
                                                                            -6.7912
                                 -6.2437
                                            -6.1558
                                                       -6.1547
                                                                            -5.8055
 -6.6652
           -6.4066
                      -6.3976
                                                                  -6.1008
                                                       -4.7303
                                                                             -4.3684
 -5.8044
            -5.5517
                      -4.9244
                                 -4.9182
                                            -4.7310
                                                                  -4.4231
 -4.2511
            -4.2501
                      -4.1964
                                 -4.1955
                                            -4.1522
                                                       -4.0959
                                                                  -4.0957
                                                                             -4.0275
                      -3.8430
                                 -3.8416
                                            -3.7472
                                                       -3.7466
                                                                  -3.5761
                                                                             -3.5702
 -3.9667
            -3.9659
  0.5160
             0.5180
                       0.7206
                                  1.0234
                                             1.0427
                                                        1.3925
                                                                   1.7147
                                                                              1.7249
                                                        2.5448
  1.9295
             2.1648
                        2.2697
                                   2.2703
                                             2.3991
                                                                   2.5672
                                                                              2.6299
  2.7260
             2.9194
                                                        3.2259
                                                                   3.3559
                        2.9386
                                   2.9389
                                             3.2245
                                                                              3.3566
  3.4627
             3.5631
        k = 0.0000 - 0.1740 \ 0.0000 \ (64783 \ PWs)
                                                        bands (ev):
-21.5485 -21.4420 -20.5311 -20.4617 -20.3422 -20.3413 -20.2293 -20.2288 -19.9737 -19.9727 -19.7952 -19.7659 -19.7650 -19.5343 -18.4573 -18.4561 -18.0770 -18.0761 -18.0318 -17.9406 -17.9397 -17.7495 -17.7482 -17.6623 -17.6596 -17.0008 -17.0001 -16.4323 -16.3558 -16.3519 -16.0516 -16.0465 -14.9228 -14.9217 -14.5445 -12.6737 -12.6661 -12.3409 -12.3366 -12.3322 -12.3316 -12.2339 -11.5250 -11.5188 -11.3946 -11.3939 -11.2057 -11.2021 -11.1510 -11.1504 -10.6246 -10.6240 -10.4311 -10.4251 -10.0762 -10.0727
           -9.5611
                      -9.3917
                                 -9.3868
                                           -9.3864
                                                      -9.3754
                                                                 -9.0188
 -9.9261
                                                                            -8.9124
 -8.8916
           -8.8910
                      -8.5730
                                 -8.5726
                                            -8.5715
                                                       -8.5710
                                                                  -8.3667
                                                                             -8.3600
                      -8.0933
                                            -7.9447
                                                       -7.9408
 -8.2141
           -8.1026
                                 -7.9571
                                                                  -7.8394
                                                                            -7.6687
 -7.6684
           -7.6600
                      -7.3996
                                 -7.3986
                                            -7.3913
                                                      -7.3879
                                                                 -7.3357
                                                                            -7.3350
 -7.2240
           -7.2009
                      -7.1223
                                 -6.8943
                                            -6.8873
                                                       -6.8866
                                                                 -6.8149
                                                                            -6.8097
 -6.6396
           -6.4063
                      -6.3973
                                 -6.2588
                                            -6.1709
                                                       -6.1699
                                                                  -6.0811
                                                                             -5.8038
                                 -4.9485
                                            -4.7558
                                                       -4.7551
 -5.8026
           -5.5343
                      -4.9548
                                                                  -4.4356
                                                                             -4.3755
 -4.2494
           -4.2484
                      -4.1951
                                 -4.1942
                                            -4.1633
                                                       -4.1096
                                                                  -4.1016
                                                                             -4.0464
 -3.9681
           -3.9673
                      -3.8455
                                                                  -3.5439
                                 -3.8441
                                            -3.7261
                                                       -3.7255
                                                                             -3.5380
                                             1.0073
                                                       1.3969
                                                                   1.7079
  0.5222
             0.5242
                       0.7453
                                  0.9881
                                                                              1.7180
  1.9339
                        2.2750
                                   2.2756
                                             2.4165
                                                        2.5808
                                                                   2.6033
             2.1692
                                                                              2.6343
  2.7304
             2.8948
                        2.9173
                                   2.9176
                                             3.2145
                                                        3.2159
                                                                   3.3494
                                                                              3.3500
  3.4379
             3.5674
        k = 0.0000 - 0.1819 \ 0.0000 \ (64791 \ PWs)
                                                        bands (ev):
-21.5452 -21.4391 -20.5458 -20.4796 -20.3481 -20.3471 -20.2366 -20.2361
-19.9629 -19.9619 -19.7767 -19.7522 -19.7512 -19.5101 -18.4745 -18.4734
-18.0763 -18.0754 -18.0409 -17.9415 -17.9405 -17.7357 -17.7345 -17.6895
-17.6869 -16.9977 -16.9970 -16.4668 -16.3240 -16.3200 -16.0644 -16.0594
-14.9045 -14.9034 -14.5051 -12.7064 -12.6989 -12.3650 -12.3606 -12.3274
-12.3268 -12.2202 -11.5046 -11.4985 -11.4098 -11.4091 -11.2208 -11.2171
-11.1615 -11.1609 -10.6059 -10.6053 -10.4067 -10.4006 -10.0418 -10.0382
                     -9.4151 -9.3998
                                           -9.3994
           -9.5612
                                                      -9.3951
                                                                 -9.0598
                                                                            -8.9086
 -9.9735
           -8.8785
                      -8.5941
                                -8.5937
                                            -8.5484
                                                      -8.5478
                                                                 -8.3457
 -8.8791
                                                                             -8.3380
 -8.2335
           -8.1125
                     -8.1031 -7.9546 -7.9509
                                                      -7.9492
                                                                 -7.7958
                                                                            -7.6803
           -7.6496 -7.4074 -7.4064 -7.3757
                                                       -7.3720
 -7.6499
                                                                 -7.3429
                                                                            -7.3422
 -7.2209 -7.1602 -7.0949 -6.9095 -6.8729 -6.8722 -6.8334
                                                                            -6.8287
```

```
-6.4063
                    -6.3974
                                                 -6.1854
                                                           -6.0614
                                                                     -5.8023
 -6.6138
                              -6.2738
                                       -6.1864
 -5.8011
          -5.5169
                    -4.9852
                              -4.9788
                                       -4.7805
                                                 -4.7798
                                                           -4.4488
                                                                     -4.3830
                                                 -4.1242
 -4.2477
          -4.2467
                    -4.1937
                              -4.1928
                                       -4.1749
                                                           -4.1076
                                                                     -4.0659
                                                           -3.5118
                                                                     -3.5058
 -3.9697
          -3.9689
                    -3.8480
                              -3.8466
                                       -3.7054
                                                 -3.7048
 0.5287
                    0.7710
                              0.9528
                                        0.9720
                                                  1.4016
                                                            1.7008
           0.5307
                                                                     1.7108
  1.9384
           2.1739
                     2.2804
                               2.2811
                                         2.4346
                                                  2.6168
                                                            2.6387
                                                                      2.6395
  2.7350
           2.8704
                     2.8961
                               2.8965
                                         3.2046
                                                   3.2060
                                                            3.3425
                                                                      3.3432
  3.4132
           3.5719
       k = 0.0000 - 0.1898 \ 0.0000 \ (64787 \ PWs)
                                                  bands (ev):
-21.5417 -21.4362 -20.5603 -20.4974 -20.3539 -20.3529 -20.2438 -20.2433
-19.9520 \ -19.9510 \ -19.7581 \ -19.7383 \ -19.7374 \ -19.4858 \ -18.4917 \ -18.4906
-18.0755 -18.0747 -18.0503 -17.9423 -17.9413 -17.7222 -17.7210 -17.7166 -17.7139 -16.9945 -16.9937 -16.5014 -16.2920 -16.2880 -16.0773 -16.0724 -14.8858 -14.8846 -14.4654 -12.7393 -12.7319 -12.3894 -12.3850 -12.3223 -12.3217 -12.2059 -11.4844 -11.4784 -11.4248 -11.4240 -11.2354 -11.2317
-11.1723 -11.1717 -10.5871 -10.5865 -10.3818 -10.3757 -10.0210 -10.0070
                                                           -9.1007
-10.0034
          -9.5621
                   -9.4383
                             -9.4136
                                       -9.4125
                                                 -9.4121
                                                                     -8.9045
          -8.8657
                    -8.6153
                                       -8.5249
                                                 -8.5242
                                                           -8.3272
 -8.8663
                             -8.6150
                                                                     -8.3162
                                                           -7.7513
                                       -7.9582
                                                                     -7.7004
 -8.2504
          -8.1227
                    -8.1134
                             -7.9595
                                                 -7.9495
                    -7.4153
                                       -7.3596
                                                           -7.3503
 -7.6313
          -7.6310
                              -7.4143
                                                 -7.3556
                                                                     -7.3496
                                                                     -6.8477
 -7.2177
          -7.1197
                    -7.0678
                             -6.9257
                                        -6.8579
                                                 -6.8572
                                                           -6.8521
          -6.4068
                              -6.2887
 -6.5879
                    -6.3978
                                        -6.2022
                                                 -6.2012
                                                                     -5.8011
                                                           -6.0416
 -5.7999
                              -5.0089
          -5.4995
                    -5.0154
                                        -4.8053
                                                  -4.8046
                                                           -4.4624
                                                                     -4.3907
 -4.2458
          -4.2448
                    -4.1923
                              -4.1914
                                        -4.1871
                                                  -4.1395
                                                           -4.1138
                                                                     -4.0858
 -3.9712
          -3.9704
                    -3.8506
                              -3.8492
                                        -3.6848
                                                  -3.6842
                                                           -3.4797
                                                                     -3.4737
  0.5354
           0.5374
                     0.7975
                               0.9177
                                         0.9368
                                                  1.4064
                                                            1.6934
                                                                      1.7033
                               2.2868
  1.9432
           2.1787
                     2.2862
                                         2.4533
                                                   2.6435
                                                            2.6528
                                                                      2.6755
  2.7398
           2.8461
                     2.8753
                               2.8756
                                         3.1950
                                                  3.1964
                                                            3.3355
                                                                      3.3361
  3.3887
           3.5766
       k = 0.0000 - 0.1977 \ 0.0000 \ (64775 \ PWs)
                                                  bands (ev):
-21.5381 -21.4331 -20.5748 -20.5150 -20.3595 -20.3586 -20.2508 -20.2503
-19.9410 -19.9400 -19.7395 -19.7243 -19.7233 -19.4613 -18.5089 -18.5078
-18.0748 -18.0739 -18.0600 -17.9432 -17.9422 -17.7435 -17.7409 -17.7088
-17.7076 -16.9911 -16.9903 -16.5360 -16.2600 -16.2559 -16.0903 -16.0855
-14.8668 -14.8655 -14.4255 -12.7725 -12.7650 -12.4142 -12.4098 -12.3170
-12.3164 -12.1911 -11.4644 -11.4583 -11.4396 -11.4388 -11.2496 -11.2459
-11.1834 -11.1828 -10.5683 -10.5677 -10.3567 -10.3504 -10.0685
                                                                    -9.9722
          -9.5646
                                                                     -8.9003
 -9.9685
                   -9.4616 -9.4303 -9.4249
                                                 -9.4245
                                                          -9.1415
                                                 -8.5006
                             -8.6362
                                       -8.5012
 -8.8531
          -8.8524
                   -8.6366
                                                           -8.3161
                                                                     -8.2946
                             -7.9672
                                                 -7.9461
          -8.1334
                                       -7.9664
                                                           -7.7204
 -8.2598
                   -8.1241
                                                                     -7.7063
          -7.6125
                   -7.4231
                             -7.4221
                                       -7.3581
                                                 -7.3574
                                                           -7.3433
 -7.6128
                                                                     -7.3391
 -7.2143
          -7.0792
                   -7.0413
                             -6.9419
                                       -6.8712
                                                 -6.8666
                                                           -6.8427
                                                                     -6.8418
 -6.5619
          -6.4075
                    -6.3986
                             -6.3035
                                       -6.2183
                                                 -6.2172
                                                           -6.0218
                                                                     -5.8001
 -5.7989
          -5.4819
                    -5.0456
                             -5.0389
                                       -4.8300
                                                 -4.8293
                                                           -4.4766
                                                                     -4.3987
 -4.2439
          -4.2429
                    -4.1997
                             -4.1908
                                       -4.1899
                                                 -4.1556
                                                           -4.1202
                                                                     -4.1062
 -3.9728
          -3.9720
                    -3.8533
                             -3.8520
                                       -3.6645
                                                 -3.6639
                                                           -3.4477
                                                                     -3.4416
 0.5424
           0.5444
                     0.8250
                               0.8828
                                         0.9018
                                                  1.4115
                                                            1.6857
                                                                      1.6955
  1.9482
           2.1838
                     2.2922
                               2.2928
                                         2.4729
                                                   2.6484
                                                            2.6887
                                                                      2.7115
  2.7449
           2.8221
                     2.8546
                               2.8550
                                         3.1855
                                                   3.1869
                                                            3.3281
                                                                      3.3287
  3.3645
           3.5815
       k = 0.0000 - 0.2056 \ 0.0000 \ (64765 \ PWs)
                                                  bands (ev):
-21.5344 -21.4299 -20.5891 -20.5325 -20.3651 -20.3641 -20.2577 -20.2572
-19.9299 -19.9289 -19.7208 -19.7101 -19.7092 -19.4367 -18.5262 -18.5251
-18.0740 -18.0732 -18.0700 -17.9441 -17.9431 -17.7703 -17.7677 -17.6956
-17.6944 -16.9876 -16.9868 -16.5707 -16.2278 -16.2237 -16.1034 -16.0987
-14.8475 -14.8461 -14.3853 -12.8058 -12.7984 -12.4393 -12.4348 -12.3115
```

```
-12.3109 -12.1757 -11.4542 -11.4535 -11.4444 -11.4384 -11.2633 -11.2597
-11.1948 -11.1942 -10.5495 -10.5489 -10.3311 -10.3247 -10.1161
                                                                           -9.9371
 -9.9333
           -9.5691
                     -9.4848
                                -9.4446
                                          -9.4371
                                                     -9.4367
                                                                -9.1822
                                                                           -8.8959
                      -8.6579
                                -8.6575
                                                      -8.4767
 -8.8395
           -8.8389
                                           -8.4773
                                                                 -8.3199
                                                                           -8.2729
                                                                -7.7401
 -8.2543
           -8.1445
                      -8.1352
                                -7.9751
                                           -7.9745
                                                      -7.9424
                                                                           -7.6615
 -7.5944
           -7.5941
                     -7.4307
                                -7.4298
                                           -7.3662
                                                     -7.3655
                                                                -7.3269
                                                                           -7.3224
                                -6.9579
                                           -6.8908
 -7.2108
           -7.0388
                      -7.0161
                                                      -6.8843
                                                                 -6.8273
                                                                           -6.8264
 -6.5359
           -6.4087
                      -6.3997
                                -6.3182
                                           -6.2346
                                                                -6.0020
                                                                           -5.7994
                                                      -6.2336
 -5.7982
                      -5.0756
                                -5.0688
                                           -4.8547
                                                      -4.8540
                                                                 -4.4914
           -5.4644
                                                                           -4.4070
                                -4.1892
 -4.2419
           -4.2409
                      -4.2128
                                           -4.1883
                                                      -4.1724
                                                                 -4.1269
                                                                           -4.1268
 -3.9745
           -3.9737
                      -3.8561
                                -3.8548
                                           -3.6445
                                                      -3.6438
                                                                 -3.4157
                                                                           -3.4096
  0.5497
            0.5516
                      0.8478
                                 0.8533
                                            0.8669
                                                      1.4167
                                                                  1.6778
                                                                            1.6874
  1.9534
                                                                  2.7245
            2.1890
                       2.2983
                                  2.2990
                                            2.4930
                                                       2.6535
                                                                             2.7475
  2.7501
             2.7982
                       2.8343
                                  2.8347
                                             3.1763
                                                       3.1776
                                                                  3.3205
                                                                             3.3211
  3.3404
             3.5863
        k = 0.0000 - 0.2135 \ 0.0000 \ (64777 \ PWs)
                                                       bands (ev):
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                     -9.5080
           -9.5763
                                -9.4560
 -9.8980
                                          -9.4490
                                                     -9.4486
                                                                -9.2229
                                                                           -8.8914
                     -8.6791
                                -8.6788
                                           -8.4533
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           -8.8249
                                                                 -8.3342
                                                                           -8.2512
                                           -7.9823
                                                      -7.9385
                                                                -7.7598
 -8.2384
                      -8.1467
                                -7.9830
           -8.1560
                                                                           -7.6166
                     -7.4382
 -7.5762
           -7.5760
                                -7.4373
                                           -7.3745
                                                                -7.3104
                                                      -7.3738
                                                                           -7.3056
 -7.2071
           -6.9986
                      -6.9942
                                -6.9737
                                           -6.9112
                                                      -6.8986
                                                                 -6.8118
                                                                           -6.8109
 -6.5097
           -6.4102
                      -6.4012
                                -6.3328
                                           -6.2513
                                                      -6.2502
                                                                 -5.9822
                                                                           -5.7989
           -5.4470
                                           -4.8794
 -5.7978
                      -5.1056
                                 -5.0986
                                                      -4.8787
                                                                 -4.5067
                                                                           -4.4156
           -4.2389
 -4.2399
                      -4.2264
                                -4.1903
                                           -4.1876
                                                      -4.1866
                                                                 -4.1476
                                                                           -4.1338
 -3.9763
           -3.9755
                      -3.8590
                                 -3.8577
                                           -3.6247
                                                      -3.6241
                                                                 -3.3838
                                                                           -3.3777
  0.5572
            0.5591
                                                                  1.6695
                       0.8132
                                  0.8321
                                            0.8824
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             2.1945
                       2.3047
                                  2.3053
                                             2.5139
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                                                                  3.3126
                                             3.1672
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  3.3165
             3.5768
        k = 0.0000 - 0.2214 \ 0.0000 \ (64787 \ PWs)
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-19.9074 -19.9065 -19.6833 -19.6814 -19.6804 -19.3871 -18.5607 -18.5595
-18.0914 -18.0722 -18.0713 -17.9460 -17.9450 -17.8236 -17.8211 -17.6698
-17.6685 -16.9802 -16.9793 -16.6403 -16.1635 -16.1593 -16.1297 -16.1252
-14.8079 -14.8064 -14.3041 -12.8730 -12.8657 -12.4905 -12.4859 -12.2998
-12.2993 -12.1433 -11.4829 -11.4821 -11.4048 -11.3988 -11.2896 -11.2860
-11.2184 -11.2178 -10.5117 -10.5111 -10.2791 -10.2725 -10.2115
                                                                           -9.8663
 -9.8624
           -9.5866
                     -9.5312 -9.4641
                                          -9.4606
                                                     -9.4603
                                                                -9.2636
                                                                           -8.8866
 -8.8113
           -8.8107
                      -8.7004
                                -8.7000
                                           -8.4291
                                                     -8.4285
                                                                -8.3522
                                                                           -8.2295
 -8.2190
           -8.1678
                      -8.1586
                                -7.9908
                                           -7.9900
                                                      -7.9344
                                                                -7.7793
                                                                           -7.5717
 -7.5582
           -7.5580
                      -7.4456
                                -7.4446
                                           -7.3832
                                                      -7.3825
                                                                -7.2938
                                                                           -7.2885
 -7.2034
           -6.9894
                      -6.9811
                                 -6.9584
                                           -6.9321
                                                      -6.9042
                                                                 -6.7961
                                                                           -6.7952
                                 -6.3474
                                                      -6.2671
 -6.4835
           -6.4120
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                                           -6.2682
                                                                 -5.9625
                                                                           -5.7987
 -5.7975
           -5.4295
                                 -5.1282
                                            -4.9040
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                      -4.2368
                                 -4.2090
                                            -4.1859
                                                      -4.1850
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                                            -3.6052
                                                      -3.6045
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                                                                            -3.3459
                                 0.7975
            0.5668
                      0.7787
                                            0.9123
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  0.5650
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  1.9644
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                       2.3113
  2.7914
             2.7936
                       2.7996
                                  2.8201
                                            3.1584
                                                       3.1597
                                                                  3.2927
                                                                             3.3045
  3.3051
             3.5527
```

```
k = 0.0000 - 0.2294 \ 0.0000 \ (64785 \ PWs)
                                                         bands (ev):
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-19.8960 -19.8951 -19.6668 -19.6658 -19.6645 -19.3622 -18.5779 -18.5768 -18.1025 -18.0713 -18.0705 -17.9470 -17.9460 -17.8501 -17.8475 -17.6571
-17.6559 -16.9763 -16.9754 -16.6750 -16.1435 -16.1388 -16.1307 -16.1265 -14.7877 -14.7861 -14.2632 -12.9068 -12.8995 -12.5165 -12.5119 -12.2937 -12.2931 -12.1263 -11.4969 -11.4962 -11.3852 -11.3791 -11.3021 -11.2985
-11.2305 -11.2300 -10.4928 -10.4922 -10.2592 -10.2527 -10.2460 -9.8307
 -9.8268
           -9.5999 -9.5543 -9.4720 -9.4717
                                                       -9.4690
                                                                  -9.3041
                                                                              -8.8817
 -8.7967
           -8.7961
                      -8.7216 -8.7213
                                            -8.4048
                                                       -8.4042
                                                                   -8.3712
                                                                              -8.2080
                                                                   -7.7987
 -8.1986
           -8.1800
                      -8.1708
                                 -7.9984
                                            -7.9976
                                                       -7.9302
                                                                              -7.5404
 -7.5401
           -7.5269
                      -7.4528
                                 -7.4518
                                            -7.3921
                                                       -7.3914
                                                                   -7.2772
                                                                              -7.2714
                                                                              -6.7794
                                                                   -6.7803
 -7.1995
           -7.0048
                      -6.9831
                                 -6.9535
                                            -6.9183
                                                        -6.8949
                                            -6.2854
                                                        -6.2844
 -6.4571
           -6.4141
                      -6.4052
                                 -6.3619
                                                                   -5.9427
                                                                              -5.7987
 -5.7975
            -5.4120
                       -5.1652
                                 -5.1577
                                             -4.9287
                                                        -4.9280
                                                                   -4.5390
                                                                              -4.4337
 -4.2550
            -4.2356
                       -4.2346
                                  -4.2288
                                             -4.1892
                                                        -4.1842
                                                                   -4.1832
                                                                              -4.1483
                      -3.8651
                                 -3.8638
                                             -3.5859
                                                        -3.5853
                                                                   -3.3203
                                                                              -3.3142
 -3.9799
            -3.9791
  0.5730
             0.5748
                        0.7444
                                   0.7631
                                              0.9429
                                                         1.4337
                                                                    1.6523
                                                                               1.6616
                                              2.5575
  1.9702
             2.2061
                        2.3181
                                   2.3188
                                                         2.6698
                                                                    2.7279
                                                                                2.7671
  2.7743
             2.7746
                        2.8325
                                   2.8556
                                              3.1497
                                                         3.1510
                                                                    3.2692
                                                                                3.2961
  3.2968
             3.5287
        k = 0.0000 - 0.2373 \ 0.0000 \ (64789 \ PWs)
                                                         bands (ev):
-21.5180 -21.4159 -20.6455 -20.6011 -20.3861 -20.3851 -20.2838 -20.2833 -19.8846 -19.8836 -19.6521 -19.6511 -19.6456 -19.3370 -18.5951 -18.5940 -18.1139 -18.0704 -18.0695 -17.9480 -17.9471 -17.8764 -17.8739 -17.6447 -17.6434 -16.9722 -16.9713 -16.7098 -16.1565 -16.1521 -16.0985 -16.0943 -14.7672 -14.7655 -14.2221 -12.9408 -12.9335 -12.5427 -12.5381 -12.2874 -12.2868 -12.1088 -11.5107 -11.5100 -11.3657 -11.3596 -11.3142 -11.3106 -11.2429 -11.2423 -10.4739 -10.4733 -10.3069 -10.2260 -10.2193 -9.7949
 -9.7909
                      -9.5774
                                 -9.4831
                                            -9.4828
                                                       -9.4711
                                                                  -9.3445
           -9.6156
                                                                              -8.8767
                      -8.7429
                                 -8.7425
                                             -8.3907
                                                        -8.3804
                                                                   -8.3797
 -8.7818
            -8.7812
                                                                              -8.1934
                       -8.1770
                                  -8.0059
                                             -8.0050
                                                        -7.9258
                                                                   -7.8179
                                                                              -7.5227
 -8.1866
            -8.1834
 -7.5225
            -7.4823
                       -7.4598
                                  -7.4587
                                             -7.4013
                                                        -7.4006
                                                                   -7.2606
                                                                              -7.2540
 -7.1954
            -7.0200
                       -6.9964
                                  -6.9754
                                             -6.8784
                                                        -6.8745
                                                                   -6.7643
                                                                              -6.7634
 -6.4307
            -6.4166
                       -6.4077
                                  -6.3763
                                             -6.3029
                                                        -6.3019
                                                                   -5.9229
                                                                              -5.7989
                                             -4.9533
                                                        -4.9526
 -5.7978
            -5.3945
                       -5.1948
                                  -5.1871
                                                                   -4.5559
                                                                              -4.4432
 -4.2701
            -4.2498
                       -4.2333
                                  -4.2323
                                             -4.2099
                                                        -4.1824
                                                                   -4.1815
                                                                              -4.1560
 -3.9819
            -3.9811
                       -3.8683
                                  -3.8670
                                             -3.5669
                                                        -3.5663
                                                                   -3.2887
                                                                              -3.2826
                                                                               1.6525
  0.5812
             0.5830
                        0.7102
                                   0.7288
                                             0.9744
                                                        1.4397
                                                                    1.6434
                        2.3251
                                   2.3258
                                              2.5802
                                                         2.6751
                                                                    2.7054
  1.9762
             2.2122
                                                                                2.7551
  2.7554
                        2.8680
                                   2.8914
                                              3.1413
                                                         3.1426
                                                                    3.2459
             2.7731
                                                                               3.2876
  3.2882
             3.5048
        k = 0.0000 - 0.2452 \ 0.0000 \ (64781 \ PWs)
                                                         bands (ev):
-21.5135 -21.4120 -20.6594 -20.6179 -20.3910 -20.3901 -20.2899 -20.2895
-19.8730 -19.8720 -19.6372 -19.6362 -19.6267 -19.3117 -18.6123 -18.6112
-18.1256 -18.0695 -18.0686 -17.9491 -17.9481 -17.9026 -17.9001 -17.6324
-17.6312 -16.9680 -16.9671 -16.7446 -16.1698 -16.1655 -16.0661 -16.0618
-14.7464 -14.7447 -14.1808 -12.9749 -12.9677 -12.5691 -12.5645 -12.2809
-12.2803 -12.0908 -11.5243 -11.5236 -11.3465 -11.3405 -11.3256 -11.3220
-11.2555 -11.2549 -10.4549 -10.4544 -10.3545 -10.1992 -10.1923
                                            -9.4936
 -9.7549
            -9.6332
                      -9.6004
                                 -9.4940
                                                       -9.4712
                                                                  -9.3849
                                                                              -8.8714
 -8.7667
            -8.7660
                       -8.7640
                                  -8.7637
                                             -8.4104
                                                        -8.3558
                                                                   -8.3552
                                                                              -8.2061
 -8.1968
            -8.1648
                       -8.1564
                                  -8.0133
                                             -8.0123
                                                        -7.9212
                                                                   -7.8369
                                                                              -7.5053
                                                                   -7.2441
 -7.5050
            -7.4667
                       -7.4658
                                 -7.4375
                                             -7.4108
                                                        -7.4101
                                                                              -7.2365
 -7.1912
           -7.0348
                      -7.0147
                                 -6.9977
                                             -6.8494
                                                        -6.8385
                                                                  -6.7482
                                                                              -6.7473
                                            -6.3207
           -6.4105
                      -6.4042 -6.3905
                                                        -6.3197
                                                                  -5.9032
 -6.4193
                                                                              -5.7994
 -5.7982 -5.3770 -5.2243 -5.2163 -4.9779
                                                       -4.9771 -4.5734
                                                                              -4.4530
```

```
-4.2856
          -4.2718
                   -4.2311
                            -4.2306
                                      -4.2297
                                               -4.1805
                                                        -4.1796
                                                                 -4.1638
 -3.9838
          -3.9830
                   -3.8715
                            -3.8703
                                     -3.5483
                                               -3.5476
                                                        -3.2572
                                                                 -3.2511
 0.5897
           0.5915
                    0.6762
                             0.6947
                                      1.0066
                                               1.4460
                                                         1.6341
                                                                  1.6432
  1.9825
                                                2.6759
           2.2185
                    2.3324
                             2.3330
                                       2.6036
                                                         2.6879
                                                                   2.7360
  2.7364
           2.7794
                    2.9037
                             2.9272
                                       3.1330
                                                         3.2227
                                                3.1343
                                                                   3.2788
  3.2794
           3.4811
       k = 0.0000 - 0.2531 \ 0.0000 \ (64787 \ PWs)
                                                bands (ev):
-21.5089 -21.4081 -20.6731 -20.6345 -20.3959 -20.3949 -20.2959 -20.2955
-19.8613 -19.8603 -19.6222 -19.6212 -19.6077 -19.2863 -18.6295 -18.6284
-18.1376 -18.0685 -18.0676 -17.9502 -17.9492 -17.9287 -17.9262 -17.6204 -17.6191 -16.9637 -16.9627 -16.7793 -16.1831 -16.1789 -16.0336 -16.0293 -14.7254 -14.7236 -14.1393 -13.0091 -13.0020 -12.5957 -12.5910 -12.2742 -12.2736 -12.0723 -11.5377 -11.5370 -11.3389 -11.3252 -11.3197
-11.2683 -11.2677 -10.4360 -10.4354 -10.4022 -10.1721 -10.1652
                                                                 -9.7230
          -9.6521 -9.6234 -9.5045
                                     -9.5042
                                                                 -8.8660
 -9.7188
                                              -9.4697
                                                        -9.4252
                                     -8.4300
                                               -8.3311
                                                        -8.3305
 -8.7853
          -8.7849
                   -8.7512 -8.7506
                                                                 -8.2195
                                     -8.0193
                                               -7.9166
                                                        -7.8558
                                                                 -7.4880
          -8.1436
                   -8.1355
                            -8.0204
 -8.2102
          -7.4734
                   -7.4725
                            -7.4206
                                                        -7.2277
 -7.4878
                                     -7.4199
                                               -7.3931
                                                                 -7.2189
                                                        -6.7320
                                                                 -6.7310
 -7.1869
          -7.0491
                   -7.0352
                            -7.0204
                                     -6.8223
                                               -6.7987
                   -6.4048
 -6.4224
          -6.4136
                            -6.3776
                                     -6.3388
                                               -6.3378
                                                        -5.8835
                                                                 -5.8000
                            -5.2453
 -5.7988
          -5.3595
                   -5.2537
                                      -5.0024
                                               -5.0017
                                                        -4.5914
                                                                 -4.4630
          -4.2949
 -4.3015
                   -4.2507
                            -4.2286
                                      -4.2276
                                               -4.1786
                                                        -4.1777
                                                                  -4.1720
 -3.9858
                   -3.8748
                            -3.8736
                                      -3.5299
                                               -3.5292
                                                        -3.2259
          -3.9850
                                                                  -3.2198
  0.5984
           0.6002
                                      1.0394
                                                1.4525
                    0.6424
                             0.6609
                                                         1.6247
                                                                   1.6336
  1.9889
           2.2250
                    2.3398
                             2.3405
                                       2.6274
                                                2.6575
                                                         2.6900
                                                                   2.7173
  2.7177
           2.7859
                    2.9393
                             2.9629
                                       3.1249
                                                3.1262
                                                         3.1998
                                                                   3.2698
  3.2704
           3.4576
       k = 0.0000 - 0.2610 \ 0.0000 \ (64787 \ PWs)
                                                bands (ev):
-14.7042 -14.7023 -14.0976 -13.0434 -13.0364 -12.6225 -12.6178 -12.2672
-12.2666 -12.0533 -11.5509 -11.5501 -11.3491 -11.3454 -11.3066 -11.3007
-11.2813 -11.2807 -10.4499 -10.4170 -10.4164 -10.1449 -10.1379
                                                                 -9.6868
 -9.6827
         -9.6719 -9.6464 -9.5149
                                     -9.5146 -9.4670
                                                       -9.4654
                                                                 -8.8604
         -8.8061 -8.7355
                           -8.7348
                                     -8.4496
                                              -8.3063
 -8.8065
                                                        -8.3056
                                                                 -8.2333
                                     -8.0263
 -8.2240
         -8.1225
                   -8.1145
                            -8.0274
                                              -7.9117
                                                        -7.8746
                                                                 -7.4799
         -7.4709
                  -7.4707
                            -7.4306
                                     -7.4299
 -7.4790
                                               -7.3488
                                                        -7.2119
                                                                 -7.2010
                  -7.0569
                                     -6.7943
                                              -6.7591
 -7.1825
         -7.0628
                            -7.0435
                                                        -6.7156
                                                                 -6.7146
                            -6.3571
                                     -6.3561
 -6.4258
         -6.4189
                   -6.4170
                                               -6.3509
                                                        -5.8639
                                                                 -5.8009
         -5.3420
 -5.7997
                   -5.2830
                            -5.2742
                                     -5.0269
                                               -5.0262
                                                        -4.6099
                                                                 -4.4734
 -4.3189
          -4.3180
                   -4.2711
                            -4.2261
                                     -4.2252
                                              -4.1803
                                                        -4.1766
                                                                 -4.1757
          -3.9871
 -3.9879
                   -3.8782
                            -3.8770
                                     -3.5118
                                              -3.5111
                                                        -3.1947
                                                                 -3.1886
                                                         1.6150
 0.6065
                    0.6108
                             0.6273
                                      1.0730
                                               1.4591
           0.6081
                                                                   1.6237
  1.9955
           2.2317
                    2.3475
                             2.3481
                                       2.6350
                                                2.6524
                                                         2.6960
                                                                   2.6988
  2.6993
           2.7925
                    2.9748
                             2.9986
                                       3.1170
                                                3.1184
                                                         3.1771
                                                                   3.2605
  3.2612
           3.4343
       k = 0.0000 - 0.2689 \ 0.0000 \ (64781 \ PWs)
                                                bands (ev):
-21.4992 -21.3998 -20.7003 -20.6674 -20.4052 -20.4043 -20.3075 -20.3071
-19.8376 -19.8366 -19.5918 -19.5908 -19.5695 -19.2351 -18.6639 -18.6628
-18.1625 -18.0664 -18.0655 -17.9805 -17.9781 -17.9525 -17.9515 -17.5969
-17.5957 -16.9546 -16.9536 -16.8487 -16.2098 -16.2057 -15.9684 -15.9640
-14.6827 -14.6808 -14.0557 -13.0779 -13.0708 -12.6494 -12.6447 -12.2601
-12.2595 -12.0337 -11.5638 -11.5631 -11.3596 -11.3561 -11.2945 -11.2939
-11.2874 -11.2815 -10.4976 -10.3979 -10.3974 -10.1175 -10.1104 -9.6924
```

```
-9.6693
                 -9.6505
                                -9.6463
                                               -9.5249
                                                               -9.5246
                                                                              -9.5055
                                                                                              -9.4634
                                                                                                             -8.8547
                                                                                              -8.2807
  -8.8277
                -8.8273
                               -8.7195
                                               -8.7189
                                                               -8.4690
                                                                              -8.2813
                                                                                                             -8.2475
                               -8.0938
                                                                                                             -7.4863
  -8.2382
                -8.1016
                                               -8.0342
                                                               -8.0331
                                                                              -7.9068
                                                                                             -7.8932
                               -7.4539
                                               -7.4410
                                                                                             -7.1969
                                                                              -7.3046
                                                                                                             -7.1831
  -7.4854
                -7.4541
                                                               -7.4402
  -7.1779
                -7.0795
                                -7.0752
                                               -7.0669
                                                               -6.7657
                                                                              -6.7195
                                                                                              -6.6991
                                                                                                             -6.6981
  -6.4329
                -6.4294
                                -6.4206
                                               -6.3757
                                                               -6.3747
                                                                              -6.3242
                                                                                              -5.8443
                                                                                                             -5.8019
  -5.8007
                 -5.3244
                                -5.3122
                                               -5.3028
                                                              -5.0513
                                                                              -5.0506
                                                                                             -4.6289
                                                                                                             -4.4840
  -4.3437
                -4.3349
                                -4.2914
                                               -4.2236
                                                              -4.2227
                                                                              -4.1889
                                                                                              -4.1746
                                                                                                             -4.1737
  -3.9900
                                               -3.8805
                                                              -3.4940
                                                                              -3.4933
                -3.9892
                               -3.8817
                                                                                             -3.1637
                                                                                                             -3.1576
   0.5753
                  0.5938
                                0.6167
                                                0.6184
                                                               1.1073
                                                                               1.4660
                                                                                              1.6050
                                                                                                              1.6137
                                                                 2.6130
   2.0023
                  2.2386
                                  2.3553
                                                 2.3560
                                                                                2.6772
                                                                                               2.6807
                                                                                                               2.6813
   2.7025
                  2.7994
                                  3.0103
                                                 3.0342
                                                                 3.1094
                                                                                3.1107
                                                                                               3.1545
                                                                                                               3.2511
   3.2518
                  3.4113
            k = 0.0000 - 0.2768 \ 0.0000 \ (64781 \ PWs)
                                                                                bands (ev):
-21.4941 -21.3955 -20.7137 -20.6836 -20.4097 -20.4088 -20.3131 -20.3127 -19.8256 -19.8246 -19.5764 -19.5753 -19.5504 -19.2093 -18.6810 -18.6799 -18.1754 -18.0654 -18.0645 -18.0062 -18.0038 -17.9536 -17.9527 -17.5856 -17.5843 -16.9499 -16.9489 -16.8833 -16.2231 -16.2191 -15.9358 -15.9313 -14.6610 -14.6591 -14.0137 -13.1124 -13.1054 -12.6765 -12.6718 -12.2528 -12.2522 -12.0138 -11.5765 -11.5758 -11.3699 -11.3664 -11.3078 -11.3072 -11.2681 -11.2622 -10.5453 -10.3789 -10.3783 -10.0900 -10.0828 -9.7133 -9.6921 -9.6142 -9.6098 -9.5455 -9.5347 -9.5344 -9.4592 -8.8489 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488 -8.8488
                -8.8485
                                               -8.7027
                                                                              -8.2621
                                                                                             -8.2562
  -8.8488
                               -8.7033
                                                              -8.4884
                                                                                                             -8.2556
                                                                              -7.9117
  -8.2528
                -8.0808
                               -8.0731
                                               -8.0409
                                                              -8.0397
                                                                                              -7.9017
                                                                                                             -7.4925
                               -7.4509
                                               -7.4374
                                                                              -7.2605
  -7.4916
                -7.4516
                                                              -7.4372
                                                                                             -7.1837
                                                                                                             -7.1732
                                               -7.0855
                                                              -6.7367
  -7.1650
                -7.1026
                               -7.0909
                                                                              -6.6824
                                                                                             -6.6814
                                                                                                             -6.6801
                -6.4333
                               -6.4246
                                               -6.3945
                                                               -6.3935
                                                                              -6.2974
                                                                                              -5.8249
  -6.4468
                                                                                                             -5.8031
  -5.8020
                -5.3413
                                -5.3312
                                               -5.3069
                                                               -5.0758
                                                                              -5.0750
                                                                                              -4.6484
                                                                                                             -4.4949
  -4.3693
                -4.3523
                                -4.3119
                                               -4.2211
                                                               -4.2202
                                                                              -4.1977
                                                                                              -4.1725
                                                                                                             -4.1716
                                                                              -3.4759
  -3.9922
                 -3.9914
                                -3.8852
                                               -3.8841
                                                               -3.4765
                                                                                              -3.1329
                                                                                                             -3.1268
   0.5423
                  0.5607
                                  0.6261
                                                 0.6278
                                                                1.1421
                                                                                1.4731
                                                                                               1.5948
                                                                                                               1.6034
   2.0093
                  2.2457
                                                 2.3640
                                                                 2.5910
                                                                                2.6629
                                                                                               2.6633
                                  2.3634
                                                                                                               2.7031
   2.7094
                  2.8065
                                  3.0458
                                                 3.0696
                                                                                3.1034
                                                                 3.1019
                                                                                               3.1322
                                                                                                               3.2415
   3.2422
                  3.3884
            k = 0.0000 - 0.2847 \ 0.0000 \ (64763 \ PWs)
                                                                                bands (ev):
-21.4889 -21.3911 -20.7270 -20.6997 -20.4141 -20.4132 -20.3185 -20.3181
-19.8135 -19.8125 -19.5608 -19.5598 -19.5312 -19.1834 -18.6981 -18.6970
-18.1885 -18.0643 -18.0634 -18.0318 -18.0294 -17.9548 -17.9539 -17.5744
-17.5731 -16.9451 -16.9440 -16.9178 -16.2364 -16.2324 -15.9031 -15.8986
-14.6391 -14.6371 -13.9715 -13.1470 -13.1400 -12.7036 -12.6990 -12.2453
-12.2447 -11.9933 -11.5890 -11.5883 -11.3799 -11.3764 -11.3213 -11.3207
-11.2489 -11.2429 -10.5929 -10.3598 -10.3592 -10.0623 -10.0551
                                                                                                            -9.7345
  -9.7149
                -9.5854
                               -9.5777
                                              -9.5733
                                                             -9.5443
                                                                             -9.5440
                                                                                             -9.4544
                                                                                                             -8.8700
 -8.8696
                -8.8427
                               -8.6869
                                              -8.6863
                                                             -8.5077
                                                                             -8.2770
                                                                                             -8.2678
                                                                                                             -8.2311
  -8.2304
                -8.0603
                               -8.0528
                                               -8.0472
                                                              -8.0461
                                                                             -7.9300
                                                                                             -7.8964
                                                                                                             -7.4986
  -7.4977
                -7.4624
                               -7.4617
                                               -7.4210
                                                              -7.4208
                                                                              -7.2166
                                                                                             -7.1739
                                                                                                             -7.1684
  -7.1468
                -7.1262
                               -7.1150
                                               -7.0922
                                                              -6.7074
                                                                              -6.6656
                                                                                              -6.6645
                                                                                                             -6.6408
  -6.4606
                -6.4375
                                -6.4288
                                               -6.4137
                                                               -6.4127
                                                                              -6.2705
                                                                                              -5.8056
                                                                                                             -5.8045
  -5.8034
                 -5.3703
                                -5.3594
                                                -5.2895
                                                               -5.1001
                                                                              -5.0994
                                                                                              -4.6685
                                                                                                             -4.5060
  -4.3954
                 -4.3701
                                -4.3325
                                                -4.2184
                                                               -4.2176
                                                                               -4.2066
                                                                                              -4.1703
                                                                                                             -4.1694
  -3.9944
                 -3.9936
                                -3.8888
                                                               -3.4594
                                                                               -3.4587
                                                -3.8877
                                                                                              -3.1023
                                                                                                              -3.0961
   0.5095
                  0.5278
                                 0.6357
                                                 0.6374
                                                                1.1777
                                                                                1.4804
                                                                                               1.5845
                                                                                                               1.5928
                                                 2.3723
                                                                 2.5691
                                                                                2.6454
                                                                                               2.6458
   2.0166
                  2.2530
                                  2.3716
                                                                                                               2.7165
   2.7293
                   2.8138
                                  3.0809
                                                 3.0943
                                                                 3.0951
                                                                                3.1063
                                                                                               3.1104
                                                                                                               3.2317
   3.2324
                  3.3657
            k = 0.0000 - 0.2926 \ 0.0000 \ (64769 \ PWs)
                                                                                bands (ev):
```

```
-21.4836 -21.3865 -20.7402 -20.7156 -20.4184 -20.4174 -20.3238 -20.3234
-19.8014 -19.8004 -19.5451 -19.5440 -19.5120 -19.1573 -18.7153 -18.7142
-18.2020 -18.0632 -18.0623 -18.0572 -18.0549 -17.9560 -17.9551 -17.5635
-17.5622 -16.9524 -16.9400 -16.9389 -16.2496 -16.2457 -15.8703 -15.8658 -14.6170 -14.6149 -13.9292 -13.1816 -13.1748 -12.7309 -12.7263 -12.2376
-12.2370 -11.9723 -11.6012 -11.6005 -11.3896 -11.3861 -11.3349 -11.3344
-11.2296 -11.2237 -10.6406 -10.3407 -10.3401 -10.0345 -10.0273
                                                                          -9.7560
           -9.6252 -9.5536 -9.5533 -9.5412 -9.5367
                                                                -9.4492
 -9.7377
                                                                          -8.8912
           -8.8364
                                -8.6696 -8.5268
                                                     -8.2923
                                                                -8.2831
 -8.8908
                      -8.6702
                                                                           -8.2058
 -8.2051
           -8.0538
                     -8.0525
                                -8.0397
                                           -8.0323
                                                     -7.9481
                                                                -7.8910
                                                                           -7.5045
 -7.5036
           -7.4735
                      -7.4728
                                -7.4048
                                           -7.4046
                                                     -7.1731
                                                                -7.1699
                                                                           -7.1634
                                                                           -6.6016
 -7.1505
           -7.1398
                      -7.1280
                                -7.0927
                                           -6.6780
                                                     -6.6487
                                                                -6.6475
                                                                -5.8061
                                                                           -5.8049
 -6.4743
           -6.4419
                      -6.4333
                                -6.4331
                                           -6.4321
                                                     -6.2435
                                                     -5.1237
 -5.7865
           -5.3991
                      -5.3872
                                -5.2720
                                           -5.1245
                                                                -4.6890
                                                                           -4.5174
 -4.4221
           -4.3883
                      -4.3534
                                -4.2159
                                           -4.2157
                                                      -4.2149
                                                                -4.1681
                                                                           -4.1672
 -3.9967
           -3.9959
                      -3.8925
                                -3.8915
                                           -3.4425
                                                     -3.4419
                                                                -3.0719
                                                                           -3.0657
  0.4769
            0.4951
                       0.6455
                                  0.6472
                                            1.2138
                                                       1.4879
                                                                  1.5739
                                                                            1.5821
                                                                  2.6286
  2.0240
            2.2606
                       2.3801
                                  2.3807
                                            2.5473
                                                       2.6282
                                                                            2.7238
  2.7560
             2.8213
                       3.0850
                                  3.0882
                                            3.0905
                                                       3.1168
                                                                  3.1408
                                                                            3.2217
  3.2226
             3.3432
        k = 0.0000 - 0.3005 \ 0.0000 \ (64793 \ PWs)
                                                       bands (ev):
-21.4781 -21.3818 -20.7533 -20.7314 -20.4225 -20.4216 -20.3290 -20.3286 -19.7891 -19.7881 -19.5293 -19.5282 -19.4927 -19.1311 -18.7323 -18.7312 -18.2157 -18.0826 -18.0803 -18.0620 -18.0612 -17.9573 -17.9563 -17.5527 -17.5515 -16.9868 -16.9349 -16.9338 -16.2628 -16.2590 -15.8376 -15.8330 -14.5947 -14.5926 -13.8867 -13.2163 -13.2095 -12.7584 -12.7537 -12.2297 -12.2291 -11.9509 -11.6131 -11.6124 -11.3989 -11.3955 -11.3487 -11.3481 -11.2104 -11.2044 -10.6882 -10.3216 -10.3216 -10.0667 -9.9994 -9.7776
 -9.7604
           -9.6649
                     -9.5626
                                -9.5623
                                          -9.5046
                                                     -9.5001
                                                                -9.4435
                                                                           -8.9123
 -8.9119
                                -8.6528
                                           -8.5457
                                                      -8.3080
                                                                -8.2988
           -8.8300
                      -8.6534
                                                                           -8.1804
                                -8.0196
                                           -8.0123
                                                      -7.9661
 -8.1797
           -8.0599
                      -8.0586
                                                                -7.8855
                                                                           -7.5103
 -7.5093
                                -7.3889
                                           -7.3887
           -7.4849
                      -7.4842
                                                      -7.1754
                                                                -7.1730
                                                                           -7.1646
 -7.1583
           -7.1292
                      -7.1095
                                -7.0861
                                           -6.6485
                                                     -6.6316
                                                                -6.6302
                                                                           -6.5626
           -6.4527
 -6.4879
                      -6.4517
                                -6.4465
                                           -6.4380
                                                      -6.2165
                                                                -5.8079
                                                                           -5.8067
 -5.7677
           -5.4278
                      -5.4147
                                -5.2545
                                           -5.1487
                                                      -5.1480
                                                                -4.7100
                                                                           -4.5291
 -4.4493
           -4.4070
                      -4.3745
                                -4.2253
                                           -4.2130
                                                      -4.2122
                                                                -4.1658
                                                                           -4.1649
           -3.9982
                                           -3.4261
                                                      -3.4254
 -3.9990
                      -3.8963
                                -3.8952
                                                                -3.0418
                                                                           -3.0356
  0.4446
            0.4628
                       0.6556
                                  0.6572
                                            1.2505
                                                       1.4955
                                                                  1.5631
                                                                            1.5712
                                            2.5258
  2.0316
             2.2683
                       2.3887
                                  2.3894
                                                       2.6114
                                                                  2.6118
                                                                            2.7313
  2.7833
             2.8290
                       3.0654
                                  3.0809
                                            3.0820
                                                       3.1516
                                                                  3.1754
                                                                            3.2118
  3.2132
             3.3209
        k = 0.0000 - 0.3084 \ 0.0000 \ (64777 \ PWs)
                                                       bands (ev):
-21.4724 -21.3770 -20.7663 -20.7470 -20.4266 -20.4256 -20.3340 -20.3336
-19.7767 -19.7757 -19.5133 -19.5122 -19.4734 -19.1048 -18.7494 -18.7483
-18.2296 -18.1078 -18.1055 -18.0609 -18.0600 -17.9586 -17.9576 -17.5423
-17.5410 -17.0211 -16.9296 -16.9285 -16.2760 -16.2722 -15.8048 -15.8002
-14.5723 -14.5700 -13.8441 -13.2510 -13.2443 -12.7859 -12.7812 -12.2216
-12.2210 -11.9291 -11.6248 -11.6241 -11.4080 -11.4045 -11.3626 -11.3620
-11.1912 -11.1852 -10.7358 -10.3024 -10.3019
                                                     -9.9788
                                                                -9.9714
           -9.7045
                                -9.5710
                                           -9.4679
                                                      -9.4634
 -9.7830
                      -9.5713
                                                                -9.4374
                                                                           -8.9334
           -8.8234
                                -8.6358
                                           -8.5645
                                                      -8.3240
                                                                -8.3148
 -8.9330
                      -8.6364
                                                                           -8.1549
 -8.1542
           -8.0659
                      -8.0645
                                -7.9997
                                           -7.9927
                                                      -7.9835
                                                                -7.8797
                                                                           -7.5159
           -7.4965
                      -7.4958
                                -7.3733
                                           -7.3731
                                                      -7.2002
                                                                -7.1901
 -7.5149
                                                                           -7.1811
           -7.0910
                      -7.0856
                                -7.0741
                                           -6.6196
                                                      -6.6144
                                                                -6.6120
 -7.1530
                                                                           -6.5237
                                           -6.4429
           -6.4726
                      -6.4716
                                -6.4514
                                                      -6.1894
                                                                -5.8098
                                                                           -5.8086
 -6.5014
 -5.7493
           -5.4564
                      -5.4416
                                -5.2371
                                           -5.1730
                                                     -5.1722
                                                                -4.7316
                                                                           -4.5410
                     -4.3958 -4.2350
                                                     -4.2094
 -4.4769
           -4.4262
                                           -4.2102
                                                                -4.1635
                                                                           -4.1626
           -4.0006 -3.9001 -3.8991 -3.4099
                                                     -3.4093
 -4.0014
                                                                -3.0119
                                                                           -3.0057
```

```
0.4127
            0.4308
                      0.6659
                                0.6675
                                           1.2878
                                                     1.5034
                                                               1.5520
                                                                         1.5600
                                                     2.5949
                                                               2.5953
                                                                         2.7390
  2.0395
            2.2762
                      2.3976
                                2.3982
                                           2.5044
  2.8112
            2.8369
                      3.0441
                                3.0741
                                           3.0752
                                                     3.1845
                                                               3.1978
                                                                         3.2036
  3.2160
            3.2989
        k = 0.0000 - 0.3164 \ 0.0000 \ (64773 \ PWs)
                                                     bands (ev):
-21.4666 -21.3720 -20.7791 -20.7625 -20.4305 -20.4296 -20.3388 -20.3384
 -19.7643 \ -19.7633 \ -19.4972 \ -19.4961 \ -19.4541 \ -19.0783 \ -18.7664 \ -18.7653 
-18.2438 -18.1329 -18.1306 -18.0597 -18.0588 -17.9599 -17.9589 -17.5321 -17.5308 -17.0554 -16.9242 -16.9230 -16.2891 -16.2854 -15.7720 -15.7673 -14.5496 -14.5473 -13.8014 -13.2858 -13.2791 -12.8134 -12.8087 -12.2133
-9.4326
                                                             -9.4258
                                                                        -8.9545
 -9.8056
          -9.7440
                    -9.5798 -9.5795
                                                   -9.4305
 -8.9541
          -8.8166
                    -8.6192 -8.6186 -8.5832 -8.3404
                                                             -8.3312
                                                                        -8.1293
                    -8.0703
-7.5077
                              -8.0019
-7.3578
-7.0422
                                                              -7.8739
                                                                        -7.5213
                                         -7.9798
 -8.1286
           -8.0717
                                                   -7.9725
 -7.5204
           -7.5084
                                         -7.3577
                                                   -7.2256
                                                              -7.2157
                                                                        -7.1919
                    -7.0594
           -7.0719
                                                   -6.5970
                                                              -6.5870
                                                                        -6.5149
 -7.1477
                                         -6.5973
           -6.4917
                     -6.4849
                               -6.4565
                                         -6.4480
                                                   -6.1623
                                                              -5.8118
                                                                        -5.8106
 -6.4927
 -5.7316
           -5.4849
                     -5.4677
                               -5.2197
                                         -5.1971
                                                    -5.1964
                                                              -4.7536
                                                                        -4.5532
 -4.5049
           -4.4458
                     -4.4174
                               -4.2449
                                         -4.2074
                                                    -4.2066
                                                              -4.1611
                                                                        -4.1602
                               -3.9029
                                         -3.3941
 -4.0038
           -4.0030
                     -3.9040
                                                    -3.3935
                                                              -2.9822
                                                                        -2.9760
                                          1.3256
            0.3992
                      0.6763
                                0.6779
                                                     1.5115
                                                               1.5408
                                                                         1.5487
  0.3811
                                           2.4832
  2.0475
            2.2844
                                                     2.5788
                                                               2.5793
                                                                         2.7470
                      2.4066
                                2.4072
  2.8395
            2.8450
                                3.0676
                                           3.0687
                                                     3.1883
                                                               3.1898
                      3.0227
                                                                         3.2246
  3.2486
            3.2770
        k = 0.0000 - 0.3243 \ 0.0000 \ (64755 \ PWs)
                                                     bands (ev):
-21.4607 -21.3670 -20.7919 -20.7778 -20.4343 -20.4334 -20.3435 -20.3432 -19.7517 -19.7507 -19.4810 -19.4798 -19.4347 -19.0517 -18.7834 -18.7823 -18.2582 -18.1578 -18.1556 -18.0585 -18.0576 -17.9612 -17.9602 -17.5221 -17.5208 -17.0897 -16.9187 -16.9175 -16.3021 -16.2985 -15.7392 -15.7345 -14.5267 -14.5244 -13.7585 -13.3266 -13.3139 -12.8411 -12.8364 -12.2048
-12.2042 -11.8840 -11.6474 -11.6467 -11.4251 -11.4216 -11.3906 -11.3901
-11.1529 -11.1468 -10.8309 -10.2641 -10.2635
                                                   -9.9227
                                                             -9.9153
                                                                        -9.8429
                    -9.5881 -9.5878 -9.4249
 -9.8281
          -9.7833
                                                   -9.3944
                                                             -9.3895
                                                                        -8.9755
 -8.9752
           -8.8097
                    -8.6018
                              -8.6016 -8.6012
                                                   -8.3572
                                                             -8.3480
                                                                        -8.1036
 -8.1029
           -8.0773
                    -8.0760
                              -8.0193
                                         -7.9604
                                                   -7.9532
                                                             -7.8679
                                                                        -7.5266
                              -7.3427
                                         -7.3425
 -7.5256
          -7.5205
                    -7.5198
                                                   -7.2514
                                                             -7.2417
                                                                        -7.2041
                                         -6.5796
 -7.1422
          -7.0529
                    -7.0428
                              -6.9992
                                                   -6.5791
                                                             -6.5574
                                                                        -6.5282
                               -6.4533
                    -6.4617
                                         -6.4463
                                                              -5.8139
 -6.5131
          -6.5121
                                                   -6.1350
                                                                        -5.8127
                    -5.4927
                               -5.2213
                                         -5.2205
                                                   -5.2023
 -5.7148
          -5.5133
                                                              -4.7761
                                                                        -4.5656
          -4.4658
                    -4.4393
                               -4.2550
                                         -4.2045
                                                   -4.2037
                                                              -4.1586
 -4.5333
                                                                        -4.1577
                     -3.9079
                               -3.9069
                                                   -3.3781
 -4.0062
          -4.0054
                                         -3.3787
                                                             -2.9529
                                                                        -2.9467
                      0.6870
           0.3679
                                                    1.5198
  0.3498
                                0.6886
                                          1.3640
                                                              1.5294
                                                                         1.5371
            2,2927
                                           2.4622
                                                     2.5631
                                                               2.5636
  2.0558
                      2.4158
                                2.4164
                                                                         2.7551
  2.8533
            2.8682
                                                     3.1785
                                                               3.1794
                      3.0016
                                3.0613
                                           3.0624
                                                                         3.2553
  3.2590
            3.2836
        k = 0.0000 - 0.3322 \ 0.0000 \ (64751 \ PWs)
                                                     bands (ev):
-21.4546 -21.3618 -20.8046 -20.7930 -20.4380 -20.4371 -20.3481 -20.3477
-19.7390 -19.7380 -19.4646 -19.4634 -19.4153 -19.0250 -18.8004 -18.7993
-18.2729 -18.1827 -18.1804 -18.0573 -18.0564 -17.9625 -17.9616 -17.5124
-17.5111 -17.1238 -16.9130 -16.9118 -16.3151 -16.3115 -15.7064 -15.7016
-14.5037 -14.5013 -13.7155 -13.3553 -13.3488 -12.8687 -12.8641 -12.1962
-12.1956 -11.8608 -11.6583 -11.6576 -11.4332 -11.4298 -11.4048 -11.4043
-11.1337 -11.1276 -10.8785 -10.2448 -10.2443 -9.8947 -9.8872 -9.8647
 -9.8506 -9.8226 -9.5961 -9.5958 -9.4179 -9.3576 -9.3527
                                                                        -8.9966
 -8.9962 -8.8025 -8.6200 -8.5843 -8.5837 -8.3742 -8.3651 -8.0827
```

```
-8.0815
           -8.0778
                      -8.0771
                                -8.0366
                                           -7.9412
                                                     -7.9341
                                                                -7.8617
                                                                          -7.5329
 -7.5322
           -7.5317
                      -7.5307
                                -7.3279
                                           -7.3277
                                                     -7.2776
                                                                -7.2680
                                                                          -7.2169
 -7.1365
           -7.0337
                     -7.0252
                                -6.9562
                                          -6.5620
                                                     -6.5614
                                                                -6.5414
                                                                          -6.5337
                     -6.4671
                                           -6.4078
                                                     -6.1077
                                                                          -5.8150
           -6.5273
                                -6.4589
                                                                -5.8163
 -6.5327
 -5.6997
           -5.5415
                      -5.5159
                                -5.2453
                                           -5.2446
                                                     -5.1848
                                                                -4.7990
                                                                          -4.5782
 -4.5620
           -4.4862
                     -4.4614
                                -4.2653
                                           -4.2016
                                                     -4.2008
                                                                -4.1561
                                                                          -4.1552
 -4.0087
           -4.0079
                     -3.9119
                                -3.9109
                                           -3.3637
                                                     -3.3630
                                                                -2.9239
                                                                          -2.9177
  0.3189
            0.3369
                      0.6978
                                0.6994
                                           1.4029
                                                      1.5179
                                                                1.5253
                                                                           1.5284
                                            2.4414
                                                                            2.7634
  2.0642
            2.3013
                       2.4252
                                 2.4258
                                                      2.5477
                                                                 2.5482
  2.8618
            2.8975
                       2.9806
                                 3.0552
                                            3.0563
                                                       3.1678
                                                                 3.1685
                                                                            3.2339
  3.2939
            3.3187
        k = 0.0000 - 0.3401 \ 0.0000 \ (64761 \ PWs)
                                                      bands (ev):
-21.4484 -21.3565 -20.8172 -20.8080 -20.4416 -20.4406 -20.3525 -20.3522
-21.4484 -21.3505 -20.8172 -20.8080 -20.4410 -20.4400 -20.3525 -20.3522 -19.7263 -19.7253 -19.4480 -19.4468 -19.3959 -18.9981 -18.8173 -18.8163 -18.2878 -18.2074 -18.2051 -18.0560 -18.0551 -17.9639 -17.9629 -17.5029 -17.5016 -17.1579 -16.9072 -16.9059 -16.3280 -16.3245 -15.6736 -15.6688 -14.4805 -14.4781 -13.6724 -13.3901 -13.3836 -12.8965 -12.8919 -12.1873 -12.1868 -11.8372 -11.6689 -11.6682 -11.4409 -11.4376 -11.4191 -11.4185 -11.1145 -11.1084 -10.9260 -10.2256 -10.2250 -9.8870 -9.8732 -9.8663
                               -9.6035
                     -9.6038
 -9.8617
           -9.8587
                                          -9.4108
                                                     -9.3207
                                                                -9.3158
                                                                          -9.0176
                                                     -8.3917
           -8.7953
                     -8.6381
                                -8.5666
                                           -8.5660
                                                                -8.3825
 -9.0172
                                                                          -8.0880
           -8.0538
                                                     -7.9153
                                                                -7.8555
 -8.0868
                     -8.0520
                                -8.0512
                                           -7.9222
                                                                          -7.5455
           -7.5366
                     -7.5357
                                -7.3133
                                           -7.3132
                                                     -7.3041
 -7.5449
                                                                -7.2947
                                                                          -7.2302
                                           -6.5552
 -7.1307
                     -7.0071
                                -6.9134
                                                     -6.5540
                                                                -6.5535
           -7.0143
                                                                          -6.5443
                                           -6.3695
 -6.5436
           -6.4970
                     -6.4727
                                -6.4645
                                                     -6.0804
                                                                -5.8186
                                                                          -5.8174
                                -5.2693
 -5.6876
           -5.5696
                      -5.5361
                                           -5.2686
                                                     -5.1675
                                                                -4.8225
                                                                          -4.5912
           -4.5072
                                -4.2758
 -4.5911
                      -4.4838
                                           -4.1986
                                                     -4.1979
                                                                -4.1535
                                                                           -4.1526
 -4.0112
           -4.0105
                      -3.9159
                                -3.9150
                                           -3.3490
                                                     -3.3484
                                                                -2.8952
                                                                          -2.8890
  0.2884
            0.3064
                       0.7089
                                 0.7104
                                            1.4422
                                                      1.5061
                                                                 1.5135
                                                                            1.5370
                                                       2.5327
  2.0729
            2.3100
                       2.4208
                                 2.4347
                                            2.4354
                                                                 2.5332
                                                                            2.7720
  2.8706
            2.9271
                       2.9598
                                 3.0493
                                            3.0504
                                                       3.1568
                                                                 3.1575
                                                                            3.2126
  3.3289
            3.3538
        k = 0.0000 - 0.3480 \ 0.0000 \ (64789 \ PWs)
                                                      bands (ev):
-21.4420 -21.3510 -20.8297 -20.8229 -20.4450 -20.4441 -20.3568 -20.3564
-19.7135 -19.7124 -19.4314 -19.4302 -19.3764 -18.9711 -18.8343 -18.8332
-18.3029 -18.2319 -18.2297 -18.0547 -18.0538 -17.9653 -17.9643 -17.4937
-17.4924 -17.1918 -16.9012 -16.9000 -16.3409 -16.3374 -15.6408 -15.6360
-14.4572 -14.4547 -13.6291 -13.4248 -13.4183 -12.9243 -12.9197 -12.1783
-12.1777 -11.8131 -11.6793 -11.6785 -11.4484 -11.4451 -11.4334 -11.4328
-11.0953 -11.0892 -10.9734 -10.2063 -10.2058
                                                     -9.9088
                                                               -9.9007
                                                                          -9.8954
          -9.8306
                     -9.6112
                               -9.6110
                                          -9.4035
                                                     -9.2839
                                                               -9.2789
 -9.8383
                                                                          -9.0386
 -9.0382
           -8.7878
                     -8.6561
                               -8.5488
                                          -8.5482
                                                     -8.4094
                                                               -8.4003
                                                                          -8.0932
           -8.0707
                     -8.0261
                                -8.0253
                                          -7.9036
                                                     -7.8967
                                                               -7.8490
 -8.0921
                                                                          -7.5584
 -7.5577
           -7.5414
                     -7.5405
                                -7.3310
                                          -7.3217
                                                     -7.2991
                                                               -7.2989
                                                                          -7.2436
 -7.1248
           -6.9948
                     -6.9884
                                -6.8708
                                          -6.5757
                                                     -6.5747
                                                                -6.5674
                                                                          -6.5264
 -6.5257
           -6.4786
                     -6.4710
                                -6.4656
                                          -6.3313
                                                     -6.0530
                                                                -5.8211
                                                                          -5.8199
 -5.6807
           -5.5976
                     -5.5510
                                -5.2933
                                           -5.2926
                                                     -5.1501
                                                                -4.8464
                                                                          -4.6204
 -4.6043
           -4.5285
                      -4.5065
                                -4.2865
                                           -4.1956
                                                     -4.1949
                                                                -4.1509
                                                                           -4.1500
 -4.0138
           -4.0130
                      -3.9200
                                -3.9191
                                           -3.3347
                                                      -3.3341
                                                                -2.8669
                                                                           -2.8607
  0.2584
            0.2763
                       0.7201
                                 0.7216
                                            1.4820
                                                      1.4943
                                                                 1.5014
                                                                            1.5459
                                 2.4444
  2.0817
            2.3190
                       2.4003
                                            2.4451
                                                       2.5181
                                                                 2.5186
                                                                            2.7807
  2.8795
            2.9390
                       2.9575
                                 3.0435
                                            3.0447
                                                       3.1456
                                                                 3.1463
                                                                            3.1916
  3.3639
            3.3889
        k = 0.0000 - 0.3559 \ 0.0000 \ (64800 \ PWs)
                                                       bands (ev):
-21.4355 -21.3455 -20.8422 -20.8375 -20.4484 -20.4474 -20.3609 -20.3606
-19.7005 -19.6995 -19.4145 -19.4133 -19.3570 -18.9440 -18.8511 -18.8500
```

```
-18.3183 -18.2564 -18.2542 -18.0534 -18.0525 -17.9667 -17.9657 -17.4848
-17.4835 -17.2257 -16.8952 -16.8939 -16.3537 -16.3502 -15.6080 -15.6032
-14.4337 -14.4311 -13.5857 -13.4594 -13.4531 -12.9521 -12.9475 -12.1691
-12.1685 -11.7887 -11.6893 -11.6885 -11.4556 -11.4523 -11.4478 -11.4472
-11.0762 -11.0700 -11.0208 -10.1870 -10.1865
                                                     -9.9396 -9.9306
                                                                           -9.9178
 -9.8102
           -9.8024
                     -9.6185
                               -9.6182 -9.3959
                                                     -9.2470
                                                                -9.2420
                                                                           -9.0596
           -8.7802
                     -8.6740
                                -8.5310
 -9.0592
                                           -8.5303
                                                     -8.4275
                                                                -8.4184
                                                                           -8.0982
           -8.0869
                      -8.0001
                                -7.9994
                                           -7.8853
                                                     -7.8785
                                                                -7.8424
                                                                           -7.5715
 -8.0976
           -7.5460
                     -7.5451
                                -7.3581
                                          -7.3491
                                                                -7.2850
 -7.5708
                                                     -7.2852
                                                                           -7.2572
                     -6.9694
                                                                           -6.5085
 -7.1188
           -6.9752
                                -6.8284
                                           -6.5970
                                                      -6.5960
                                                                -6.5804
 -6.5078
           -6.4843
                      -6.4764
                                -6.4356
                                           -6.2933
                                                     -6.0256
                                                                -5.8237
                                                                           -5.8225
           -5.6255
                      -5.5579
 -5.6816
                                -5.3171
                                           -5.3164
                                                      -5.1329
                                                                -4.8708
                                                                           -4.6500
                                                                -4.1482
           -4.5503
                      -4.5295
                                -4.2974
                                                      -4.1919
 -4.6176
                                           -4.1926
                                                                           -4.1473
 -4.0164
                      -3.9241
                                           -3.3209
                                                      -3.3202
                                                                -2.8390
           -4.0156
                                -3.9232
                                                                           -2.8328
  0.2288
                       0.7315
                                  0.7330
                                            1.4820
                                                       1.4891
                                                                 1.5225
            0.2466
                                                                            1.5550
  2.0908
            2.3281
                       2.3802
                                  2.4543
                                            2.4550
                                                       2.5039
                                                                  2.5044
                                                                            2.7896
  2.8885
             2.9187
                       2.9879
                                  3.0380
                                            3.0391
                                                       3.1343
                                                                  3.1349
                                                                            3.1707
  3.3989
             3.4240
        k = 0.0000 - 0.3638 \ 0.0000 \ (64796 \ PWs)
                                                       bands (ev):
-21.4288 -21.3398 -20.8548 -20.8517 -20.4516 -20.4507 -20.3649 -20.3646 -19.6875 -19.6865 -19.3976 -19.3964 -19.3374 -18.9167 -18.8680 -18.8669 -18.3338 -18.2807 -18.2785 -18.0521 -18.0512 -17.9681 -17.9671 -17.4761 -17.4749 -17.2595 -16.8890 -16.8876 -16.3664 -16.3630 -15.5753 -15.5704 -14.4100 -14.4074 -13.5423 -13.4939 -13.4877 -12.9799 -12.9753 -12.1597 -12.1592 -11.7638 -11.6990 -11.6983 -11.4626 -11.4622 -11.4617 -11.4592 -11.0685 -11.0567 -11.0507 -10.1677 -10.1672 -9.9783 -9.9525 -9.9400 -9.7820 -9.7820 -9.7742 -9.6254 -9.6251 -9.3881 -9.2101 -9.2050 -9.0805
           -9.7742
 -9.7820
                     -9.6254
                                -9.6251
                                          -9.3881
                                                     -9.2101
                                                                -9.2050
                                                                           -9.0805
           -8.7724
                     -8.6917
                                -8.5129
                                           -8.5123
                                                      -8.4459
                                                                -8.4368
 -9.0801
                                                                           -8.1071
                                -7.9733
 -8.1028
           -8.0992
                      -7.9740
                                           -7.8672
                                                      -7.8607
                                                                -7.8355
                                                                           -7.5848
           -7.5505
                      -7.5496
                                -7.3857
                                                                -7.2714
 -7.5841
                                           -7.3767
                                                      -7.2716
                                                                           -7.2707
 -7.1126
                      -6.9501
                                -6.7862
           -6.9554
                                           -6.6185
                                                      -6.6175
                                                                -6.5932
                                                                           -6.4923
                      -6.4819
                                -6.4049
 -6.4906
           -6.4878
                                           -6.2555
                                                      -5.9981
                                                                -5.8263
                                                                           -5.8251
           -5.6532
                      -5.5558
                                -5.3409
                                           -5.3402
 -5.6914
                                                                -4.8956
                                                      -5.1156
                                                                           -4.6799
           -4.5724
 -4.6312
                      -4.5527
                                 -4.3085
                                           -4.1895
                                                      -4.1888
                                                                -4.1454
                                                                           -4.1445
 -4.0191
           -4.0183
                      -3.9283
                                -3.9274
                                           -3.3074
                                                      -3.3068
                                                                -2.8115
                                                                           -2.8053
            0.2175
                       0.7430
                                 0.7446
                                            1.4697
                                                      1.4767
                                                                 1.5627
  0.1996
                                                                            1.5649
                                                       2.4901
  2.1000
             2.3372
                       2.3604
                                  2.4644
                                            2.4650
                                                                  2.4906
                                                                            2.7987
  2.8962
             2.9001
                       3.0189
                                  3.0327
                                            3.0338
                                                       3.1228
                                                                  3.1234
                                                                            3.1501
  3.4338
             3.4591
        k = 0.0000 - 0.3717 \ 0.0000 \ (64804 \ PWs)
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-21.4220 -21.3340 -20.8681 -20.8650 -20.4547 -20.4538 -20.3688 -20.3684
-19.6744 -19.6734 -19.3805 -19.3793 -19.3179 -18.8893 -18.8848 -18.8837
-18.3495 -18.3049 -18.3028 -18.0508 -18.0499 -17.9695 -17.9686 -17.4677
-17.4665 -17.2932 -16.8826 -16.8812 -16.3790 -16.3757 -15.5427 -15.5377
-14.3862 -14.3835 -13.5286 -13.5224 -13.4984 -13.0078 -13.0032 -12.1502
-12.1496 -11.7386 -11.7084 -11.7077 -11.4767 -11.4762 -11.4691 -11.4659
-11.1157 -11.0377 -11.0315 -10.1484 -10.1478 -10.0169
                                                                -9.9743
                                                                          -9.9622
 -9.7538
           -9.7460
                      -9.6321
                                -9.6318
                                          -9.3801
                                                     -9.1733
                                                                -9.1681
                                                                           -9.1014
 -9.1010
           -8.7645
                      -8.7091
                                -8.4948
                                           -8.4942
                                                      -8.4647
                                                                 -8.4556
                                                                           -8.1224
                                -7.9472
                      -7.9480
                                           -7.8496
                                                      -7.8433
 -8.1074
           -8.1051
                                                                -7.8285
                                                                           -7.5984
                                -7.4135
           -7.5548
                      -7.5539
                                           -7.4047
                                                      -7.2843
                                                                 -7.2583
 -7.5977
                                                                           -7.2581
 -7.1063
           -6.9354
                      -6.9306
                                 -6.7442
                                           -6.6402
                                                      -6.6392
                                                                 -6.6059
                                                                           -6.4967
 -6.4890
           -6.4717
                      -6.4709
                                 -6.3741
                                           -6.2178
                                                      -5.9706
                                                                 -5.8290
                                                                           -5.8278
 -5.7081
           -5.6808
                      -5.5468
                                 -5.3647
                                           -5.3640
                                                      -5.0984
                                                                 -4.9209
                                                                           -4.7100
                                                                 -4.1426
           -4.5950
                      -4.5761
                                 -4.3198
                                           -4.1864
                                                      -4.1857
 -4.6451
                                                                           -4.1417
 -4.0217
           -4.0210
                      -3.9325
                                -3.9317
                                           -3.2943
                                                      -3.2937
                                                                -2.7844
                                                                           -2.7782
  0.1710
            0.1888
                      0.7548
                                0.7564
                                           1.4573
                                                      1.4642
                                                                 1.5737
                                                                            1.6046
  2.1095
            2.3388
                       2.3485
                                 2.4745
                                            2.4751
                                                      2.4769
                                                                 2.4774
                                                                            2.8081
```

```
2.8782
             2.9077
                        3.0275
                                   3.0287
                                             3.0503
                                                                   3.1118
                                                                              3.1297
                                                        3.1111
  3.4686
             3.4940
        k = 0.0000 - 0.3796 \ 0.0000 \ (64802 \ PWs)
                                                        bands (ev):
-21.4150 -21.3280 -20.8820 -20.8775 -20.4577 -20.4568 -20.3725 -20.3721
-19.6612 -19.6602 -19.3633 -19.3620 -19.2984 -18.9015 -18.9004 -18.8618
-18.3655 -18.3290 -18.3268 -18.0494 -18.0485 -17.9710 -17.9700 -17.4596 -17.4583 -17.3268 -16.8761 -16.8747 -16.3915 -16.3882 -15.5101 -15.5051 -14.3622 -14.3595 -13.5629 -13.5568 -13.4548 -13.0357 -13.0311 -12.1405 -12.1399 -11.7176 -11.7169 -11.7127 -11.4912 -11.4907 -11.4755 -11.4722
-11.1630 \ -11.0185 \ -11.0122 \ -10.1290 \ -10.1285 \ -10.0554 \ -9.9961 \ -9.9843
                                           -9.3719
                                                                  -9.1312
 -9.7257
           -9.7178
                      -9.6385
                                 -9.6382
                                                       -9.1364
                                                                             -9.1224
 -9.1220
           -8.7565
                      -8.7264
                                 -8.4838
                                            -8.4766
                                                       -8.4760
                                                                  -8.4746
                                                                             -8.1385
                      -7.9218
                                 -7.9210
                                            -7.8324
                                                       -7.8269
                                                                  -7.8206
                                                                             -7.6122
 -8.1119
           -8.1098
 -7.6115
           -7.5590
                      -7.5580
                                 -7.4417
                                            -7.4330
                                                       -7.2977
                                                                  -7.2454
                                                                             -7.2452
           -6.9153
                                 -6.7024
                                            -6.6622
                                                       -6.6612
                                                                             -6.5027
 -7.0999
                      -6.9108
                                                                  -6.6185
           -6.4534
                                            -6.1803
                                                       -5.9430
                                                                  -5.8318
                                                                             -5.8306
 -6.4951
                      -6.4526
                                 -6.3432
                                            -5.3877
 -5.7289
           -5.7082
                      -5.5335
                                 -5.3883
                                                       -5.0811
                                                                  -4.9467
                                                                             -4.7403
                      -4.5998
                                 -4.3313
 -4.6591
           -4.6180
                                            -4.1833
                                                       -4.1826
                                                                  -4.1397
                                                                             -4.1388
 -4.0245
            -4.0237
                      -3.9367
                                 -3.9359
                                            -3.2817
                                                       -3.2810
                                                                  -2.7579
                                                                             -2.7517
  0.1429
            0.1607
                       0.7667
                                  0.7683
                                             1.4448
                                                        1.4514
                                                                   1.5834
                                                                              1.6462
                                             2.4643
                                                        2.4850
                                                                   2.4857
  2.1191
             2.3201
                        2.3574
                                   2.4638
                                                                              2.8176
  2.8584
             2.9174
                        3.0226
                                   3.0237
                                             3.0821
                                                        3.0994
                                                                   3.1000
                                                                              3.1095
  3.5034
             3.5289
        k = 0.0000 - 0.3875 \ 0.0000 \ (64790 \ PWs)
                                                        bands (ev):
-21.4079 -21.3220 -20.8960 -20.8895 -20.4606 -20.4596 -20.3760 -20.3757
-19.6479 -19.6469 -19.3459 -19.3446 -19.2788 -18.9182 -18.9171 -18.8341
-19.0479 -19.0409 -19.3459 -19.3446 -19.2788 -18.9182 -18.9171 -18.8341 -18.3816 -18.3529 -18.3508 -18.0481 -18.0472 -17.9724 -17.9715 -17.4518 -17.4505 -17.3603 -16.8695 -16.8681 -16.4040 -16.4007 -15.4776 -15.4726 -14.3381 -14.3353 -13.5971 -13.5911 -13.4110 -13.0636 -13.0591 -12.1305 -12.1300 -11.7263 -11.7256 -11.6868 -11.5058 -11.5052 -11.4815 -11.4783 -11.2103 -10.9992 -10.9929 -10.1096 -10.1091 -10.0937 -10.0179 -10.0064
                                                       -9.1432
 -9.6976
           -9.6897
                      -9.6447
                                 -9.6444
                                           -9.3635
                                                                 -9.1428
                                                                            -9.0996
                                                       -8.4583
 -9.0943
           -8.7491
                      -8.7426
                                 -8.5031
                                            -8.4940
                                                                  -8.4577
                                                                             -8.1547
                      -7.8956
                                 -7.8948
                                                       -7.8140
           -8.1142
                                            -7.8170
                                                                  -7.8078
                                                                             -7.6262
 -8.1161
                                 -7.4702
                                                                             -7.2327
 -7.6255
           -7.5629
                      -7.5620
                                            -7.4616
                                                       -7.3112
                                                                  -7.2328
 -7.0933
           -6.8951
                      -6.8909
                                 -6.6843
                                            -6.6833
                                                       -6.6608
                                                                  -6.6310
                                                                             -6.5088
                      -6.4341
 -6.5013
           -6.4349
                                 -6.3121
                                            -6.1429
                                                       -5.9154
                                                                  -5.8346
                                                                             -5.8333
                                                       -5.0640
 -5.7519
           -5.7356
                      -5.5180
                                 -5.4118
                                            -5.4113
                                                                  -4.9728
                                                                             -4.7708
                      -4.6238
                                 -4.3429
                                            -4.1801
                                                       -4.1794
 -4.6734
           -4.6413
                                                                  -4.1367
                                                                             -4.1359
 -4.0272
                                            -3.2694
                                                       -3.2688
           -4.0264
                      -3.9410
                                 -3.9402
                                                                  -2.7318
                                                                             -2.7257
                       0.7787
                                                        1.4386
  0.1154
             0.1332
                                  0.7803
                                             1.4321
                                                                   1.5933
                                                                              1.6883
             2.3008
  2.1290
                       2.3672
                                   2.4514
                                             2.4518
                                                        2.4955
                                                                   2.4962
                                                                              2.8273
                        3.0178
                                  3.0190
  2.8388
                                             3.0875
                                                        3.0881
                                                                   3.0895
             2.9273
                                                                              3.1142
  3.5287
             3.5382
        k = 0.0000 - 0.3954 \ 0.0000 \ (64802 \ PWs)
                                                        bands (ev):
-21.4007 -21.3158 -20.9100 -20.9013 -20.4634 -20.4624 -20.3794 -20.3791
-19.6345 -19.6335 -19.3284 -19.3271 -19.2592 -18.9349 -18.9338 -18.8063
-18.3980 -18.3767 -18.3746 -18.0467 -18.0458 -17.9739 -17.9730 -17.4442
-17.4430 -17.3937 -16.8628 -16.8613 -16.4163 -16.4132 -15.4453 -15.4402
-14.3139 -14.3110 -13.6312 -13.6252 -13.3671 -13.0915 -13.0870 -12.1205
-12.1199 -11.7348 -11.7341 -11.6604 -11.5204 -11.5198 -11.4873 -11.4841
-11.2576 -10.9800 -10.9736 -10.1319 -10.0902 -10.0896 -10.0396 -10.0284
           -9.6615
                     -9.6506
                                -9.6503
                                           -9.3549
                                                      -9.1641
                                                                 -9.1637
                                                                             -9.0628
 -9.6695
 -9.0574
           -8.7610
                      -8.7392
                                 -8.5228
                                           -8.5137
                                                       -8.4399
                                                                  -8.4393
                                                                             -8.1708
                                                       -7.7984
                                           -7.8083
                                                                 -7.7919
 -8.1202
           -8.1184
                      -7.8693
                                -7.8686
                                                                             -7.6404
           -7.5668 -7.5658 -7.4990 -7.4904 -7.3245 -7.2207
 -7.6397
                                                                            -7.2205
```

```
-7.0866
           -6.8748
                     -6.8707
                               -6.7067
                                                    -6.6433
                                                               -6.6194
                                                                         -6.5150
                                          -6.7057
           -6.4163
 -6.5076
                     -6.4155
                               -6.2810
                                          -6.1058
                                                    -5.8877
                                                               -5.8374
                                                                         -5.8362
                               -5.4353
                                                              -4.9994
 -5.7762
           -5.7627
                     -5.5012
                                          -5.4348
                                                    -5.0469
                                                                         -4.8016
                                          -4.1769
                                                    -4.1762
                                                                         -4.1328
           -4.6651
                     -4.6479
                               -4.3548
                                                              -4.1337
 -4.6878
 -4.0300
           -4.0292
                     -3.9453
                               -3.9446
                                                              -2.7064
                                          -3.2577
                                                    -3.2570
                                                                         -2.7002
  0.0886
            0.1063
                      0.7909
                                0.7926
                                          1.4192
                                                     1.4256
                                                               1.6034
                                                                         1.7307
  2.1390
            2.2816
                      2.3774
                                 2.4393
                                           2.4398
                                                     2.5062
                                                                2.5068
                                                                          2.8193
  2.8372
            2.9374
                      3.0131
                                 3.0144
                                           3.0698
                                                     3.0755
                                                                3.0761
                                                                          3.1467
  3.5097
            3.5534
        k = 0.0000 - 0.4034 \ 0.0000 \ (64788 \ PWs)
                                                     bands (ev):
-21.3933 -21.3095 -20.9239 -20.9130 -20.4660 -20.4650 -20.3827 -20.3824
-19.6210 \ -19.6200 \ -19.3108 \ -19.3095 \ -19.2396 \ -18.9515 \ -18.9505 \ -18.7784
-19.0216 -19.0206 -19.5108 -19.5093 -19.2396 -10.9513 -18.9305 -18.7764 -18.4145 -18.4004 -18.3983 -18.0453 -18.0444 -17.9754 -17.9745 -17.4370 -17.4357 -17.4270 -16.8559 -16.8544 -16.4286 -16.4255 -15.4130 -15.4079 -14.2895 -14.2866 -13.6651 -13.6592 -13.3230 -13.1194 -13.1149 -12.1102 -12.1096 -11.7430 -11.7423 -11.6336 -11.5349 -11.5344 -11.4929 -11.4897 -11.3048 -10.9606 -10.9543 -10.1699 -10.0702 -10.0702 -10.0613 -10.0504
 -9.6563
           -9.6560
                     -9.6414
                               -9.6335
                                          -9.3461
                                                    -9.1849
                                                              -9.1845
                                                                         -9.0260
 -9.0205
           -8.7777
                     -8.7307
                               -8.5427
                                          -8.5337
                                                    -8.4215
                                                              -8.4209
                                                                         -8.1868
                                                                         -7.6548
                     -7.8431
                               -7.8423
                                          -7.8006
                                                              -7.7761
 -8.1241
           -8.1223
                                                    -7.7823
           -7.5704
                     -7.5695
                               -7.5280
                                         -7.5196
                                                              -7.2089
 -7.6541
                                                    -7.3378
                                                                         -7.2088
                               -6.7292
                                          -6.7282
 -7.0797
           -6.8543
                     -6.8504
                                                                         -6.5211
                                                    -6.6557
                                                               -6.5783
                     -6.3967
           -6.3975
                               -6.2498
                                          -6.0688
                                                    -5.8600
                                                              -5.8402
 -6.5139
                                                                         -5.8390
 -5.8012
           -5.7898
                     -5.4842
                               -5.4584
                                          -5.4578
                                                    -5.0298
                                                               -5.0264
                                                                         -4.8325
 -4.7025
           -4.6893
                     -4.6723
                                -4.3668
                                          -4.1736
                                                    -4.1730
                                                               -4.1306
                                                                         -4.1298
 -4.0328
                     -3.9497
                                -3.9489
                                          -3.2463
                                                    -3.2457
           -4.0320
                                                               -2.6815
                                                                         -2.6753
  0.0623
            0.0801
                      0.8033
                                 0.8050
                                           1.4062
                                                     1.4125
                                                                1.6137
                                                                          1.7735
  2.1493
            2.2626
                      2.3878
                                 2.4277
                                           2.4282
                                                     2.5170
                                                                2.5177
                                                                          2.8001
  2.8473
            2.9478
                       3.0086
                                           3.0504
                                                     3.0634
                                                                3.0640
                                 3.0100
                                                                          3.1796
  3.4908
            3.5489
        k = 0.0000 - 0.4113 \ 0.0000 \ (64786 \ PWs)
                                                     bands (ev):
-21.3857 -21.3031 -20.9376 -20.9246 -20.4685 -20.4676 -20.3858 -20.3855
-19.6074 -19.6064 -19.2930 -19.2917 -19.2201 -18.9681 -18.9670 -18.7504
-18.4311 -18.4239 -18.4219 -18.0438 -18.0429 -17.9769 -17.9760 -17.4602
-17.4300 -17.4288 -16.8489 -16.8473 -16.4408 -16.4377 -15.3810 -15.3758
-14.2650 -14.2620 -13.6988 -13.6930 -13.2789 -13.1472 -13.1428 -12.0998
-12.0992 -11.7508 -11.7501 -11.6064 -11.5495 -11.5490 -11.4981 -11.4949
-11.3520 -10.9413 -10.9349 -10.2078 -10.0830 -10.0723 -10.0512 -10.0507
 -9.6617
          -9.6614
                    -9.6134
                               -9.6054
                                         -9.3370
                                                    -9.2057
                                                              -9.2053
                                                                        -8.9893
           -8.7943
                    -8.7220
                                         -8.5539
 -8.9837
                               -8.5630
                                                    -8.4030
                                                              -8.4024
                                                                         -8.2026
           -8.1261
                    -7.8168
                               -7.8160
                                         -7.7929
                                                    -7.7667
                                                              -7.7606
 -8.1279
                                                                        -7.6694
                               -7.5573
 -7.6687
          -7.5740
                    -7.5732
                                         -7.5490
                                                    -7.3510
                                                              -7.1975
                                                                         -7.1974
          -6.8338
                    -6.8300
                               -6.7520
                                         -6.7510
                                                    -6.6679
                                                              -6.5375
 -7.0727
                                                                         -6.5271
          -6.3786
                     -6.3778
                               -6.2185
                                         -6.0320
                                                    -5.8430
                                                              -5.8418
 -6.5201
                                                                         -5.8323
           -5.8167
 -5.8266
                     -5.4841
                               -5.4818
                                         -5.4630
                                                    -5.0538
                                                              -5.0127
                                                                         -4.8635
 -4.7174
           -4.7138
                     -4.6969
                               -4.3791
                                         -4.1704
                                                    -4.1698
                                                              -4.1274
                                                                         -4.1266
 -4.0357
           -4.0349
                     -3.9541
                               -3.9533
                                          -3.2354
                                                    -3.2348
                                                              -2.6572
                                                                         -2.6510
  0.0368
            0.0545
                      0.8158
                                 0.8175
                                           1.3931
                                                     1.3993
                                                               1.6242
                                                                          1.8167
  2.1598
            2.2438
                      2.3984
                                 2.4166
                                           2.4171
                                                     2.5280
                                                                2.5286
                                                                          2.7810
                                           3.0314
                                                     3.0512
                                                                3.0518
  2.8576
            2.9583
                      3.0041
                                 3.0058
                                                                          3.2128
  3.4720
            3.5446
        k = 0.0000 - 0.4192 \ 0.0000 \ (64798 \ PWs)
                                                     bands (ev):
-21.3780 -21.2965 -20.9513 -20.9360 -20.4709 -20.4700 -20.3888 -20.3885
-19.5938 -19.5928 -19.2751 -19.2737 -19.2004 -18.9846 -18.9836 -18.7222
-18.4480 -18.4473 -18.4453 -18.0424 -18.0415 -17.9785 -17.9775 -17.4933
-17.4234 -17.4221 -16.8417 -16.8402 -16.4528 -16.4498 -15.3491 -15.3439
```

```
-14.2403 -14.2373 -13.7322 -13.7265 -13.2347 -13.1751 -13.1706 -12.0892
-12.0887 -11.7583 -11.7576 -11.5789 -11.5641 -11.5636 -11.5031 -11.4999
-11.3991 -10.9219 -10.9155 -10.2456 -10.1046 -10.0941 -10.0317 -10.0312
                                                      -9.2265
                     -9.5855
                                -9.5774 -9.3278
 -9.6669
           -9.6666
                                                                 -9.2261
                                                                            -8.9526
                      -8.7130
                                                                 -8.3839
 -8.9470
           -8.8108
                                 -8.5836 -8.5745
                                                      -8.3845
                                                                            -8.2183
                      -7.7904
 -8.1315
           -8.1297
                                 -7.7896
                                           -7.7851
                                                      -7.7515
                                                                 -7.7455
                                                                            -7.6842
           -7.5875
                      -7.5802
                                 -7.5762
                                           -7.5756
                                                      -7.3641
 -7.6835
                                                                 -7.1866
                                                                            -7.1864
                      -6.8095
                                 -6.7749
                                           -6.7739
                                                       -6.6799
 -7.0656
           -6.8131
                                                                 -6.5332
                                                                            -6.5264
 -6.4966
           -6.3596
                      -6.3588
                                 -6.1872
                                           -5.9954
                                                       -5.8522
                                                                 -5.8458
                                                                            -5.8446
                                                                            -4.8947
 -5.8434
           -5.8046
                      -5.5064
                                 -5.5051
                                           -5.4454
                                                       -5.0816
                                                                 -4.9957
 -4.7387
           -4.7324
                      -4.7217
                                 -4.3914
                                            -4.1671
                                                      -4.1665
                                                                  -4.1242
                                                                            -4.1234
 -4.0385
           -4.0377
                      -3.9585
                                 -3.9578
                                            -3.2250
                                                       -3.2243
                                                                 -2.6336
                                                                            -2.6275
                                             1.3799
  0.0119
            0.0297
                       0.8284
                                  0.8302
                                                        1.3859
                                                                   1.6348
                                                                              1.8602
  2.1704
             2.2252
                       2.4058
                                  2.4063
                                             2.4092
                                                        2.5391
                                                                   2.5397
                                                                              2.7621
  2.8681
             2.9691
                       2.9988
                                  3.0018
                                             3.0137
                                                        3.0389
                                                                   3.0395
                                                                              3.2462
  3.4535
             3.5404
        k = 0.0000 - 0.4271 \ 0.0000 \ (64818 \ PWs)
                                                        bands (ev):
-21.3702 -21.2899 -20.9647 -20.9474 -20.4732 -20.4723 -20.3916 -20.3913 -19.5800 -19.5790 -19.2570 -19.2557 -19.1808 -19.0011 -19.0001 -18.6939 -18.4706 -18.4686 -18.4650 -18.0409 -18.0400 -17.9800 -17.9791 -17.5263 -17.4170 -17.4157 -16.8344 -16.8329 -16.4648 -16.4618 -15.3175 -15.3122 -14.2155 -14.2125 -13.7654 -13.7598 -13.2031 -13.1988 -13.1899 -12.0785 -12.0779 -11.7655 -11.7648 -11.5787 -11.5781 -11.5510 -11.5079 -11.5047 -11.4462 -10.9025 -10.8960 -10.2831 -10.1261 -10.1159 -10.0122 -10.0117 -9.6718 -9.6715 -9.5576 -9.5495 -9.3184 -9.2472 -9.2468 -8.9160 -8.8103 -8.8271 -8.87030 -8.8044 -8.5054 -8.3650 -8.3653 -8.2338
                      -8.7039
                                           -8.5954
                                                                 -8.3653
 -8.9103
                                -8.6044
                                                      -8.3659
           -8.8271
                                                                            -8.2338
                      -7.7772
                                -7.7641
                                           -7.7633
                                                       -7.7367
 -8.1349
                                                                  -7.7310
           -8.1331
                                                                            -7.6992
                      -7.6091
                                 -7.5802
                                            -7.5793
                                                       -7.3771
                                                                 -7.1760
 -7.6986
           -7.6172
                                                                            -7.1759
 -7.0584
           -6.7985
                      -6.7978
                                 -6.7916
                                            -6.7883
                                                       -6.6919
                                                                  -6.5391
                                                                            -6.5325
                                 -6.1558
                                            -5.9590
                                                       -5.8780
                                                                  -5.8700
 -6.4562
           -6.3404
                      -6.3396
                                                                            -5.8486
           -5.7768
                      -5.5294
                                 -5.5283
 -5.8474
                                            -5.4268
                                                       -5.1099
                                                                  -4.9788
                                                                            -4.9261
 -4.7640
                      -4.7467
                                 -4.4040
           -4.7477
                                            -4.1639
                                                       -4.1632
                                                                  -4.1210
                                                                             -4.1202
                      -3.9629
 -4.0414
           -4.0406
                                 -3.9622
                                            -3.2150
                                                       -3.2144
                                                                  -2.6107
                                                                             -2.6046
 -0.0121
             0.0056
                       0.8412
                                  0.8430
                                             1.3666
                                                        1.3724
                                                                   1.6457
                                                                              1.9040
  2.1813
             2.2069
                       2.3956
                                  2.3961
                                             2.4202
                                                        2.5503
                                                                   2.5509
                                                                              2.7435
                                                        3.0265
  2.8787
             2.9800
                        2.9885
                                  2.9979
                                             3.0015
                                                                   3.0271
                                                                              3.2800
  3.4351
             3.5362
        k = 0.0000 - 0.4350 \ 0.0000 \ (64816 \ PWs)
                                                        bands (ev):
-21.3622 -21.2831 -20.9781 -20.9585 -20.4754 -20.4744 -20.3943 -20.3940
-19.5662 -19.5652 -19.2388 -19.2375 -19.1612 -19.0176 -19.0165 -18.6655
-18.4938 -18.4918 -18.4821 -18.0394 -18.0385 -17.9816 -17.9807 -17.5592
-17.4110 -17.4097 -16.8270 -16.8254 -16.4767 -16.4737 -15.2861 -15.2808
-14.1906 -14.1876 -13.7982 -13.7927 -13.2308 -13.2264 -13.1458 -12.0676
-12.0670 -11.7723 -11.7716 -11.5933 -11.5927 -11.5227 -11.5125 -11.5092
                                                                            -9.9921
-11.4931 -10.8831 -10.8765 -10.3206 -10.1476 -10.1376
                                                                 -9.9926
 -9.6764
           -9.6761 -9.5298
                                -9.5217
                                           -9.3088
                                                      -9.2679
                                                                 -9.2675
                                                                            -8.8796
 -8.8738
           -8.8430
                      -8.6946
                                -8.6255
                                           -8.6165
                                                       -8.3473
                                                                 -8.3467
                                                                            -8.2492
                                                                            -7.7144
 -8.1381
           -8.1363
                      -7.7692
                                 -7.7377
                                            -7.7369
                                                       -7.7225
                                                                  -7.7169
                                 -7.5833
                                            -7.5824
 -7.7138
           -7.6474
                      -7.6393
                                                       -7.3899
                                                                  -7.1659
                                                                             -7.1658
           -6.8215
                                 -6.7713
                                            -6.7679
                                                       -6.7037
                                                                  -6.5449
 -7.0511
                      -6.8205
                                                                            -6.5384
           -6.3212
                      -6.3203
                                 -6.1243
                                            -5.9228
                                                       -5.9037
                                                                  -5.8964
 -6.4161
                                                                             -5.8514
 -5.8501
           -5.7491
                      -5.5525
                                 -5.5515
                                            -5.4079
                                                       -5.1385
                                                                  -4.9619
                                                                             -4.9575
 -4.7897
            -4.7719
                      -4.7632
                                 -4.4168
                                            -4.1606
                                                       -4.1600
                                                                  -4.1176
                                                                             -4.1169
 -4.0444
            -4.0436
                      -3.9673
                                 -3.9667
                                            -3.2055
                                                       -3.2048
                                                                  -2.5886
                                                                             -2.5825
 -0.0353
            -0.0176
                       0.8540
                                 0.8559
                                                                             1.9481
                                            1.3532
                                                       1.3589
                                                                   1.6568
  2.1883
            2.1929
                        2.3859
                                  2.3864
                                             2.4315
                                                        2.5616
                                                                   2.5623
                                                                              2.7250
                                             2.9966
  2.8895
             2.9717
                        2.9908
                                  2.9941
                                                        3.0141
                                                                   3.0147
                                                                              3.3140
  3.4169
             3.5282
```

```
k = 0.0000 - 0.4429 \ 0.0000 \ (64828 \ PWs)
                                                         bands (ev):
-18.5168 -18.5148 -18.4995 -18.0380 -18.0370 -17.9832 -17.9822 -17.5920
-17.4052 -17.4039 -16.8195 -16.8178 -16.4885 -16.4856 -15.2551 -15.2497 -14.1656 -14.1625 -13.8306 -13.8252 -13.2586 -13.2542 -13.1013 -12.0565 -12.0560 -11.7788 -11.7781 -11.6078 -11.6073 -11.5405 -11.5164 -11.5134 -11.4942 -10.8636 -10.8570 -10.3578 -10.1691 -10.1592 -9.9731 -9.9725
 -9.6808
           -9.6805
                      -9.5021 -9.4939
                                            -9.2991
                                                       -9.2886
                                                                  -9.2882
                                                                             -8.8601
 -8.8422
           -8.8369
                      -8.6851
                                 -8.6469
                                            -8.6379
                                                       -8.3287
                                                                  -8.3281
                                                                             -8.2644
 -8.1412
           -8.1394
                      -7.7611
                                 -7.7298
                                            -7.7292
                                                       -7.7113
                                                                  -7.7105
                                                                             -7.7088
                      -7.6698
 -7.7035
           -7.6778
                                 -7.5862
                                            -7.5852
                                                       -7.4027
                                                                   -7.1563
                                                                             -7.1562
                                            -6.7471
                                                                             -6.5441
 -7.0436
           -6.8449
                      -6.8440
                                 -6.7505
                                                       -6.7154
                                                                  -6.5504
                                                                  -5.8867
 -6.3763
           -6.3018
                      -6.3009
                                 -6.0927
                                            -5.9295
                                                       -5.9226
                                                                              -5.8541
                                            -5.3889
 -5.8528
           -5.7213
                      -5.5755
                                 -5.5745
                                                       -5.1675
                                                                   -4.9891
                                                                             -4.9451
 -4.8157
            -4.7974
                       -4.7788
                                  -4.4297
                                             -4.1573
                                                        -4.1567
                                                                   -4.1142
                                                                              -4.1135
                                                                  -2.5672
                                                                              -2.5612
 -4.0473
            -4.0465
                       -3.9718
                                 -3.9712
                                            -3.1964
                                                        -3.1958
 -0.0577
            -0.0400
                        0.8670
                                   0.8689
                                              1.3396
                                                         1.3452
                                                                    1.6681
                                                                               1.9923
  2.1710
             2.2037
                        2.3767
                                   2.3772
                                              2.4429
                                                         2.5731
                                                                    2.5738
                                                                               2.7067
  2.9004
             2.9537
                        2.9905
                                   2.9918
                                              3.0015
                                                         3.0021
                                                                    3.0030
                                                                               3.3483
  3.3989
             3.5109
        k = 0.0000 - 0.4508 \ 0.0000 \ (64836 \ PWs)
                                                         bands (ev):
-21.3458 -21.2691 -21.0043 -20.9806 -20.4794 -20.4784 -20.3992 -20.3989 -19.5383 -19.5373 -19.2020 -19.2006 -19.1220 -19.0503 -19.0492 -18.6082 -18.5397 -18.5378 -18.5169 -18.0364 -18.0355 -17.9847 -17.9838 -17.6247 -17.3998 -17.3985 -16.8118 -16.8101 -16.5001 -16.4973 -15.2244 -15.2190 -14.1405 -14.1373 -13.8625 -13.8573 -13.2864 -13.2820 -13.0567 -12.0453 -12.0448 -11.7849 -11.7842 -11.6224 -11.6218 -11.5874 -11.5204 -11.5174 -11.4652 -10.8441 -10.8374 -10.3949 -10.1905 -10.1808 -9.9534 -9.9529
                      -9.4744 -9.4662
                                            -9.3093
                                                       -9.3088
                                                                  -9.2891
 -9.6849
           -9.6847
                                                                             -8.8754
                      -8.6755
                                            -8.6596
                                                       -8.3101
                                                                   -8.3095
 -8.8062
           -8.8006
                                 -8.6686
                                                                              -8.2794
 -8.1441
            -8.1423
                      -7.7528
                                 -7.7454
                                            -7.7447
                                                        -7.7089
                                                                   -7.7010
                                                                              -7.6953
            -7.6849
                      -7.6841
                                 -7.5888
                                            -7.5879
                                                       -7.4153
                                                                  -7.1471
                                                                             -7.1470
 -7.6902
 -7.0360
           -6.8686
                      -6.8676
                                 -6.7297
                                            -6.7270
                                                        -6.7263
                                                                   -6.5556
                                                                              -6.5495
                                            -5.9552
                                                        -5.9485
 -6.3369
           -6.2822
                      -6.2814
                                 -6.0612
                                                                   -5.8567
                                                                              -5.8556
 -5.8507
           -5.6934
                      -5.5985
                                 -5.5975
                                            -5.3698
                                                        -5.1968
                                                                   -5.0208
                                                                              -4.9284
                      -4.7946
                                 -4.4427
                                                        -4.1534
 -4.8421
           -4.8229
                                             -4.1539
                                                                   -4.1108
                                                                              -4.1100
           -4.0495
                      -3.9763
                                 -3.9757
 -4.0503
                                            -3.1879
                                                        -3.1872
                                                                   -2.5467
                                                                              -2.5407
           -0.0615
 -0.0792
                        0.8802
                                   0.8821
                                              1.3260
                                                         1.3314
                                                                    1.6796
                                                                               2.0363
                                                         2.5847
                                                                    2.5853
  2.1541
             2.2152
                        2.3679
                                   2.3684
                                              2.4546
                                                                               2.6887
  2.9113
                                                         2.9906
                                                                    3.0144
             2.9358
                        2.9862
                                   2.9875
                                              2.9902
                                                                               3.3810
  3.3829
             3.4928
        k = 0.0000 - 0.4587 \ 0.0000 \ (64850 \ PWs)
                                                         bands (ev):
-21.3374 -21.2620 -21.0172 -20.9914 -20.4812 -20.4803 -20.4015 -20.4012
-19.5242 -19.5232 -19.1834 -19.1820 -19.1024 -19.0665 -19.0655 -18.5794
-18.5624 -18.5605 -18.5345 -18.0349 -18.0340 -17.9863 -17.9854 -17.6573
-17.3947 -17.3934 -16.8040 -16.8023 -16.5117 -16.5089 -15.1942 -15.1887
-14.1152 -14.1120 -13.8940 -13.8889 -13.3141 -13.3098 -13.0119 -12.0340
-12.0334 -11.7907 -11.7900 -11.6369 -11.6363 -11.6342 -11.5242 -11.5211
-11.4360 -10.8245 -10.8178 -10.4318 -10.2119 -10.2023
                                                                  -9.9338
                                                                             -9.9333
           -9.6886
                      -9.4469
                                 -9.4386
                                            -9.3299
                                                       -9.3295
                                                                  -9.2790
 -9.6888
                                                                             -8.8910
                                                       -8.2943
 -8.7700
           -8.7642
                      -8.6905
                                 -8.6815
                                            -8.6656
                                                                   -8.2915
                                                                              -8.2908
                                            -7.7445
 -8.1468
           -8.1450
                      -7.7612
                                 -7.7605
                                                       -7.7396
                                                                  -7.7318
                                                                             -7.6830
 -7.6781
           -7.6585
                      -7.6577
                                 -7.5914
                                            -7.5904
                                                       -7.4278
                                                                  -7.1385
                                                                              -7.1384
                      -6.8914
                                                       -6.7056
 -7.0282
           -6.8924
                                 -6.7385
                                            -6.7089
                                                                  -6.5603
                                                                              -6.5546
                     -6.2617 -6.0296 -5.9808
                                                       -5.9742
 -6.2979
           -6.2626
                                                                  -5.8592
                                                                             -5.8580
```

```
-5.8153
          -5.6656
                    -5.6214
                              -5.6204
                                        -5.3507
                                                 -5.2265
                                                           -5.0526
                                                                     -4.9117
                              -4.4559
 -4.8689
          -4.8486
                    -4.8106
                                        -4.1506
                                                 -4.1500
                                                           -4.1072
                                                                     -4.1065
                                                 -3.1792
                                                           -2.5271
 -4.0533
          -4.0525
                    -3.9808
                             -3.9802
                                       -3.1798
                                                                     -2.5211
 -0.0997
          -0.0820
                    0.8934
                               0.8954
                                                            1.6912
                                        1.3123
                                                  1.3176
                                                                     2.0786
 2.1393
           2.2269
                     2.3596
                               2.3602
                                         2.4664
                                                  2.5964
                                                            2.5970
                                                                      2.6708
  2.9156
           2.9247
                     2.9756
                               2.9763
                                         2.9850
                                                   2.9865
                                                            3.0262
                                                                      3.3635
  3.4172
           3.4748
       k = 0.0000 - 0.4666 \ 0.0000 \ (64828 \ PWs)
                                                  bands (ev):
-21.3288 -21.2547 -21.0300 -21.0022 -20.4829 -20.4820 -20.4036 -20.4033
-18.5832 -18.5522 -18.5504 -18.0334 -18.0325 -17.9879 -17.9870 -17.6897 -17.3899 -17.3886 -16.7961 -16.7944 -16.5231 -16.5204 -15.1645 -15.1590 -14.0898 -14.0866 -13.9248 -13.9198 -13.3418 -13.3375 -12.9671 -12.0225 -12.0219 -11.7961 -11.7954 -11.6811 -11.6513 -11.6508 -11.5277 -11.5246 -11.4064 -10.8049 -10.7981 -10.4685 -10.2331 -10.2237 -9.9141 -9.9136
                                                 -9.3500
                             -9.4111 -9.3505
                                                           -9.2686
                                                                     -8.9064
 -9.6925
          -9.6922 -9.4194
          -8.7284
                    -8.7125
                                                 -8.3090
 -8.7338
                             -8.7034
                                       -8.6557
                                                           -8.2728
                                                                     -8.2722
          -8.1476
                    -7.7771
                             -7.7765
                                       -7.7708
-7.5928
                                                           -7.7358
                                                                     -7.6711
 -8.1494
                                                 -7.7631
                             -7.5937
 -7.6664
          -7.6321
                    -7.6312
                                                 -7.4402
                                                           -7.1303
                                                                     -7.1302
                             -6.7499
                    -6.9154
                                                                     -6.5590
 -7.0204
          -6.9163
                                       -6.6885
                                                 -6.6852
                                                           -6.5645
                              -6.0064
                                                 -5.9975
 -6.2595
          -6.2428
                    -6.2420
                                        -5.9998
                                                           -5.8617
                                                                     -5.8604
                    -5.6433
                              -5.6378
                                                 -5.2566
                                                           -5.0844
 -5.7800
          -5.6442
                                        -5.3316
                                                                     -4.8960
                                        -4.1473
          -4.8745
                    -4.8268
                              -4.4693
 -4.8951
                                                 -4.1467
                                                           -4.1037
                                                                     -4.1030
          -4.0555
                    -3.9852
                              -3.9847
                                        -3.1722
                                                           -2.5085
 -4.0564
                                                 -3.1716
                                                                     -2.5025
 -0.1192
          -0.1015
                     0.9067
                               0.9088
                                         1.2986
                                                  1.3037
                                                            1.7031
                                                                      2.1041
  2.1418
           2.2388
                     2.3519
                               2.3524
                                         2.4785
                                                   2.6082
                                                            2.6089
                                                                      2.6531
  2.8990
           2.9346
                               2.9637
                                         2.9820
                                                   2.9840
                                                            3.0382
                     2.9631
                                                                      3.3461
  3.4502
           3.4571
       k = 0.0000 - 0.4745 \ 0.0000 \ (64824 \ PWs)
                                                  bands (ev):
-21.3201 -21.2473 -21.0426 -21.0128 -20.4845 -20.4836 -20.4055 -20.4052
-19.4958 -19.4948 -19.1458 -19.1444 -19.0989 -19.0979 -19.0632 -18.6076
-18.6057 -18.5700 -18.5214 -18.0318 -18.0309 -17.9895 -17.9886 -17.7220
-17.3854 -17.3841 -16.7880 -16.7863 -16.5345 -16.5318 -15.1354 -15.1299
-14.0643 -14.0611 -13.9550 -13.9501 -13.3694 -13.3652 -12.9222 -12.0108
-12.0102 -11.8012 -11.8004 -11.7279 -11.6657 -11.6652 -11.5309 -11.5278
-11.3765 -10.7852 -10.7784 -10.5050 -10.2544 -10.2451 -9.8944 -9.8939
                   -9.3920
                             -9.3837
                                       -9.3710
                                                -9.3706 -9.2581
 -9.6959
          -9.6956
                                                                     -8.9217
                                                           -8.2542
 -8.7354
          -8.7266
                   -8.6975
                             -8.6912
                                       -8.6455
                                                 -8.3236
                                                                     -8.2536
                   -7.8023
                             -7.7946
                                       -7.7932
                                                 -7.7926
 -8.1518
          -8.1500
                                                           -7.7271
                                                                     -7.6598
          -7.6057
                    -7.6049
                             -7.5959
                                       -7.5950
                                                 -7.4524
                                                           -7.1226
 -7.6554
                                                                     -7.1225
                             -6.7612
          -6.9405
                   -6.9395
                                       -6.6686
                                                 -6.6653
                                                           -6.5677
 -7.0124
                                                                     -6.5625
 -6.2229
          -6.2221
                   -6.2219
                             -6.0318
                                       -6.0239
                                                 -5.9663
                                                           -5.8640
                                                                     -5.8628
 -5.7449
          -5.6669
                    -5.6660
                             -5.6100
                                       -5.3125
                                                 -5.2870
                                                           -5.1164
                                                                     -4.9234
 -4.9005
          -4.8786
                    -4.8431
                             -4.4828
                                       -4.1439
                                                 -4.1434
                                                           -4.1000
                                                                     -4.0994
 -4.0594
          -4.0585
                    -3.9897
                             -3.9892
                                       -3.1651
                                                 -3.1645
                                                           -2.4908
                                                                     -2.4849
 -0.1377
          -0.1200
                     0.9202
                               0.9223
                                        1.2847
                                                  1.2897
                                                            1.7152
                                                                      2.0949
 2.1794
           2.2508
                     2.3446
                               2.3452
                                         2.4907
                                                  2.6201
                                                            2.6208
                                                                      2.6357
  2.8814
           2.9455
                     2.9504
                               2.9510
                                         2.9793
                                                  2.9821
                                                            3.0503
                                                                      3.3289
  3.4385
           3.4419
       k = 0.0000 - 0.4824 \ 0.0000 \ (64832 \ PWs)
                                                  bands (ev):
-21.3113 -21.2398 -21.0551 -21.0233 -20.4860 -20.4850 -20.4073 -20.4070
-19.4815 -19.4805 -19.1268 -19.1254 -19.1150 -19.1140 -19.0437 -18.6300
-18.6281 -18.5880 -18.4922 -18.0303 -18.0294 -17.9911 -17.9902 -17.7543
-17.3812 -17.3799 -16.7798 -16.7780 -16.5457 -16.5430 -15.1070 -15.1015
-14.0388 -14.0354 -13.9843 -13.9796 -13.3970 -13.3928 -12.8772 -11.9990
-11.9984 -11.8058 -11.8051 -11.7746 -11.6801 -11.6795 -11.5339 -11.5308
```

```
-11.3463 -10.7655 -10.7586 -10.5414 -10.2755 -10.2664
                                                                -9.8746
                                                                           -9.8742
                                                     -9.3565
                                                                -9.2474
 -9.6990
           -9.6987
                     -9.3916
                               -9.3911
                                          -9.3648
                                                                           -8.9368
                                -8.6553
                                                     -8.3380
 -8.7580
           -8.7492
                     -8.6615
                                          -8.6352
                                                                -8.2356
                                                                           -8.2350
                                           -7.8095
                                                                -7.7183
           -8.1523
                      -7.8339
                                -7.8263
                                                     -7.8088
 -8.1541
                                                                           -7.6492
 -7.6450
           -7.5980
                      -7.5970
                                -7.5793
                                           -7.5785
                                                     -7.4646
                                                                -7.1154
                                                                           -7.1153
 -7.0043
           -6.9648
                     -6.9638
                                -6.7723
                                           -6.6500
                                                     -6.6465
                                                                -6.5692
                                                                           -6.5644
 -6.2029
           -6.2021
                     -6.1861
                                -6.0571
                                           -6.0467
                                                      -5.9347
                                                                -5.8662
                                                                           -5.8650
 -5.7100
           -5.6895
                     -5.6886
                                -5.5822
                                           -5.3176
                                                     -5.2934
                                                                -5.1483
                                                                           -4.9512
                                -4.4965
 -4.9267
           -4.8621
                     -4.8596
                                           -4.1406
                                                      -4.1400
                                                                -4.0963
                                                                           -4.0957
                                                                           -2.4683
 -4.0625
           -4.0616
                     -3.9942
                                -3.9937
                                           -3.1586
                                                     -3.1579
                                                                -2.4742
 -0.1550
           -0.1373
                       0.9337
                                  0.9359
                                            1.2708
                                                       1.2757
                                                                 1.7274
                                                                            2.0794
  2.2238
            2.2631
                       2.3379
                                  2.3385
                                            2.5032
                                                       2.6184
                                                                 2.6322
                                                                            2.6328
  2.8639
            2.9375
                                            2.9769
                                                       2.9814
                                                                 3.0627
                       2.9382
                                  2.9559
                                                                            3.3119
  3.3924
             3.4218
        k = 0.0000 - 0.4904 \ 0.0000 \ (64840 \ PWs)
                                                       bands (ev):
-21.3023 -21.2321 -21.0674 -21.0337 -20.4873 -20.4864 -20.4090 -20.4087 -19.4671 -19.4660 -19.1311 -19.1300 -19.1076 -19.1062 -19.0241 -18.6522 -18.6504 -18.6061 -18.4628 -18.0287 -18.0278 -17.9928 -17.9919 -17.7864 -17.3774 -17.3761 -16.7715 -16.7697 -16.5568 -16.5542 -15.0796 -15.0739 -14.0141 -14.0120 -14.0105 -14.0069 -13.4246 -13.4204 -12.8321 -11.9870 -11.9865 -11.8213 -11.8102 -11.8095 -11.6944 -11.6939 -11.5366 -11.5336 -11.3158 -10.7458 -10.7388 -10.5775 -10.2966 -10.2877 -9.8549 -9.8544
                                          -9.3377
 -9.7019
                                -9.4116
                                                     -9.3293
           -9.7016
                     -9.4120
                                                                -9.2365
                                                                           -8.9518
 -8.7810
           -8.7721
                     -8.6256
                                -8.6247
                                           -8.6194
                                                     -8.3523
                                                                -8.2170
                                                                           -8.2164
                                                                -7.7093
                      -7.8657
 -8.1562
           -8.1544
                                -7.8582
                                           -7.8259
                                                      -7.8253
                                                                           -7.6392
                     -7.5989
           -7.5998
                                -7.5530
                                                      -7.4766
 -7.6354
                                           -7.5521
                                                                -7.1087
                                                                           -7.1086
                                -6.7834
           -6.9891
                     -6.9883
                                           -6.6338
                                                                -6.5680
 -6.9960
                                                      -6.6302
                                                                           -6.5635
 -6.1828
                                                                -5.8683
           -6.1819
                      -6.1549
                                -6.0824
                                           -6.0652
                                                      -5.9032
                                                                           -5.8671
 -5.7121
           -5.7112
                      -5.6753
                                -5.5544
                                           -5.3485
                                                      -5.2744
                                                                -5.1803
                                                                           -4.9794
 -4.9530
                                 -4.5103
           -4.8763
                      -4.8457
                                           -4.1373
                                                      -4.1367
                                                                -4.0926
                                                                           -4.0920
 -4.0656
                                -3.9982
           -4.0646
                      -3.9987
                                           -3.1525
                                                      -3.1519
                                                                -2.4587
                                                                           -2.4528
                       0.9473
                                  0.9496
                                            1.2568
                                                                 1.7399
 -0.1712
           -0.1535
                                                       1.2616
                                                                            2.0631
            2.2759
                       2.3317
                                  2.3324
                                            2.5159
                                                       2.6013
  2.2692
                                                                 2.6443
                                                                            2.6449
  2.8466
             2.9247
                       2.9253
                                  2.9637
                                            2.9746
                                                       2.9836
                                                                 3.0753
                                                                            3.2950
  3.3423
             3.4045
        k = 0.0000 - 0.4983 \ 0.0000 \ (64826 \ PWs)
                                                       bands (ev):
-21.2931 -21.2244 -21.0796 -21.0439 -20.4886 -20.4876 -20.4105 -20.4102
-19.4526 -19.4516 -19.1471 -19.1460 -19.0884 -19.0869 -19.0046 -18.6743
-18.6725 -18.6243 -18.4334 -18.0272 -18.0262 -17.9944 -17.9935 -17.8184
-17.3738 -17.3726 -16.7631 -16.7612 -16.5679 -16.5653 -15.0531 -15.0474
-14.0400 -14.0358 -13.9871 -13.9837 -13.4521 -13.4479 -12.7870 -11.9750
-11.9744 -11.8680 -11.8141 -11.8134 -11.7087 -11.7081 -11.5391 -11.5361
-11.2850 -10.7260 -10.7189 -10.6135 -10.3177 -10.3088
                                                                -9.8351
                                                                          -9.8346
 -9.7045
           -9.7042
                     -9.4325
                               -9.4321
                                          -9.3106
                                                     -9.3023
                                                                -9.2254
                                                                          -8.9666
 -8.8041
           -8.7953
                     -8.6141
                                -8.5898
                                          -8.5835
                                                     -8.3664
                                                                -8.1984
                                                                           -8.1978
 -8.1582
           -8.1564
                     -7.8977
                                -7.8903
                                           -7.8425
                                                     -7.8418
                                                                -7.7002
                                                                           -7.6300
 -7.6265
           -7.6016
                      -7.6006
                                -7.5266
                                           -7.5258
                                                     -7.4885
                                                                -7.1026
                                                                           -7.1025
 -7.0137
           -7.0128
                      -6.9876
                                -6.7943
                                           -6.6220
                                                      -6.6182
                                                                -6.5618
                                                                           -6.5578
 -6.1625
           -6.1617
                      -6.1388
                                 -6.1075
                                           -6.0686
                                                      -5.8717
                                                                -5.8703
                                                                           -5.8690
                                           -5.3796
                                                      -5.2554
 -5.7346
           -5.7336
                      -5.6408
                                 -5.5266
                                                                -5.2124
                                                                           -5.0078
 -4.9795
           -4.8931
                      -4.8294
                                 -4.5243
                                           -4.1339
                                                      -4.1334
                                                                -4.0887
                                                                           -4.0883
 -4.0687
            -4.0676
                      -4.0032
                                 -4.0027
                                           -3.1469
                                                      -3.1463
                                                                -2.4444
                                                                           -2.4385
 -0.1862
            -0.1685
                                            1.2428
                                                       1.2474
                                                                 1.7525
                       0.9610
                                  0.9634
                                                                            2.0467
                                            2.5288
                                                       2.5845
  2.2882
            2.3151
                       2.3261
                                  2.3276
                                                                 2.6565
                                                                            2.6571
  2.8294
                                                       2.9907
                                                                 3.0881
             2.9118
                       2.9124
                                  2.9670
                                            2.9726
                                                                            3.2783
  3.2922
             3.3874
        k = 0.0000 - 0.5062 \ 0.0000 \ (64826 \ PWs)
                                                       bands (ev):
```

```
-21.2838 -21.2165 -21.0917 -21.0541 -20.4897 -20.4887 -20.4119 -20.4116
-19.4380 -19.4370 -19.1630 -19.1619 -19.0689 -19.0674 -18.9851 -18.6963
-14.0660 -14.0619 -13.9612 -13.9577 -13.4795 -13.4754 -12.7417 -11.9627 -11.9622 -11.9145 -11.8177 -11.8170 -11.7229 -11.7223 -11.5413 -11.5383
-11.2539 -10.7061 -10.6990 -10.6492 -10.3387 -10.3299 -9.8153 -9.8148
 -9.7069
           -9.7066 -9.4529
                               -9.4525
                                          -9.2838
                                                     -9.2753
                                                                -9.2142
                                                                          -8.9812
           -8.8187
 -8.8276
                     -8.6032
                                -8.5541
                                          -8.5479
                                                     -8.3803
                                                                -8.1799
                                                                           -8.1793
 -8.1600
           -8.1583
                     -7.9299
                                -7.9225
                                          -7.8592
                                                     -7.8586
                                                                -7.6910
                                                                          -7.6216
                                                                          -7.0970
                                                                -7.0971
 -7.6183
           -7.6031
                     -7.6022
                                -7.5004
                                          -7.5002
                                                     -7.4995
                                                     -6.6118
 -7.0385
           -7.0375
                     -6.9791
                                -6.8051
                                          -6.6157
                                                                -6.5497
                                                                           -6.5460
                                                                           -5.8405
 -6.1472
           -6.1421
                     -6.1413
                                -6.1325
                                           -6.0477
                                                     -5.8721
                                                                -5.8708
                                                                -5.2364
                                                                           -5.0367
 -5.7569
           -5.7560
                     -5.6066
                                -5.4989
                                           -5.4108
                                                     -5.2444
 -5.0061
           -4.9100
                      -4.8132
                                -4.5384
                                           -4.1306
                                                     -4.1300
                                                                -4.0849
                                                                           -4.0846
                                                                           -2.4253
 -4.0718
           -4.0706
                     -4.0077
                                -4.0072
                                           -3.1419
                                                     -3.1413
                                                                -2.4312
 -0.1999
           -0.1822
                       0.9747
                                 0.9772
                                            1.2287
                                                       1.2332
                                                                 1.7653
                                                                            2.0304
  2.3011
            2.3209
                       2.3211
                                  2.3630
                                            2.5419
                                                       2.5679
                                                                 2.6688
                                                                            2.6694
  2.8125
             2.8989
                       2.8995
                                  2.9673
                                            2.9708
                                                       3.0013
                                                                 3.1011
                                                                            3.2418
  3.2621
             3.3705
        k = 0.0000 - 0.5141 \ 0.0000 \ (64828 \ PWs)
                                                       bands (ev):
-21.2744 -21.2085 -21.1036 -21.0641 -20.4907 -20.4897 -20.4131 -20.4129 -19.4233 -19.4223 -19.1789 -19.1778 -19.0494 -19.0479 -18.9656 -18.7181 -18.7163 -18.6610 -18.3741 -18.0240 -18.0230 -17.9977 -17.9968 -17.8821 -17.3678 -17.3665 -16.7458 -16.7439 -16.5895 -16.5870 -15.0040 -14.9983 -14.0905 -14.0866 -13.9352 -13.9317 -13.5069 -13.5028 -12.6964 -11.9611 -11.9504 -11.9498 -11.8210 -11.8202 -11.7370 -11.7364 -11.5433 -11.5403 -11.2225 -10.6862 -10.6848 -10.6790 -10.3596 -10.3510 -9.7954 -9.7949 -0.7080 -0.7087 -0.4733 -0.4739 -0.2570 -0.2486 -0.2027 -8.0056
                                          -9.2570
                               -9.4729
 -9.7090
           -9.7087
                     -9.4733
                                                     -9.2486
                                                                -9.2027
                                                                           -8.9956
 -8.8512
                     -8.5923
                                -8.5187
                                           -8.5123
                                                     -8.3941
           -8.8424
                                                                -8.1618
                                                                          -8.1614
                                -7.9548
                                                     -7.8755
                     -7.9621
                                           -7.8761
                                                                           -7.6140
 -8.1608
           -8.1601
                                                                -7.6816
                      -7.6035
                                -7.5118
                                           -7.4741
                                                     -7.4733
 -7.6110
           -7.6045
                                                                -7.0921
                                                                           -7.0920
 -7.0633
           -7.0624
                      -6.9705
                                -6.8158
                                           -6.6136
                                                     -6.6097
                                                                -6.5329
                                                                           -6.5294
                                                                           -5.8095
 -6.1667
           -6.1575
                      -6.1217
                                -6.1208
                                           -6.0158
                                                     -5.8737
                                                                -5.8724
                                -5.4717
                                                                           -5.0658
 -5.7792
           -5.7783
                      -5.5726
                                           -5.4415
                                                      -5.2764
                                                                -5.2175
                                -4.5527
                                           -4.1273
 -5.0328
           -4.9271
                      -4.7971
                                                      -4.1267
                                                                -4.0813
                                                                           -4.0809
 -4.0749
           -4.0732
                      -4.0122
                                -4.0117
                                           -3.1374
                                                      -3.1368
                                                                -2.4193
                                                                           -2.4134
 -0.2123
           -0.1946
                       0.9886
                                  0.9911
                                            1.2146
                                                       1.2190
                                                                 1.7784
                                                                            2.0142
  2.3142
            2.3163
                       2.3167
                                  2.4097
                                            2.5516
                                                       2.5552
                                                                 2.6811
                                                                            2.6818
  2.7957
                                                                 3.1143
             2.8859
                       2.8866
                                  2.9666
                                            2.9692
                                                       3.0132
                                                                            3.1918
  3.2458
             3.3539
        k = 0.0000 - 0.5220 \ 0.0000 \ (64840 \ PWs)
                                                       bands (ev):
-21.2648 -21.2004 -21.1153 -21.0740 -20.4916 -20.4906 -20.4142 -20.4139
-19.4086 -19.4076 -19.1947 -19.1936 -19.0297 -19.0282 -18.9462 -18.7398
-18.7381 -18.6795 -18.3443 -18.0224 -18.0214 -17.9993 -17.9984 -17.9137
-17.3653 -17.3640 -16.7370 -16.7350 -16.6002 -16.5977 -14.9818 -14.9761
-14.1132 -14.1096 -13.9091 -13.9055 -13.5343 -13.5302 -12.6510 -12.0075
-11.9379 -11.9373 -11.8238 -11.8231 -11.7510 -11.7505 -11.5451 -11.5421
                                                               -9.7755
-11.1908 -10.7201 -10.6662 -10.6590 -10.3805 -10.3720
                                                                          -9.7750
           -9.7106
                     -9.4937
                                -9.4933
                                          -9.2304
                                                     -9.2219
                                                                -9.1911
                                                                          -9.0099
 -9.7109
 -8.8751
           -8.8663
                      -8.5811
                                -8.4833
                                           -8.4769
                                                      -8.4077
                                                                -8.1636
                                                                           -8.1620
 -8.1430
           -8.1423
                      -7.9943
                                -7.9872
                                           -7.8931
                                                      -7.8924
                                                                -7.6722
                                                                           -7.6071
                                           -7.4479
 -7.6057
           -7.6048
                      -7.6044
                                -7.5233
                                                      -7.4471
                                                                -7.0891
                                                                           -7.0876
 -7.0874
           -7.0865
                     -6.9618
                                -6.8263
                                           -6.6136
                                                     -6.6100
                                                                -6.5134
                                                                           -6.5101
 -6.1893
           -6.1823
                     -6.1011
                                -6.1002
                                          -5.9811
                                                     -5.8752
                                                                -5.8739
                                                                           -5.8014
                     -5.5389
                                -5.4741 -5.4423
                                                                -5.1987
 -5.8005
           -5.7791
                                                     -5.3084
                                                                           -5.0953
           -4.9444 -4.7810 -4.5671 -4.1239
                                                     -4.1234
                                                                -4.0797
 -5.0595
                                                                          -4.0783
```

```
-4.0767
          -4.0740
                     -4.0167
                               -4.0162
                                         -3.1334
                                                   -3.1328
                                                             -2.4087
                                                                       -2.4028
                                                              1.7916
                                                                       1.9981
 -0.2234
          -0.2057
                     1.0025
                                1.0051
                                          1.2005
                                                   1.2047
  2.3122
           2.3126
                      2.3275
                                2.4565
                                          2.5358
                                                    2.5686
                                                              2.6936
                                                                        2.6942
  2.7792
                                2.9656
                                          2.9677
                                                    3.0258
                                                              3.1273
            2.8730
                      2.8736
                                                                        3.1423
  3.2298
            3.3374
       k = 0.0000 - 0.5299 \ 0.0000 \ (64858 \ PWs)
                                                    bands (ev):
-21.2551 -21.1921 -21.1269 -21.0838 -20.4923 -20.4914 -20.4152 -20.4149
-19.3938 \ -19.3928 \ -19.2104 \ -19.2093 \ -19.0099 \ -19.0083 \ -18.9268 \ -18.7614
-18.7597 \ -18.6981 \ -18.3143 \ -18.0208 \ -18.0198 \ -18.0009 \ -18.0000 \ -17.9452
-17.3631 -17.3618 -16.7280 -16.7260 -16.6108 -16.6083 -14.9616 -14.9558 -14.1338 -14.1305 -13.8829 -13.8793 -13.5615 -13.5575 -12.6055 -12.0539 -11.9253 -11.9247 -11.8263 -11.8256 -11.7650 -11.7645 -11.5466 -11.5437
-11.1588 -10.7553 -10.6462 -10.6389 -10.4013 -10.3929
                                                            -9.7556
                                                                      -9.7551
 -9.7125
          -9.7122
                    -9.5140
                              -9.5136 -9.2040
                                                  -9.1955
                                                            -9.1792
                                                                      -9.0239
                    -8.5698
                                                  -8.4211
                                                            -8.1654
                                                                      -8.1639
 -8.8992
          -8.8904
                              -8.4482
                                        -8.4418
                    -8.0264
                                                  -7.9096
                                                                      -7.6068
          -8.1240
 -8.1246
                              -8.0194
                                        -7.9102
                                                            -7.6626
          -7.6011
 -7.6058
                    -7.5988
                              -7.5346
                                        -7.4218
                                                  -7.4209
                                                            -7.1134
                                                                       -7.1124
                    -6.9529
                              -6.8368
                                        -6.6145
                                                  -6.6111
                                                             -6.4925
                                                                       -6.4892
 -7.0837
          -7.0836
 -6.2128
          -6.2070
                    -6.0804
                              -6.0795
                                         -5.9456
                                                   -5.8765
                                                             -5.8752
                                                                       -5.8234
                    -5.5054
 -5.8225
          -5.7496
                              -5.5040
                                        -5.4151
                                                   -5.3403
                                                             -5.1799
                                                                       -5.1250
                     -4.7651
                              -4.5816
                                         -4.1206
 -5.0865
          -4.9617
                                                   -4.1201
                                                             -4.0815
                                                                       -4.0814
                               -4.0206
                                         -3.1299
 -4.0729
          -4.0714
                                                             -2.3993
                    -4.0211
                                                   -3.1293
                                                                       -2.3935
 -0.2331
          -0.2154
                     1.0164
                                1.0192
                                          1.1863
                                                    1.1904
                                                              1.8050
                                                                        1.9822
  2.3087
            2.3091
                      2.3410
                                2.5006
                                          2.5231
                                                    2.5823
                                                              2.7061
                                                                        2.7068
  2.7628
            2.8600
                      2.8607
                                2.9647
                                          2.9665
                                                    3.0387
                                                              3.0917
                                                                        3.1416
  3.2140
            3.3211
       k = 0.0000 - 0.5378 \ 0.0000 \ (64866 \ PWs)
                                                    bands (ev):
-21.2452 -21.1837 -21.1384 -21.0935 -20.4930 -20.4920 -20.4160 -20.4157
-19.3789 -19.3779 -19.2261 -19.2250 -18.9899 -18.9883 -18.9074 -18.7828
-18.7811 -18.7168 -18.2842 -18.0192 -18.0182 -18.0026 -18.0017 -17.9767 -17.3612 -17.3600 -16.7189 -16.7169 -16.6212 -16.6188 -14.9436 -14.9379 -14.1521 -14.1491 -13.8566 -13.8529 -13.5887 -13.5847 -12.5600 -12.1003 -11.9125 -11.9119 -11.8284 -11.8277 -11.7789 -11.7783 -11.5479 -11.5450
-11.1266 -10.7902 -10.6261 -10.6188 -10.4220 -10.4137
                                                            -9.7357
                                                                      -9.7352
                                        -9.1777
 -9.7139
          -9.7136
                    -9.5343
                              -9.5339
                                                  -9.1696
                                                            -9.1667
                                                                      -9.0378
 -8.9235
          -8.9148
                    -8.5583
                              -8.4344
                                        -8.4133
                                                  -8.4068
                                                            -8.1676
                                                                      -8.1662
                              -8.0513
                                        -7.9275
                                                  -7.9269
 -8.1062
          -8.1056
                    -8.0580
                                                             -7.6529
                                                                       -7.6077
          -7.5960
                    -7.5940
                                        -7.3956
 -7.6067
                              -7.5457
                                                  -7.3948
                                                             -7.1385
                                                                       -7.1376
                              -6.8471
                                        -6.6158
                                                  -6.6126
 -7.0804
          -7.0804
                    -6.9439
                                                             -6.4707
                                                                       -6.4674
                                        -5.9100
                    -6.0596
                              -6.0587
                                                  -5.8776
                                                            -5.8763
 -6.2366
          -6.2316
                                                                      -5.8454
 -5.8444
          -5.7222
                    -5.5325
                              -5.4722
                                        -5.3875
                                                  -5.3721
                                                            -5.1613
                                                                       -5.1551
 -5.1135
          -4.9792
                    -4.7492
                              -4.5962
                                        -4.1173
                                                  -4.1168
                                                            -4.0845
                                                                       -4.0843
          -4.0677
 -4.0688
                    -4.0255
                              -4.0250
                                        -3.1270
                                                  -3.1263
                                                            -2.3914
                                                                       -2.3856
          -0.2237
                     1.0304
                               1.0333
                                         1.1721
                                                   1.1761
                                                             1.8186
 -0.2414
                                                                        1.9665
  2.3057
           2.3061
                      2.3546
                                2.5012
                                          2.5543
                                                    2.5963
                                                              2.7187
                                                                        2.7194
  2.7467
            2.8471
                      2.8477
                                2.9638
                                          2.9654
                                                    3.0419
                                                              3.0520
                                                                        3.1553
  3.1985
            3.3050
       k = 0.0000 - 0.5457 \ 0.0000 \ (64846 \ PWs)
                                                    bands (ev):
-21.2352 -21.1753 -21.1497 -21.1030 -20.4935 -20.4925 -20.4166 -20.4163
-19.3640 -19.3629 -19.2417 -19.2406 -18.9698 -18.9682 -18.8881 -18.8041
-18.8024 -18.7355 -18.2540 -18.0176 -18.0166 -18.0080 -18.0042 -18.0033
-17.3597 -17.3584 -16.7097 -16.7077 -16.6315 -16.6291 -14.9283 -14.9225
-14.1677 -14.1650 -13.8302 -13.8265 -13.6159 -13.6119 -12.5143 -12.1465
-11.8996 -11.8991 -11.8301 -11.8294 -11.7927 -11.7921 -11.5490 -11.5460
```

```
-8.9480
           -8.9393
                     -8.5467
                                -8.4476
                                           -8.3786
                                                      -8.3721
                                                                -8.1708
                                                                           -8.1697
           -8.0880
                     -8.0874
                                           -7.9449
                                                     -7.9443
 -8.0884
                                -8.0821
                                                                -7.6432
                                                                           -7.6084
           -7.5917
                     -7.5901
                                                                -7.1638
                                                                           -7.1629
 -7.6074
                                -7.5566
                                          -7.3696
                                                     -7.3687
 -7.0777
                      -6.9348
                                                                -6.4484
           -7.0777
                                -6.8574
                                           -6.6170
                                                      -6.6141
                                                                           -6.4450
 -6.2606
           -6.2560
                      -6.0386
                                -6.0378
                                           -5.8785
                                                      -5.8772
                                                                -5.8756
                                                                           -5.8673
 -5.8654
           -5.6991
                     -5.5571
                                -5.4393
                                           -5.4038
                                                      -5.3598
                                                                -5.1855
                                                                           -5.1427
 -5.1405
           -4.9969
                      -4.7334
                                -4.6110
                                           -4.1140
                                                      -4.1135
                                                                -4.0877
                                                                           -4.0874
                     -4.0299
                                -4.0294
 -4.0648
           -4.0637
                                           -3.1245
                                                      -3.1239
                                                                -2.3848
                                                                           -2.3790
 -0.2482
           -0.2305
                      1.0445
                                 1.0475
                                           1.1579
                                                      1.1618
                                                                 1.8323
                                                                            1.9511
  2.3032
            2.3037
                       2.3685
                                  2.4863
                                            2.6014
                                                       2.6104
                                                                  2.7307
                                                                            2.7314
  2.7320
            2.8341
                       2.8348
                                  2.9630
                                            2.9645
                                                       2.9924
                                                                  3.0654
                                                                            3.1691
  3.1833
             3.2892
        k = 0.0000 - 0.5536 \ 0.0000 \ (64840 \ PWs)
                                                       bands (ev):
-21.2251 -21.1667 -21.1609 -21.1125 -20.4939 -20.4930 -20.4171 -20.4169 -19.3489 -19.3479 -19.2572 -19.2561 -18.9496 -18.9480 -18.8689 -18.8253 -18.8236 -18.7544 -18.2237 -18.0391 -18.0160 -18.0150 -18.0058 -18.0049 -17.3585 -17.3573 -16.7004 -16.6983 -16.6417 -16.6393 -14.9159 -14.9101 -14.1802 -14.1779 -13.8037 -13.8000 -13.6429 -13.6390 -12.4686 -12.1927 -11.8867 -11.8861 -11.8314 -11.8307 -11.8064 -11.8059 -11.5498 -11.5468 -11.0613 -10.8594 -10.5858 -10.5783 -10.4633 -10.4552 -9.7159 -9.7156 -9.6956 -9.6952 -9.5749 -9.5744 -9.1432 -9.1253 -9.1168 -9.0651
                      -8.5349
                                           -8.3443
                                                      -8.3378
 -8.9727
           -8.9640
                                -8.4605
                                                                -8.1769
                                                                           -8.1757
           -8.1103
                      -8.0698
                                                     -7.9618
                                                                -7.6334
                                                                           -7.6089
 -8.1154
                                -8.0692
                                           -7.9624
                     -7.5871
                                -7.5672
 -7.6080
           -7.5884
                                           -7.3435
                                                     -7.3427
                                                                -7.1892
                                                                           -7.1883
                      -6.9255
                                                                -6.4257
 -7.0756
           -7.0755
                                -6.8675
                                           -6.6181
                                                     -6.6154
                                                                           -6.4223
 -6.2846
           -6.2803
                                -6.0168
                                                      -5.8884
                                                                -5.8792
                      -6.0176
                                           -5.8891
                                                                           -5.8779
                      -5.5715
                                 -5.4351
 -5.8393
           -5.6865
                                           -5.4066
                                                      -5.3323
                                                                 -5.2163
                                                                           -5.1677
                      -4.7178
                                -4.6259
                                                                 -4.0909
 -5.1242
           -5.0146
                                           -4.1107
                                                      -4.1102
                                                                           -4.0905
 -4.0607
           -4.0596
                      -4.0342
                                 -4.0338
                                           -3.1227
                                                      -3.1221
                                                                 -2.3797
                                                                           -2.3739
 -0.2535
           -0.2358
                       1.0586
                                  1.0617
                                            1.1437
                                                       1.1474
                                                                  1.8461
                                                                            1.9359
                                            2.6246
                                                       2.6494
                                                                  2.7150
  2.3013
            2.3018
                       2.3826
                                  2.4711
                                                                            2.7441
                                                       2.9639
  2.7447
             2.8212
                       2.8218
                                  2.9430
                                            2.9624
                                                                  3.0790
                                                                            3.1676
  3.1840
             3.2735
        k = 0.0000 - 0.5615 \ 0.0000 \ (64846 \ PWs)
                                                       bands (ev):
-21.2148 -21.1719 -21.1579 -21.1218 -20.4942 -20.4933 -20.4175 -20.4172
-19.3338 -19.3328 -19.2727 -19.2716 -18.9292 -18.9276 -18.8496 -18.8464
-18.8447 -18.7733 -18.1932 -18.0702 -18.0144 -18.0134 -18.0074 -18.0065
-17.3577 -17.3564 -16.6910 -16.6889 -16.6517 -16.6494 -14.9067 -14.9010
-14.1894 -14.1873 -13.7771 -13.7734 -13.6699 -13.6660 -12.4228 -12.2388
-11.8736 -11.8730 -11.8324 -11.8317 -11.8200 -11.8195 -11.5504 -11.5474
-11.0283 -10.8937 -10.5655 -10.5579 -10.4839 -10.4759
                                                                -9.7165
                                                                           -9.7162
 -9.6756
          -9.6751 -9.5951 -9.5946 -9.1307
                                                     -9.0995
                                                                -9.0909
                                                                           -9.0784
 -8.9976
           -8.9890
                     -8.5229
                               -8.4733 -8.3106
                                                     -8.3041
                                                                -8.1907
                                                                           -8.1876
           -8.1319
                     -8.0517
                                -8.0511 -7.9801
                                                     -7.9794
                                                                -7.6237
                                                                           -7.6093
 -8.1347
 -7.6084
           -7.5861
                     -7.5851
                                -7.5771
                                          -7.3176
                                                     -7.3168
                                                                -7.2147
                                                                           -7.2138
 -7.0741
           -7.0740
                     -6.9162
                                -6.8774
                                          -6.6189
                                                      -6.6163
                                                                -6.4027
                                                                           -6.3992
 -6.3084
           -6.3044
                      -5.9964
                                -5.9956
                                           -5.9108
                                                     -5.9100
                                                                -5.8797
                                                                           -5.8784
 -5.8051
           -5.6916
                      -5.5685
                                -5.4660
                                           -5.3741
                                                      -5.3047
                                                                 -5.2472
                                                                           -5.1950
 -5.1059
           -5.0323
                      -4.7022
                                -4.6409
                                           -4.1075
                                                      -4.1070
                                                                 -4.0941
                                                                           -4.0937
                      -4.0385
                                 -4.0381
                                                      -3.1207
 -4.0566
           -4.0556
                                           -3.1213
                                                                 -2.3761
                                                                           -2.3703
 -0.2573
           -0.2396
                      1.0727
                                 1.0759
                                            1.1295
                                                       1.1331
                                                                  1.8600
                                                                            1.9211
  2.2999
            2.3004
                       2.3969
                                  2.4559
                                            2.6392
                                                       2.6967
                                                                  2.7004
                                                                            2.7568
                       2.8089
                                  2.8938
                                                       2.9634
  2.7574
             2.8082
                                            2.9620
                                                                  3.0927
                                                                            3.1531
  3.1982
             3.2581
        k = 0.0000 - 0.5694 \ 0.0000 \ (64862 \ PWs)
                                                       bands (ev):
-21.2044 -21.1827 -21.1491 -21.1310 -20.4944 -20.4934 -20.4177 -20.4174
```

```
-19.3186 -19.3176 -19.2881 -19.2870 -18.9087 -18.9071 -18.8673 -18.8656
-18.8305 -18.7923 -18.1627 -18.1011 -18.0129 -18.0119 -18.0089 -18.0081
-17.3572 -17.3559 -16.6815 -16.6794 -16.6615 -16.6593 -14.9012 -14.8954
-14.1951 -14.1931 -13.7505 -13.7467 -13.6968 -13.6929 -12.3770 -12.2849 -11.8604 -11.8598 -11.8337 -11.8334 -11.8326 -11.8320 -11.5508 -11.5478
-10.9950 -10.9277 -10.5452 -10.5376 -10.5043 -10.4964 -9.7169
                                                                            -9.7166
            -9.6550
                      -9.6152
                                 -9.6148
                                           -9.1182 -9.0915
 -9.6555
                                                                 -9.0740
                                                                            -9.0654
                      -8.5108
                                 -8.4860
                                            -8.2779
                                                       -8.2715
                                                                 -8.2139
 -9.0227
           -9.0140
                                                                            -8.2089
                                                                            -7.6096
 -8.1440
           -8.1429
                      -8.0336
                                -8.0330
                                            -7.9979
                                                       -7.9972
                                                                 -7.6149
                                                                            -7.2394
 -7.6087
           -7.5884
                      -7.5841
                                 -7.5824
                                            -7.2918
                                                       -7.2909
                                                                  -7.2403
 -7.0732
           -7.0731
                      -6.9067
                                 -6.8873
                                            -6.6194
                                                       -6.6169
                                                                  -6.3795
                                                                            -6.3759
                                                                            -5.8787
 -6.3321
           -6.3283
                      -5.9752
                                 -5.9744
                                            -5.9323
                                                       -5.9315
                                                                  -5.8800
                                                                            -5.2223
 -5.7718
           -5.7121
                      -5.5504
                                 -5.4960
                                            -5.3420
                                                       -5.2785
                                                                  -5.2772
                                                                             -4.0967
 -5.0880
           -5.0499
                      -4.6867
                                 -4.6560
                                            -4.1043
                                                       -4.1039
                                                                  -4.0972
                                                                             -2.3681
 -4.0528
           -4.0515
                      -4.0425
                                 -4.0422
                                            -3.1205
                                                       -3.1199
                                                                  -2.3738
 -0.2597
           -0.2419
                       1.0869
                                  1.0901
                                             1.1153
                                                        1.1188
                                                                  1.8734
                                                                              1.9071
  2.2991
             2.2996
                        2.4113
                                  2.4409
                                             2.6538
                                                        2.6841
                                                                   2.7460
                                                                              2.7696
  2.7702
             2.7953
                        2.7960
                                   2.8450
                                             2.9618
                                                        2.9631
                                                                   3.1059
                                                                              3.1393
  3.2127
             3.2429
        k = 0.0000 - 0.5774 \ 0.0000 \ (64894 \ PWs)
                                                        bands (ev):
-21.1957 -21.1915 -21.1408 -21.1394 -20.4944 -20.4935 -20.4178 -20.4175 -19.3037 -19.3032 -19.3030 -19.3016 -18.8886 -18.8878 -18.8864 -18.8861 -18.8120 -18.8106 -18.1326 -18.1313 -18.0121 -18.0109 -18.0097 -18.0090 -17.3570 -17.3557 -16.6737 -16.6718 -16.6691 -16.6673 -14.8993 -14.8935 -14.1970 -14.1951 -13.7257 -13.7220 -13.7215 -13.7178 -12.3339 -12.3281 -11.8481 -11.8471 -11.8460 -11.8458 -11.8331 -11.8324 -11.5509 -11.5479 -10.9619 -10.9609 -10.5259 -10.5240 -10.5184 -10.5155 -9.7170 -9.7167 -9.6360 -9.6352 -9.6349 -9.6346 -9.1081 -9.1017 -9.0517 -9.0458
 -9.0418
           -9.0363
                      -8.4992
                                 -8.4977
                                            -8.2528
                                                       -8.2478
                                                                 -8.2351
                                                                            -8.2309
                                            -8.0151
                                 -8.0159
                                                                             -7.6096
 -8.1465
           -8.1458
                      -8.0163
                                                       -8.0142
                                                                  -7.6101
           -7.5928
                      -7.5837
                                 -7.5825
                                                                            -7.2645
 -7.6087
                                            -7.2664
                                                       -7.2661
                                                                 -7.2653
           -7.0728
                      -6.8980
                                 -6.8962
 -7.0729
                                            -6.6195
                                                       -6.6171
                                                                  -6.3579
                                                                            -6.3564
           -6.3500
                      -5.9541
                                 -5.9536
                                            -5.9535
                                                       -5.9523
                                                                  -5.8801
 -6.3520
                                                                             -5.8788
 -5.7415
            -5.7391
                      -5.5271
                                 -5.5224
                                            -5.3108
                                                       -5.3095
                                                                  -5.2503
                                                                             -5.2491
 -5.0746
            -5.0633
                      -4.6725
                                 -4.6702
                                            -4.1021
                                                       -4.1018
                                                                  -4.0994
                                                                             -4.0988
 -4.0505
            -4.0486
                      -4.0454
                                 -4.0446
                                            -3.1203
                                                       -3.1196
                                                                  -2.3731
                                                                             -2.3673
 -0.2604
           -0.2427
                        1.1008
                                  1.1013
                                             1.1037
                                                        1.1053
                                                                   1.8820
                                                                              1.8983
  2.2988
             2.2993
                        2.4250
                                   2.4270
                                             2.6669
                                                        2.6709
                                                                   2.7817
                                                                              2.7821
  2.7827
             2.7845
                        2.7875
                                   2.8033
                                             2.9617
                                                        2.9630
                                                                   3.1143
                                                                              3.1306
  3.2257
             3.2297
        k = 0.0079 - 0.5774 \ 0.0000 \ (64850 \ PWs)
                                                        bands (ev):
-21.1956 -21.1915 -21.1407 -21.1394 -20.5090 -20.4788 -20.4360 -20.3992
-19.3163 -19.3153 -19.2904 -19.2894 -18.9061 -18.9043 -18.8700 -18.8682
-18.8120 -18.8106 -18.1325 -18.1313 -18.0254 -18.0239 -17.9972 -17.9957
-17.3625 -17.3503 -16.7059 -16.7028 -16.6382 -16.6350 -14.9120 -14.8807
-14.2083 -14.1838 -13.7560 -13.7522 -13.6912 -13.6873 -12.3338 -12.3280
-11.8623 -11.8612 -11.8390 -11.8320 -11.8309 -11.8266 -11.5878 -11.5108
-10.9619 -10.9609 -10.5630 -10.5587 -10.4833 -10.4790
                                                                  -9.7383
                                                                            -9.6952
           -9.6653
                      -9.6052
 -9.6658
                                 -9.6046
                                            -9.1080
                                                       -9.1016
                                                                  -9.0699
                                                                             -9.0607
 -9.0270
            -9.0179
                      -8.4991
                                                       -8.2457
                                                                  -8.2352
                                 -8.4976
                                            -8.2560
                                                                             -8.2307
                                            -7.9993
                                                       -7.9985
                                                                  -7.6299
 -8.1637
            -8.1272
                      -8.0322
                                 -8.0314
                                                                             -7.6218
 -7.6100
            -7.5924
                      -7.5883
                                 -7.5454
                                            -7.2684
                                                       -7.2681
                                                                  -7.2630
                                                                             -7.2626
                                            -6.6484
                                                       -6.5889
            -7.0368
                      -6.8982
                                 -6.8964
                                                                  -6.3774
 -7.1090
                                                                             -6.3697
                                            -5.9355
                                                                  -5.9043
            -6.3316
                      -5.9720
                                 -5.9712
                                                       -5.9347
                                                                             -5.8547
 -6.3367
                                                                  -5.2502
 -5.7416
           -5.7392
                      -5.5270
                                 -5.5224
                                            -5.3109
                                                       -5.3096
                                                                             -5.2490
 -5.0748
           -5.0635
                      -4.6726
                                 -4.6704
                                            -4.1249
                                                       -4.1222
                                                                  -4.0797
                                                                             -4.0783
                                                       -3.1109
                                            -3.1291
                                 -4.0172
                                                                  -2.3931
 -4.0757
           -4.0733
                      -4.0210
                                                                            -2.3472
 -0.2716 -0.2318
                                            1.1347
                                                       1.1365
                      1.0695
                                 1.0711
                                                                  1.8821
                                                                             1.8984
```

```
2.2967
            2.3014
                       2.4251
                                  2.4271
                                            2.6670
                                                       2.6710
                                                                 2.7610
                                                                            2.7622
  2.7874
             2.8033
                       2.8038
                                  2.8050
                                            2.9372
                                                       2.9877
                                                                 3.1144
                                                                            3.1308
  3.2258
             3.2298
        k = 0.0159 - 0.5774 \ 0.0000 \ (64838 \ PWs)
                                                       bands (ev):
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-19.3291 -19.3282 -19.2773 -19.2763 -18.9239 -18.9221 -18.8518 -18.8499
-18.8118 -18.8104 -18.1323 -18.1311 -18.0398 -18.0382 -17.9834 -17.9819 -17.3686 -17.3444 -16.7395 -16.7365 -16.6043 -16.6011 -14.9271 -14.8652 -14.2207 -14.1718 -13.7880 -13.7843 -13.6587 -13.6548 -12.3337 -12.3279
-11.8768 -11.8757 -11.8452 -11.8207 -11.8162 -11.8152 -11.6259 -11.4721
-10.9618 -10.9608 -10.6029 -10.5986 -10.4439 -10.4396
                                                                -9.7594
                                                                          -9.6963
                                                                -9.0908
 -9.6957
           -9.6731 -9.5750
                               -9.5745 -9.1078 -9.1014
                                                                          -9.0818
                                                                -8.2354
 -9.0060
           -8.9967
                     -8.4989
                                -8.4973 -8.2625
                                                     -8.2429
                                                                          -8.2301
                                                                -7.6596
                                                                          -7.6505
 -8.1791
           -8.1072
                     -8.0485
                                -8.0477
                                          -7.9828
                                                     -7.9820
           -7.5934
 -7.6111
                     -7.5674
                                -7.5075
                                          -7.2708
                                                     -7.2704
                                                                -7.2602
                                                                          -7.2598
           -7.0008
                     -6.8989
                                                     -6.5607
                                                                          -6.3872
 -7.1451
                                -6.8971
                                          -6.6790
                                                                -6.3976
                                           -5.9292
                                                                -5.9163
                                                                           -5.8300
 -6.3162
           -6.3117
                      -5.9901
                                -5.9893
                                                     -5.9171
                                           -5.3114
                                                     -5.3101
                                                                -5.2500
                                                                           -5.2488
 -5.7420
           -5.7395
                      -5.5268
                                -5.5222
 -5.0755
           -5.0642
                      -4.6732
                                -4.6709
                                           -4.1490
                                                      -4.1457
                                                                -4.1042
                                                                           -4.1014
 -4.0573
           -4.0556
                      -3.9929
                                -3.9889
                                           -3.1384
                                                      -3.1019
                                                                -2.4155
                                                                           -2.3242
 -0.2889
           -0.2154
                       1.0376
                                 1.0391
                                            1.1679
                                                       1.1698
                                                                 1.8824
                                                                            1.8987
                                                                 2.7402
  2.2943
                       2.4254
                                                       2.6713
                                                                            2.7414
            2.3036
                                  2.4274
                                            2.6673
  2.7873
            2.8032
                       2.8258
                                  2.8270
                                            2.9122
                                                       3.0131
                                                                 3.1148
                                                                            3.1311
  3.2261
            3.2301
        k = 0.0238 - 0.5774 \ 0.0000 \ (64844 \ PWs)
                                                       bands (ev):
-21.1950 -21.1909 -21.1402 -21.1389 -20.5387 -20.4722 -20.4483 -20.3618 -19.3419 -19.3410 -19.2642 -19.2632 -18.9416 -18.9398 -18.8334 -18.8315 -18.8115 -18.8102 -18.1320 -18.1307 -18.0543 -18.0528 -17.9698 -17.9683 -17.3748 -17.3385 -16.7731 -16.7702 -16.5704 -16.5671 -14.9421 -14.8496 -14.2331 -14.1599 -13.8199 -13.8162 -13.6260 -13.6220 -12.3334 -12.3276 -11.8909 -11.8899 -11.8515 -11.8148 -11.8002 -11.7991 -11.6638 -11.4331
-10.9617 -10.9607 -10.6429 -10.6386 -10.4046 -10.4003
                                                                -9.7801
                                                                          -9.7269
 -9.7263
                     -9.5451 -9.5445
           -9.6508
                                          -9.1122
                                                     -9.1074
                                                                -9.1030
                                                                          -9.1005
 -8.9847
           -8.9755
                     -8.4984
                                -8.4969
                                          -8.2716
                                                     -8.2403
                                                                -8.2356
                                                                          -8.2291
 -8.1919
           -8.0864
                     -8.0648
                                -8.0640
                                           -7.9663
                                                     -7.9655
                                                                -7.6977
                                                                           -7.6709
                                -7.4696
 -7.6127
           -7.5951
                     -7.5462
                                           -7.2730
                                                     -7.2727
                                                                -7.2572
                                                                          -7.2569
                                -6.8983
                                           -6.7099
 -7.1812
           -6.9647
                     -6.9001
                                                     -6.5347
                                                                -6.4176
                                                                           -6.4024
                     -6.0081
                                -6.0073
                                                     -5.8986
 -6.2956
           -6.2914
                                           -5.9542
                                                                -5.8978
                                                                           -5.8054
                     -5.5265
                                -5.5218
 -5.7425
           -5.7401
                                           -5.3121
                                                     -5.3109
                                                                -5.2497
                                                                           -5.2484
           -5.0655
                     -4.6741
                                          -4.1741
 -5.0768
                                -4.6718
                                                     -4.1702
                                                                -4.1310
                                                                           -4.1285
           -4.0346
 -4.0360
                     -3.9648
                                -3.9605
                                           -3.1477
                                                     -3.0930
                                                                -2.4378
                                                                           -2.3010
           -0.1987
 -0.3071
                      1.0060
                                 1.0075
                                            1.2014
                                                      1.2034
                                                                 1.8830
                                                                            1.8992
            2.3057
                       2.4259
                                  2.4280
                                            2.6678
                                                       2.6718
                                                                 2.7199
  2.2919
                                                                            2.7211
  2.7871
            2.8031
                       2.8482
                                 2.8493
                                            2.8876
                                                       3.0387
                                                                 3.1153
                                                                            3.1318
  3.2266
            3.2306
        k = 0.0317 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                       bands (ev):
-21.1945 -21.1904 -21.1398 -21.1384 -20.5534 -20.4901 -20.4329 -20.3429
-19.3547 -19.3537 -19.2510 -19.2500 -18.9592 -18.9574 -18.8149 -18.8130
-18.8112 -18.8098 -18.1315 -18.1302 -18.0690 -18.0675 -17.9564 -17.9549
-17.3811 -17.3327 -16.8066 -16.8038 -16.5365 -16.5330 -14.9570 -14.8338
-14.2456 -14.1482 -13.8516 -13.8480 -13.5931 -13.5891 -12.3331 -12.3273
-11.9047 -11.9036 -11.8579 -11.8089 -11.7837 -11.7827 -11.7015 -11.3941
-10.9616 -10.9606 -10.6831 -10.6788 -10.3655 -10.3612 -9.8005
                                                                          -9.7575
 -9.7570
          -9.6281 -9.5152 -9.5147 -9.1331 -9.1241
                                                                -9.1066
                                                                          -9.1001
          -8.9542 -8.4978 -8.4963 -8.2834
 -8.9635
                                                     -8.2381
                                                                -8.2358
                                                                          -8.2280
 -8.2017 -8.0811 -8.0803 -8.0651 -7.9497 -7.9489 -7.7357
                                                                          -7.6911
```

```
-7.2748
 -7.6150
           -7.5973
                     -7.5250
                                -7.4316
                                          -7.2752
                                                               -7.2541
                                                                          -7.2537
                     -6.9018
                                -6.9000
 -7.2174
           -6.9288
                                          -6.7410
                                                     -6.5136
                                                               -6.4375
                                                                          -6.4127
           -6.2709
 -6.2749
                     -6.0260
                                -6.0252
                                          -5.9793
                                                     -5.8800
                                                               -5.8792
                                                                          -5.7809
           -5.7409
                     -5.5260
                                -5.5214
                                          -5.3132
                                                                          -5.2479
 -5.7433
                                                     -5.3119
                                                               -5.2491
 -5.0785
           -5.0672
                     -4.6754
                                -4.6731
                                          -4.2002
                                                     -4.1958
                                                               -4.1573
                                                                          -4.1549
 -4.0153
           -4.0139
                     -3.9367
                                -3.9322
                                          -3.1571
                                                     -3.0842
                                                               -2.4600
                                                                          -2.2777
 -0.3258
           -0.1821
                      0.9749
                                0.9764
                                           1.2353
                                                     1.2374
                                                                1.8837
                                                                           1.8999
                                                                 2.7000
  2.2893
            2.3078
                       2.4267
                                 2.4287
                                            2.6685
                                                      2.6725
                                                                           2.7013
                                                      3.0643
  2.7869
            2.8029
                       2.8620
                                 2.8711
                                            2.8730
                                                                 3.1161
                                                                           3.1328
  3.2274
            3.2313
        k = 0.0397 - 0.5774 \ 0.0000 \ (64814 \ PWs)
                                                      bands (ev):
-21.1939 -21.1897 -21.1392 -21.1379 -20.5680 -20.5078 -20.4174 -20.3239
 -19.3673 \ -19.3664 \ -19.2377 \ -19.2368 \ -18.9766 \ -18.9748 \ -18.8107 \ -18.8093 
-19.3673 -19.3664 -19.2377 -19.2368 -18.9766 -18.9748 -18.8107 -18.8093 -18.7962 -18.7943 -18.1308 -18.1296 -18.0839 -18.0824 -17.9432 -17.9417 -17.3874 -17.3269 -16.8401 -16.8373 -16.5025 -16.4989 -14.9719 -14.8179 -14.2581 -14.1366 -13.8831 -13.8796 -13.5601 -13.5561 -12.3327 -12.3269 -11.9181 -11.9170 -11.8644 -11.8032 -11.7669 -11.7658 -11.7389 -11.3549 -10.9614 -10.9604 -10.7235 -10.7191 -10.3266 -10.3223 -9.8205 -9.7883 -9.7877 -9.6052 -9.4855 -9.4850 -9.1541 -9.1451 -9.1058 -9.0993
                                          -8.2976
                                                                          -8.2267
 -8.9422
           -8.9329
                     -8.4971
                                -8.4955
                                                     -8.2362
                                                               -8.2355
                                                     -7.9322
 -8.2087
                                          -7.9331
                                                               -7.7737
           -8.0973
                     -8.0964
                                -8.0433
                                                                          -7.7113
                     -7.5035
           -7.6003
                                -7.3937
                                                               -7.2539
                                          -7.2772
                                                     -7.2769
 -7.6179
                                                                         -7.2507
                                          -6.7723
           -6.9040
                     -6.9022
                                                     -6.5026
 -7.2501
                                -6.8927
                                                               -6.4574
                                                                          -6.4128
 -6.2541
           -6.2501
                     -6.0438
                                -6.0430
                                          -6.0044
                                                     -5.8613
                                                               -5.8605
                                                                          -5.7565
                     -5.5254
                                          -5.3146
 -5.7444
           -5.7419
                                -5.5208
                                                     -5.3133
                                                               -5.2485
                                                                          -5.2473
                     -4.6770
                                -4.6747
                                                     -4.2225
 -5.0807
           -5.0694
                                           -4.2274
                                                                -4.1830
                                                                          -4.1806
                     -3.9087
                                -3.9040
 -3.9950
           -3.9937
                                          -3.1666
                                                     -3.0755
                                                                -2.4819
                                                                          -2.2541
 -0.3449
           -0.1657
                      0.9443
                                0.9456
                                           1.2696
                                                      1.2718
                                                                1.8846
                                                                           1.9008
  2.2868
            2.3097
                       2.4276
                                 2.4296
                                            2.6694
                                                      2.6734
                                                                 2.6806
                                                                           2.6818
            2.8026
                                                      3.0895
  2.7866
                       2.8382
                                 2.8943
                                            2.8956
                                                                 3.1172
                                                                           3.1345
  3.2283
            3.2322
        k = 0.0476 - 0.5774 \ 0.0000 \ (64808 \ PWs)
                                                      bands (ev):
-21.1931 -21.1889 -21.1385 -21.1372 -20.5825 -20.5254 -20.4018 -20.3047
-19.3799 -19.3789 -19.2244 -19.2235 -18.9939 -18.9921 -18.8101 -18.8088
-18.7774 -18.7755 -18.1301 -18.1288 -18.0990 -18.0975 -17.9303 -17.9287
-17.3938 -17.3213 -16.8735 -16.8708 -16.4684 -16.4648 -14.9866 -14.8019
-14.2707 -14.1252 -13.9145 -13.9110 -13.5270 -13.5229 -12.3321 -12.3263
-11.9310 -11.9300 -11.8708 -11.7976 -11.7759 -11.7498 -11.7487 -11.3155
-10.9611 -10.9601 -10.7639 -10.7596 -10.2879 -10.2836
                                                               -9.8401
                                                                         -9.8191
           -9.5820
                    -9.4559
                               -9.4554
                                          -9.1751
                                                    -9.1661
                                                               -9.1048
 -9.8185
                                                                         -9.0983
                     -8.4961
                               -8.4946
                                          -8.3138
                                                     -8.2358
                                                               -8.2337
 -8.9209
          -8.9115
                                                                          -8.2253
 -8.2134
           -8.1134
                     -8.1126
                               -8.0212
                                          -7.9164
                                                     -7.9156
                                                               -7.8118
                                                                         -7.7312
          -7.6038
                     -7.4820
                               -7.3559
                                          -7.2898
                                                    -7,2792
                                                               -7.2787
 -7.6215
                                                                          -7.2473
          -6.9066
 -7.2469
                     -6.9048
                               -6.8568
                                          -6.8038
                                                     -6.5049
                                                               -6.4771
                                                                         -6.3996
                                                                          -5.7457
 -6.2332
          -6.2291
                     -6.0615
                                -6.0607
                                          -6.0296
                                                     -5.8426
                                                               -5.8417
 -5.7431
          -5.7321
                     -5.5247
                                -5.5201
                                          -5.3163
                                                     -5.3150
                                                               -5.2477
                                                                          -5.2465
 -5.0833
           -5.0721
                     -4.6790
                                -4.6767
                                          -4.2554
                                                     -4.2503
                                                               -4.2081
                                                                          -4.2057
 -3.9751
           -3.9739
                     -3.8808
                                -3.8760
                                          -3.1761
                                                     -3.0669
                                                               -2.5038
                                                                          -2.2304
 -0.3643
           -0.1496
                      0.9141
                                 0.9154
                                           1.3042
                                                      1.3065
                                                                1.8857
                                                                           1.9020
  2.2841
            2.3116
                       2.4287
                                 2.4307
                                            2.6616
                                                      2.6629
                                                                 2.6706
                                                                           2.6746
                                 2.9178
                                                      3.1119
  2.7863
            2.8023
                       2.8141
                                            2.9191
                                                                 3.1199
                                                                           3.1380
  3.2294
            3.2334
        k = 0.0556 - 0.5774 \ 0.0000 \ (64828 \ PWs)
                                                      bands (ev):
-21.1921 -21.1879 -21.1377 -21.1364 -20.5969 -20.5429 -20.3860 -20.2854
-19.3924 -19.3915 -19.2111 -19.2101 -19.0110 -19.0092 -18.8094 -18.8081
-18.7585 -18.7566 -18.1292 -18.1279 -18.1142 -18.1127 -17.9175 -17.9160
```

```
-17.4002 -17.3157 -16.9068 -16.9042 -16.4343 -16.4306 -15.0012 -14.7857
-14.2834 -14.1140 -13.9457 -13.9422 -13.4937 -13.4895 -12.3315 -12.3257
-11.9436 -11.9425 -11.8774 -11.8127 -11.7920 -11.7322 -11.7311 -11.2761
-9.8594
                                                                         -9.8500
                                                               -9.1037
                                                                          -9.0972
                                                               -8.2319
 -8.8995
           -8.8901
                     -8.4950
                                -8.4935
                                          -8.3313
                                                     -8.2355
                                                                          -8.2239
           -8.1295
                     -8.1286
                               -7.9988
                                          -7.8997
                                                     -7.8989
                                                               -7.8498
                                                                          -7.7511
 -8.2165
 -7.6257
           -7.6081
                     -7.4603
                                -7.3260
                                          -7.3180
                                                     -7.2810
                                                               -7.2805
                                                                          -7.2437
 -7.2433
           -6.9097
                     -6.9079
                                -6.8354
                                          -6.8210
                                                     -6.5160
                                                               -6.4966
                                                                          -6.3776
                                                                          -5.7472
 -6.2121
           -6.2080
                     -6.0791
                                -6.0782
                                          -6.0548
                                                     -5.8237
                                                                -5.8229
 -5.7446
           -5.7079
                     -5.5238
                                -5.5193
                                          -5.3183
                                                     -5.3170
                                                                -5.2467
                                                                          -5.2455
 -5.0865
           -5.0752
                     -4.6813
                                -4.6791
                                          -4.2842
                                                     -4.2789
                                                                -4.2328
                                                                          -4.2304
                                                                          -2.2065
 -3.9556
           -3.9544
                     -3.8531
                                -3.8482
                                          -3.1857
                                                     -3.0584
                                                                -2.5254
                                                                 1.8871
 -0.3841
           -0.1338
                      0.8843
                                 0.8856
                                            1.3392
                                                      1.3416
                                                                           1.9033
  2.2814
            2.3134
                       2.4300
                                 2.4320
                                            2.6431
                                                      2.6443
                                                                 2.6719
                                                                           2.6759
  2.7859
            2.7901
                       2.8019
                                 2.9417
                                            2.9430
                                                      3.1184
                                                                 3.1298
                                                                           3.1508
  3.2308
            3.2347
        k = 0.0635 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                      bands (ev):
-21.1910 -21.1868 -21.1368 -21.1354 -20.6111 -20.5602 -20.3702 -20.2660 -19.4049 -19.4039 -19.1977 -19.1967 -19.0280 -19.0262 -18.8087 -18.8073 -18.7394 -18.7375 -18.1296 -18.1281 -18.1281 -18.1269 -17.9050 -17.9035 -17.4067 -17.3102 -16.9401 -16.9375 -16.4002 -16.3964 -15.0156 -14.7694 -14.2960 -14.1031 -13.9766 -13.9733 -13.4603 -13.4561 -12.3308 -12.3250 -11.9558 -11.9547 -11.8840 -11.8491 -11.7866 -11.7144 -11.7133 -11.2365 -10.9605 -10.9595 -10.8451 -10.8408 -10.2112 -10.2069 -9.8811 -9.8804 -9.8779 -9.5349 -9.3973 -9.3969 -9.2169 -9.2080 -9.1024 -9.0958
                                -8.4922
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           -8.8687
                     -8.4937
                                                     -8.2350
                                                               -8.2300
 -8.8782
                                                                          -8.2224
 -8.2182
                     -8.1447
                                -7.9760
                                          -7.8879
                                                     -7.8830
                                                               -7.8821
                                                                          -7.7707
           -8.1455
 -7.6306
           -7.6129
                     -7.4384
                                -7.3622
                                          -7.2827
                                                     -7.2822
                                                               -7.2802
                                                                          -7.2398
                                          -6.7852
 -7.2395
           -6.9133
                     -6.9115
                                -6.8672
                                                     -6.5311
                                                                -6.5161
                                                                          -6.3516
                      -6.0966
                                -6.0957
                                           -6.0801
                                                     -5.8048
                                                                -5.8040
 -6.1910
           -6.1867
                                                                          -5.7489
           -5.6837
                      -5.5227
                                -5.5183
                                           -5.3206
 -5.7463
                                                     -5.3193
                                                                -5.2457
                                                                          -5.2444
                      -4.6840
                                -4.6818
                                           -4.3136
                                                     -4.3082
 -5.0901
           -5.0789
                                                                -4.2571
                                                                          -4.2548
 -3.9365
           -3.9353
                      -3.8257
                                -3.8207
                                           -3.1954
                                                     -3.0501
                                                                -2.5468
                                                                          -2.1824
                                                                           1.9048
 -0.4042
                       0.8551
                                            1.3745
                                                      1.3770
                                                                 1.8886
           -0.1182
                                 0.8563
                                                      2.6263
                                                                           2.6774
  2.2787
            2.3152
                       2.4316
                                 2.4336
                                            2.6251
                                                                 2.6735
                                                                           3.1744
  2.7663
            2.7854
                       2.8014
                                 2.9660
                                            2.9673
                                                      3.1203
                                                                 3.1341
  3.2323
            3.2363
        k = 0.0714 - 0.5774 \ 0.0000 \ (64814 \ PWs)
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-19.4172 -19.4163 -19.1842 -19.1832 -19.0448 -19.0431 -18.8078 -18.8064
-18.7202 -18.7183 -18.1452 -18.1437 -18.1269 -18.1257 -17.8927 -17.8912
-17.4132 -17.3049 -16.9732 -16.9707 -16.3661 -16.3622 -15.0300 -14.7530
-14.3087 -14.0925 -14.0074 -14.0041 -13.4267 -13.4224 -12.3300 -12.3242
-11.9675 -11.9664 -11.8906 -11.8851 -11.7814 -11.6961 -11.6950 -11.1969
-10.9601 -10.9591 -10.8859 -10.8815 -10.1732 -10.1690
                                                               -9.9120
                                                                          -9.9114
 -9.8965
           -9.5110
                     -9.3683
                                -9.3679
                                          -9.2378
                                                     -9.2289
                                                               -9.1008
                                                                          -9.0943
 -8.8568
           -8.8473
                     -8.4923
                                -8.4908
                                          -8.3683
                                                     -8.2343
                                                                -8.2283
                                                                          -8.2211
 -8.2186
           -8.1615
                      -8.1607
                                -7.9530
                                           -7.9259
                                                     -7.8662
                                                                -7.8653
                                                                          -7.7903
           -7.6184
                      -7.4165
                                -7.3983
                                           -7.2843
                                                     -7.2838
                                                                -7.2425
 -7.6361
                                                                          -7.2358
           -6.9174
                      -6.9156
                                -6.8991
                                           -6.7494
                                                     -6.5478
                                                                -6.5354
 -7.2355
                                                                          -6.3240
                                                     -5.7858
 -6.1697
           -6.1653
                      -6.1139
                                -6.1131
                                           -6.1054
                                                                -5.7850
                                                                          -5.7509
 -5.7481
           -5.6596
                      -5.5215
                                -5.5172
                                           -5.3232
                                                     -5.3219
                                                                -5.2444
                                                                          -5.2432
 -5.0942
           -5.0830
                      -4.6870
                                -4.6848
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                                                                -4.2813
                                                                          -4.2791
                      -3.7985
                                -3.7934
 -3.9177
           -3.9166
                                           -3.2050
                                                     -3.0419
                                                                -2.5681
                                                                          -2.1582
 -0.4245
           -0.1029
                      0.8263
                                0.8275
                                           1.4102
                                                     1.4128
                                                                1.8903
                                                                           1.9066
                                 2.4353
                                            2.6075
                                                      2.6087
                                                                 2.6752
  2.2760
           2.3168
                       2.4333
                                                                           2.6790
                       2.8009
                                 2.9907
                                            2.9920
                                                      3.1221
                                                                 3.1367
  2.7428
            2.7849
                                                                           3.2004
```

```
3.2340
               3.2380
          k = 0.0794 - 0.5774 \ 0.0000 \ (64784 \ PWs)
                                                                   bands (ev):
-21.1883 -21.1842 -21.1346 -21.1332 -20.6394 -20.5944 -20.3383 -20.2266
-19.4295 -19.4286 -19.1707 -19.1697 -19.0615 -19.0598 -18.8068 -18.8054 -18.7009 -18.6989 -18.1609 -18.1594 -18.1256 -18.1243 -17.8806 -17.8791 -17.4197 -17.2996 -17.0063 -17.0038 -16.3320 -16.3280 -15.0442 -14.7365 -14.3213 -14.0821 -14.0379 -14.0347 -13.3930 -13.3887 -12.3291 -12.3233 -11.9788 -11.9778 -11.9207 -11.8972 -11.7762 -11.6776 -11.6765 -11.1572 -10.9596 -10.9586 -10.9267 -10.9224 -10.1355 -10.1312 -9.9431 -9.9424
             -10.9386 -10.9267 -10.9224 -10.1333 -10.1312

-9.4868 -9.3395 -9.3390 -9.2586 -9.2498

-8.8259 -8.4907 -8.4892 -8.3873 -8.2334

-8.1774 -8.1766 -7.9639 -7.9298 -7.8494

-7.6246 -7.4345 -7.3943 -7.2857 -7.2853

-6.9312 -6.9220 -6.9201 -6.7136 -6.5653
                                                                                           -9.0925
 -9.9145
                                                                              -9.0992
 -8.8353
                                                                              -8.2266 -8.2203
                                                                                           -7.8096
 -8.2176
                                                                              -7.8485
 -7.6422
                                                                              -7.2316
                                                                                           -7.2313
                                                                                           -6.2955
 -7.2047
                                                                              -6.5546
                                                                 -5.7670
                                                                              -5.7662
                                                                                           -5.7529
                                                    -6.1303
 -6.1484
             -6.1438
                          -6.1312 -6.1309
                          -5.5202
                                       -5.5159
                                                    -5.3261
              -5.6356
                                                                              -5.2430
                                                                                           -5.2418
 -5.7500
                                                                 -5.3249
 -5.0987
              -5.0876
                           -4.6904
                                       -4.6882
                                                    -4.3736
                                                                 -4.3682
                                                                              -4.3055
                                                                                           -4.3033
                           -3.7716
                                       -3.7664
                                                    -3.2148
                                                                 -3.0338
                                                                              -2.5892
                                                                                           -2.1338
 -3.8994
              -3.8983
 -0.4452
              -0.0879
                            0.7981
                                         0.7993
                                                      1.4461
                                                                   1.4488
                                                                                1.8923
                                                                                             1.9085
                                                                                             2.6808
  2.2732
               2.3184
                            2.4352
                                         2.4373
                                                      2.5904
                                                                   2.5916
                                                                                2.6771
               2.7843
   2.7197
                            2.8003
                                         3.0157
                                                      3.0170
                                                                   3.1241
                                                                                3.1389
                                                                                             3.2269
   3.2360
               3.2399
          k = 0.0873 - 0.5774 \ 0.0000 \ (64796 \ PWs)
                                                                   bands (ev):
-21.1868 -21.1826 -21.1332 -21.1319 -20.6533 -20.6113 -20.3222 -20.2067 -19.4418 -19.4408 -19.1571 -19.1561 -19.0781 -19.0764 -18.8057 -18.8043 -18.6814 -18.6794 -18.1768 -18.1753 -18.1241 -18.1229 -17.8688 -17.8672 -17.4263 -17.2944 -17.0392 -17.0368 -16.2979 -16.2938 -15.0583 -14.7198 -14.3340 -14.0729 -14.0679 -14.0645 -13.3592 -13.3548 -12.3281 -12.3222 -11.9898 -11.9887 -11.9559 -11.9039 -11.7712 -11.6587 -11.6575 -11.1174 -10.9676 -10.9633 -10.9592 -10.9582 -10.0980 -10.0938 -9.9742 -9.9735 -9.9320 -9.4624 -9.3109 -9.3104 -9.2794 -9.2706 -9.0973 -9.0906 -8.8130 -8.8044 -8.4880 -8.4874 -8.4065 -8.2333 -8.2351 -8.2105
 -8.8139
              -8.8044
                          -8.4889
                                       -8.4874
                                                    -8.4065
                                                                 -8.2323
                                                                              -8.2251
                                                                                           -8.2195
                                       -8.0019
                                                    -7.9064
                                                                 -7.8325
 -8.2160
              -8.1933
                          -8.1924
                                                                              -7.8317
                                                                                           -7.8289
                          -7.4707
 -7.6490
             -7.6314
                                       -7.3721
                                                    -7.2871
                                                                 -7.2867
                                                                              -7.2272
                                                                                           -7.2270
 -7.1670
             -6.9633
                          -6.9270
                                       -6.9252
                                                    -6.6779
                                                                 -6.5833
                                                                              -6.5736
                                                                                           -6.2666
                                                                              -5.7542
 -6.1563
             -6.1483
                          -6.1474
                                       -6.1270
                                                    -6.1221
                                                                 -5.7566
                                                                                           -5.7465
             -5.6117
                          -5.5187
                                       -5.5145
                                                    -5.3294
                                                                                           -5.2403
 -5.7453
                                                                 -5.3281
                                                                              -5.2415
             -5.0926
 -5.1038
                          -4.6942
                                       -4.6920
                                                    -4.4042
                                                                 -4.3988
                                                                              -4.3296
                                                                                           -4.3274
 -3.8814
                                                                 -3.0259
                                                                              -2.6102
              -3.8803
                          -3.7450
                                       -3.7397
                                                    -3.2245
                                                                                           -2.1092
             -0.0732
                           0.7704
                                        0.7715
                                                     1.4824
                                                                               1.8944
 -0.4662
                                                                  1.4852
                                                                                             1.9107
               2.3199
                            2.4374
                                         2.4394
                                                      2.5738
                                                                   2.5750
  2.2704
                                                                                2.6790
                                                                                             2.6820
  2.6976
               2.7836
                            2.7997
                                         3.0410
                                                      3.0423
                                                                  3.1262
                                                                                3.1412
                                                                                             3.2322
   3.2392
               3.2424
          k = 0.0952 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                                   bands (ev):
-21.1851 -21.1809 -21.1318 -21.1305 -20.6672 -20.6281 -20.3060 -20.1867
-19.4539 -19.4529 -19.1435 -19.1425 -19.0945 -19.0928 -18.8045 -18.8031
-18.6618 -18.6598 -18.1928 -18.1913 -18.1225 -18.1213 -17.8572 -17.8556
-17.4328 -17.2893 -17.0721 -17.0698 -16.2638 -16.2595 -15.0723 -14.7031
-14.3467 -14.0985 -14.0955 -14.0620 -13.3252 -13.3208 -12.3270 -12.3211
-12.0002 -11.9992 -11.9907 -11.9106 -11.7663 -11.6394 -11.6383 -11.0775
-11.0086 -11.0043 -10.9586 -10.9576 -10.0608 -10.0566 -10.0053 -10.0047
             -9.4378
                                                   -9.2825
                                                                              -9.0953 -9.0885
 -9.9491
                          -9.3002
                                      -9.2914
                                                                -9.2821
                          -8.4870
                                                    -8.4257
 -8.7925
             -8.7829
                                       -8.4854
                                                                 -8.2309
                                                                              -8.2237
                                                                                           -8.2183
 -8.2141
             -8.2090
                          -8.2082 -8.0400
                                                   -7.8827
                                                                 -7.8480
                                                                              -7.8156
                                                                                           -7.8148
                                                    -7.2884
             -7.6388 -7.5069 -7.3497
                                                                 -7.2880
                                                                              -7.2227
 -7.6564
                                                                                           -7.2224
 -7.1294 -6.9955 -6.9325 -6.9307 -6.6423 -6.6013 -6.5926 -6.2377
```

```
-6.1654
                    -6.1644
                              -6.1055
                                        -6.1004
                                                  -5.7590
                                                            -5.7560
                                                                      -5.7277
 -6.1818
                                        -5.3330
 -5.7269
          -5.5880
                    -5.5171
                              -5.5129
                                                  -5.3318
                                                            -5.2398
                                                                      -5.2386
                                                            -4.3538
 -5.1092
          -5.0981
                    -4.6983
                              -4.6961
                                        -4.4349
                                                  -4.4296
                                                                      -4.3516
          -3.8627
                              -3.7133
 -3.8638
                    -3.7188
                                        -3.2343
                                                  -3.0181
                                                            -2.6309
                                                                      -2.0844
 -0.4876
          -0.0588
                     0.7432
                               0.7443
                                        1.5190
                                                             1.8968
                                                   1.5219
                                                                      1.9130
 2.2675
           2.3213
                     2.4397
                               2.4418
                                         2.5576
                                                   2.5588
                                                             2.6706
                                                                       2.6821
  2.6876
           2.7829
                     2.7989
                               3.0667
                                         3.0680
                                                   3.1286
                                                             3.1437
                                                                       3.2101
  3.2408
           3.2446
       k = 0.1032 - 0.5774 \ 0.0000 \ (64796 \ PWs)
                                                   bands (ev):
-21.1833 -21.1791 -21.1303 -21.1289 -20.6809 -20.6447 -20.2896 -20.1666
-19.4660 \ -19.4650 \ -19.1298 \ -19.1289 \ -19.1108 \ -19.1091 \ -18.8032 \ -18.8018
-18.6420 -18.6400 -18.2089 -18.2074 -18.1208 -18.1195 -17.8458 -17.8442 -17.4395 -17.2843 -17.1049 -17.1026 -16.2297 -16.2253 -15.0862 -14.6862 -14.3593 -14.1283 -14.1253 -14.0527 -13.2911 -13.2867 -12.3258 -12.3199 -12.0249 -12.0103 -12.0093 -11.9174 -11.7616 -11.6198 -11.6187 -11.0497 -11.0453 -11.0376 -10.9581 -10.9571 -10.0364 -10.0358 -10.0240 -10.0198
                                       -9.2543
                                                  -9.2539
          -9.4131 -9.3209
                              -9.3121
 -9.9658
                                                            -9.0930
                                                                      -9.0863
                    -8.4849
                                        -8.4449
                                                  -8.2293
                                                            -8.2248
                                                                      -8.2240
 -8.7710
          -8.7614
                              -8.4834
                                                            -7.7987
                                                                      -7.7978
 -8.2223
          -8.2167
                    -8.2120
                              -8.0779 -7.8669
                                                  -7.8589
                    -7.5430
                                        -7.2896
                                                            -7.2179
 -7.6644
          -7.6468
                              -7.3271
                                                  -7.2891
                                                                      -7.2176
                    -6.9384
                                        -6.6195
                                                                      -6.2089
                              -6.9366
                                                  -6.6113
                                                            -6.6068
 -7.0918
          -7.0278
                                                            -5.7587
 -6.2074
          -6.1823
                    -6.1810
                              -6.0839
                                        -6.0785
                                                  -5.7619
                                                                      -5.7085
          -5.5643
                    -5.5153
                              -5.5112
 -5.7076
                                        -5.3369
                                                  -5.3357
                                                            -5.2380
                                                                      -5.2368
                    -4.7027
                              -4.7005
 -5.1151
          -5.1040
                                        -4.4659
                                                  -4.4606
                                                            -4.3780
                                                                      -4.3759
 -3.8466
          -3.8455
                    -3.6928
                              -3.6873
                                        -3.2442
                                                  -3.0105
                                                            -2.6515
                                                                      -2.0595
 -0.5092
          -0.0446
                     0.7165
                               0.7177
                                         1.5558
                                                   1.5589
                                                             1.8993
                                                                       1.9156
  2.2647
                                         2.5420
                                                   2.5432
           2.3226
                     2.4423
                               2.4443
                                                             2.6490
                                                                       2.6845
  2.6892
            2.7821
                     2.7982
                               3.0927
                                         3.0940
                                                   3.1311
                                                             3.1462
                                                                       3.1873
  3.2433
            3.2472
       k = 0.1111 - 0.5774 \ 0.0000 \ (64852 \ PWs)
                                                   bands (ev):
-21.1813 -21.1771 -21.1286 -21.1272 -20.6946 -20.6612 -20.2732 -20.1463
-19.4780 -19.4770 -19.1270 -19.1253 -19.1161 -19.1151 -18.8017 -18.8004
-18.6221 -18.6201 -18.2252 -18.2237 -18.1189 -18.1176 -17.8347 -17.8331
-17.4461 -17.2795 -17.1376 -17.1354 -16.1956 -16.1912 -15.0999 -14.6692
-14.3720 -14.1579 -14.1550 -14.0438 -13.2569 -13.2524 -12.3245 -12.3186
-12.0586 -12.0200 -12.0189 -11.9241 -11.7570 -11.5999 -11.5988 -11.0908
-11.0865 -10.9977 -10.9575 -10.9565 -10.0676 -10.0670
                                                           -9.9874 -9.9833
 -9.9819
         -9.3881 -9.3416 -9.3328 -9.2264
                                                 -9.2260
                                                            -9.0907
                                                                      -9.0838
                                        -8.4637
                    -8.4828
                             -8.4812
                                                  -8.2405
 -8.7495
          -8.7399
                                                            -8.2397
                                                                      -8.2274
          -8.2148
                    -8.2099
                             -8.1159
                                        -7.8856
                                                  -7.8349
                                                            -7.7817
 -8.2207
                                                                      -7.7809
          -7.6555
                    -7.5792
                             -7.3045
                                        -7.2907
                                                  -7.2902
                                                            -7.2129
 -7.6731
                                                                      -7.2126
 -7.0603
          -7.0543
                    -6.9449
                             -6.9431
                                        -6.6376
                                                  -6.6300
                                                            -6.5713
                                                                      -6.2331
          -6.1988
                    -6.1785
                              -6.0624
                                        -6.0566
                                                  -5.7652
                                                            -5.7618
 -6.1992
                                                                      -5.6890
 -5.6882
          -5.5407
                    -5.5134
                              -5.5094
                                        -5.3411
                                                  -5.3399
                                                            -5.2360
                                                                      -5.2348
                                                                      -4.4003
 -5.1214
          -5.1104
                    -4.7074
                              -4.7052
                                        -4.4970
                                                  -4.4918
                                                            -4.4023
 -3.8297
          -3.8286
                    -3.6673
                              -3.6617
                                        -3.2540
                                                  -3.0031
                                                            -2.6719
                                                                      -2.0344
 -0.5311
          -0.0308
                     0.6904
                               0.6916
                                        1.5930
                                                   1.5961
                                                             1.9021
                                                                       1.9183
 2.2618
           2.3238
                     2.4450
                               2.4471
                                         2.5268
                                                   2.5280
                                                             2.6266
                                                                       2.6873
  2.6917
            2.7813
                     2.7973
                               3.1189
                                         3.1202
                                                   3.1338
                                                             3.1489
                                                                       3.1647
  3.2460
            3.2500
       k = 0.1190 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                   bands (ev):
-21.1791 -21.1750 -21.1268 -21.1254 -20.7081 -20.6775 -20.2567 -20.1258
-19.4899 -19.4889 -19.1430 -19.1413 -19.1023 -19.1014 -18.8002 -18.7988
-18.6021 -18.6001 -18.2416 -18.2401 -18.1169 -18.1156 -17.8238 -17.8222
-17.4528 -17.2747 -17.1702 -17.1680 -16.1616 -16.1570 -15.1136 -14.6520
-14.3846 -14.1872 -14.1844 -14.0353 -13.2225 -13.2180 -12.3231 -12.3172
```

```
-12.0917 -12.0292 -12.0281 -11.9309 -11.7526 -11.5797 -11.5785 -11.1320
-11.1276 -10.9577 -10.9568 -10.9558 -10.0988 -10.0982 -9.9976
                                                                          -9.9512
                                                                -9.0881
 -9.9471
           -9.3630
                     -9.3621
                                -9.3535
                                           -9.1987
                                                      -9.1983
                                                                           -9.0812
                                                                 -8.2553
                      -8.4854
                                -8.4794
                                           -8.4770
 -8.7280
           -8.7184
                                                      -8.2561
                                                                           -8.2253
                                -8.1538
 -8.2190
           -8.2128
                      -8.2077
                                           -7.9043
                                                      -7.8107
                                                                 -7.7648
                                                                           -7.7639
 -7.6823
           -7.6648
                      -7.6153 -7.2917
                                           -7.2913
                                                      -7.2816
                                                                 -7.2076
                                                                           -7.2074
 -7.0928
                      -6.9517
                                -6.9499
                                           -6.6557
                                                      -6.6485
           -7.0169
                                                                 -6.5359
                                                                           -6.2587
                     -6.1499
                                -6.0408
                                           -6.0346
                                                      -5.7688
                                                                 -5.7650
 -6.2158
           -6.2151
                                                                           -5.6696
 -5.6687
           -5.5172
                      -5.5113
                                -5.5074
                                           -5.3457
                                                      -5.3445
                                                                 -5.2339
                                                                           -5.2327
 -5.1282
           -5.1171
                      -4.7124
                                 -4.7103
                                           -4.5283
                                                      -4.5232
                                                                 -4.4267
                                                                            -4.4248
 -3.8133
           -3.8121
                      -3.6421
                                -3.6364
                                           -3.2639
                                                      -2.9958
                                                                 -2.6922
                                                                           -2.0091
                                                       1.6337
 -0.5533
           -0.0172
                       0.6649
                                 0.6661
                                            1.6304
                                                                  1.9051
                                                                            1.9213
                                                                  2.6043
            2.3249
                       2.4480
                                  2.4500
                                             2.5122
                                                       2.5134
  2.2589
                                                                             2.6903
  2.6946
            2.7804
                       2.7964
                                  3.1367
                                             3.1411
                                                       3.1457
                                                                  3.1475
                                                                             3.1522
  3.2490
             3.2529
        k = 0.1270 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                       bands (ev):
-21.1769 -21.1727 -21.1248 -21.1235 -20.7215 -20.6936 -20.2402 -20.1052 -19.5017 -19.5007 -19.1589 -19.1572 -19.0885 -19.0876 -18.7986 -18.7972 -18.5819 -18.5799 -18.2582 -18.2567 -18.1147 -18.1134 -17.8132 -17.8116 -17.4595 -17.2701 -17.2027 -17.2006 -16.1276 -16.1230 -15.1271 -14.6348 -14.3972 -14.2163 -14.2136 -14.0273 -13.1880 -13.1835 -12.3216 -12.3158 -12.1241 -12.0379 -12.0369 -11.9377 -11.7483 -11.5591 -11.5580 -11.1732 -11.1689 -10.9561 -10.9551 -10.9177 -10.1300 -10.1294 -10.0128 -9.9154 -9.9113 -9.3827 -9.3741 -9.3376 -9.1712 -9.1709 -9.0854 -9.0784
                                -8.4771 -8.4755
-8.1913 -7.9227
 -8.7065
                     -8.5030
                                                      -8.2716
           -8.6968
                                                                -8.2708
                                                                           -8.2228
                      -8.2057
                                                      -7.7863
                                                                 -7.7477
 -8.2169
           -8.2108
                                                                           -7.7469
                                -7.2927
                                           -7.2922
           -7.6747
                      -7.6514
                                                      -7.2587
 -7.6923
                                                                 -7.2022
                                                                           -7.2019
 -7.1253
           -6.9795
                      -6.9591
                                -6.9573
                                           -6.6738
                                                                 -6.5005
                                                      -6.6668
                                                                           -6.2845
 -6.2323
           -6.2316
                      -6.1210
                                 -6.0193
                                           -6.0125
                                                      -5.7726
                                                                 -5.7685
                                                                            -5.6500
           -5.5091
                      -5.5052
 -5.6491
                                 -5.4938
                                           -5.3506
                                                      -5.3495
                                                                 -5.2317
                                                                           -5.2305
                      -4.7177
                                           -4.5597
                                                      -4.5547
 -5.1353
           -5.1243
                                 -4.7156
                                                                 -4.4513
                                                                           -4.4493
                                                                 -2.7122
 -3.7972
           -3.7960
                      -3.6173
                                 -3.6116
                                           -3.2738
                                                      -2.9887
                                                                            -1.9836
 -0.5759
           -0.0039
                       0.6400
                                  0.6413
                                                       1.6715
                                                                  1.9083
                                             1.6682
                                                                             1.9245
  2.2561
            2.3260
                       2.4512
                                  2.4532
                                             2.4981
                                                       2.4993
                                                                  2.5821
                                                                             2.6935
                                  3.1193
                                                                  3.1725
  2.6978
             2.7794
                       2.7954
                                             3.1399
                                                       3.1552
                                                                             3.1739
  3.2522
             3.2561
        k = 0.1349 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                       bands (ev):
-21.1744 -21.1703 -21.1228 -21.1214 -20.7348 -20.7097 -20.2235 -20.0845
-19.5134 -19.5125 -19.1746 -19.1729 -19.0747 -19.0737 -18.7969 -18.7955
-18.5616 -18.5596 -18.2748 -18.2733 -18.1124 -18.1111 -17.8028 -17.8012
-17.4662 -17.2656 -17.2351 -17.2330 -16.0938 -16.0890 -15.1405 -14.6174
-14.4097 -14.2451 -14.2424 -14.0198 -13.1534 -13.1488 -12.3200 -12.3142
-12.1560 -12.0463 -12.0453 -11.9445 -11.7442 -11.5382 -11.5371 -11.2145
                                                                           -9.8799
-11.2102 -10.9554 -10.9544 -10.8777 -10.1612 -10.1605 -10.0275
 -9.8758
           -9.4033
                     -9.3946
                                -9.3122 -9.1441
                                                     -9.1437
                                                                -9.0825
                                                                           -9.0754
 -8.6850
           -8.6753
                     -8.5217
                                -8.4744
                                           -8.4728
                                                      -8.2871
                                                                -8.2863
                                                                           -8.2303
 -8.2200
           -8.2145
                      -8.2080
                                -8.2029
                                           -7.9410
                                                      -7.7619
                                                                 -7.7307
                                                                           -7.7298
 -7.7028
           -7.6874
                      -7.6853
                                -7.2936
                                           -7.2931
                                                      -7.2356
                                                                 -7.1965
                                                                           -7.1963
 -7.1580
           -6.9669
                      -6.9651
                                 -6.9421
                                           -6.6917
                                                      -6.6850
                                                                 -6.4652
                                                                           -6.3103
                      -6.0921
           -6.2480
                                 -5.9979
                                           -5.9904
                                                      -5.7767
                                                                 -5.7721
 -6.2488
                                                                            -5.6303
 -5.6295
           -5.5067
                      -5.5029
                                 -5.4706
                                           -5.3559
                                                      -5.3548
                                                                 -5.2293
                                                                            -5.2281
 -5.1428
           -5.1318
                      -4.7234
                                 -4.7212
                                            -4.5913
                                                      -4.5863
                                                                 -4.4759
                                                                            -4.4740
 -3.7815
           -3.7803
                      -3.5929
                                 -3.5871
                                            -3.2837
                                                      -2.9817
                                                                 -2.7321
                                                                            -1.9580
 -0.5987
            0.0092
                                 0.6170
                                            1.7061
                                                      1.7096
                                                                 1.9116
                      0.6157
                                                                            1.9278
  2.2532
             2.3269
                       2.4545
                                  2.4566
                                             2.4845
                                                       2.4857
                                                                  2.5601
                                                                             2.6969
  2.7012
             2.7783
                       2.7944
                                  3.0972
                                             3.1432
                                                       3.1585
                                                                  3.1997
                                                                             3.2011
  3.2556
             3.2596
```

```
k = 0.1429 - 0.5774 \ 0.0000 \ (64840 \ PWs)
                                                             bands (ev):
-21.1719 -21.1677 -21.1206 -21.1193 -20.7480 -20.7256 -20.2067 -20.0637
-19.5251 -19.5241 -19.1902 -19.1885 -19.0608 -19.0598 -18.7950 -18.7937 -18.5412 -18.5392 -18.2916 -18.2901 -18.1100 -18.1087 -17.7927 -17.7911
-18.3412 -18.3592 -18.2910 -18.2901 -16.1100 -18.1007 -17.7927 -17.7911 -17.4729 -17.2674 -17.2654 -17.2612 -16.0600 -16.0551 -15.1537 -14.5999 -14.4222 -14.2735 -14.2710 -14.0129 -13.1187 -13.1140 -12.3184 -12.3125 -12.1871 -12.0542 -12.0532 -11.9513 -11.7403 -11.5170 -11.5159 -11.2558 -11.2515 -10.9546 -10.9536 -10.8377 -10.1924 -10.1917 -10.0416 -9.8449
 -9.8408
            -9.4237
                        -9.4152 -9.2865 -9.1172 -9.1168 -9.0794
                                                                                   -9.0722
 -8.6635
            -8.6538
                        -8.5403
                                   -8.4714
                                               -8.4699
                                                           -8.3026
                                                                       -8.3018
                                                                                   -8.2678
                                                                                   -7.7139
                                                                       -7.7222
 -8.2170
            -8.2119
                        -8.2057
                                    -8.2006
                                               -7.9592
                                                           -7.7386
 -7.7136
            -7.7127
                        -7.6964
                                   -7.2944
                                               -7.2939
                                                           -7.2124
                                                                       -7.1907
                                                                                   -7.1906
                                                                                   -6.3361
 -7.1903
            -6.9752
                        -6.9733
                                    -6.9048
                                               -6.7095
                                                           -6.7031
                                                                       -6.4300
                                                                       -5.7757
                        -6.0633
                                    -5.9766
                                               -5.9684
                                                                                   -5.6106
 -6.2651
            -6.2643
                                                            -5.7810
 -5.6098
            -5.5041
                        -5.5004
                                    -5.4474
                                                -5.3615
                                                            -5.3604
                                                                       -5.2267
                                                                                   -5.2255
                                                            -4.6179
 -5.1507
             -5.1397
                        -4.7293
                                    -4.7272
                                                -4.6229
                                                                       -4.5007
                                                                                   -4.4988
                        -3.5690
                                    -3.5632
                                               -3.2936
                                                            -2.9750
                                                                       -2.7518
                                                                                   -1.9322
 -3.7662
            -3.7650
 -0.6219
              0.0220
                          0.5920
                                     0.5934
                                                 1.7444
                                                             1.7480
                                                                         1.9152
                                                                                     1.9314
                                                                                     2.7005
  2.2503
              2.3278
                          2.4581
                                      2.4601
                                                 2.4714
                                                             2.4726
                                                                         2.5383
  2.7048
              2.7772
                          2.7933
                                      3.0752
                                                 3.1468
                                                             3.1620
                                                                         3.2272
                                                                                     3.2285
  3.2592
              3.2632
         k = 0.1508 - 0.5774 \ 0.0000 \ (64844 \ PWs)
                                                             bands (ev):
-21.1691 -21.1650 -21.1183 -21.1170 -20.7611 -20.7413 -20.1898 -20.0427 -19.5367 -19.5357 -19.2056 -19.2040 -19.0469 -19.0459 -18.7931 -18.7917 -18.5206 -18.5186 -18.3085 -18.3070 -18.1074 -18.1061 -17.7828 -17.7813 -17.4796 -17.2996 -17.2976 -17.2570 -16.0264 -16.0214 -15.1669 -14.5823 -14.4347 -14.3016 -14.2992 -14.0067 -13.0838 -13.0791 -12.3166 -12.3107 -12.2174 -12.0617 -12.0606 -11.9581 -11.7365 -11.4955 -11.4944 -11.2972 -11.2929 -10.9538 -10.9528 -10.7977 -10.2236 -10.2229 -10.0553 -9.8103 -9.8062 -9.4442 -9.4356 -9.2608 -9.0905 -9.0902 -9.0761 -9.0688
                        -8.5589
                                    -8.4683
                                               -8.4667
                                                            -8.3179
 -8.6419
            -8.6322
                                                                       -8.3171
                                                                                   -8.3056
             -8.2090
                        -8.2032
                                    -8.1982
                                               -7.9772
                                                            -7.7605
                                                                       -7.7258
                                                                                   -7.7121
 -8.2135
                                    -7.2951
                                                -7.2946
                                                                       -7.1891
 -7.7074
             -7.6964
                        -7.6956
                                                            -7.2236
                                                                                   -7.1844
                                                -6.7273
                                                            -6.7210
 -7.1842
            -6.9839
                        -6.9820
                                    -6.8676
                                                                       -6.3949
                                                                                   -6.3619
                                                -5.9464
                                                            -5.7854
 -6.2813
             -6.2805
                        -6.0346
                                    -5.9557
                                                                       -5.7793
                                                                                   -5.5908
                        -5.4978
                                    -5.4244
 -5.5900
            -5.5013
                                                -5.3675
                                                            -5.3664
                                                                       -5.2240
                                                                                   -5.2228
 -5.1589
            -5.1480
                        -4.7354
                                    -4.7333
                                                -4.6546
                                                            -4.6497
                                                                       -4.5256
                                                                                   -4.5237
            -3.7501
                        -3.5455
                                    -3.5397
                                                            -2.9685
                                                                       -2.7713
 -3.7513
                                                -3.3036
                                                                                   -1.9062
 -0.6453
              0.0345
                         0.5689
                                     0.5704
                                                 1.7829
                                                            1.7866
                                                                        1.9190
                                                                                     1.9352
                          2.4588
                                      2.4600
                                                 2.4618
                                                             2.4639
                                                                         2.5167
  2.2475
              2.3285
                                                                                     2.7044
  2.7086
                          2.7921
                                      3.0534
                                                 3.1505
                                                             3.1657
                                                                         3.2549
              2.7760
                                                                                     3.2563
  3.2630
              3.2670
         k = 0.1587 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                             bands (ev):
-21.1663 -21.1621 -21.1159 -21.1145 -20.7741 -20.7569 -20.1729 -20.0215
-19.5482 -19.5472 -19.2209 -19.2193 -19.0329 -19.0319 -18.7911 -18.7897
-18.4999 -18.4978 -18.3255 -18.3240 -18.1047 -18.1034 -17.7733 -17.7717
-17.4864 -17.3317 -17.3298 -17.2529 -15.9929 -15.9877 -15.1799 -14.5646
-14.4471 -14.3294 -14.3270 -14.0011 -13.0489 -13.0441 -12.3147 -12.3089
-12.2469 -12.0687 -12.0677 -11.9648 -11.7329 -11.4737 -11.4726 -11.3386
-11.3343 -10.9529 -10.9519 -10.7578 -10.2547 -10.2541 -10.0684
                                                                                   -9.7761
 -9.7720
            -9.4645
                        -9.4560
                                   -9.2349
                                               -9.0727
                                                           -9.0653
                                                                       -9.0642
                                                                                   -9.0639
                                                                       -8.3332
 -8.6205
            -8.6108
                        -8.5770
                                    -8.4650
                                                -8.4634
                                                            -8.3434
                                                                                   -8.3324
                                                -7.9950
                                                            -7.7962
 -8.2097
            -8.2058
                        -8.2005
                                    -8.1956
                                                                       -7.7380
                                                                                   -7.7207
            -7.6793
                        -7.6784
                                    -7.2958
                                                -7.2952
                                                            -7.2564
                                                                       -7.1780
                                                                                   -7.1778
 -7.6863
 -7.1656
            -6.9930
                        -6.9912
                                    -6.8305
                                               -6.7449
                                                            -6.7388
                                                                       -6.3878
                                                                                   -6.3598
                                   -5.9354
                                               -5.9247
                                                            -5.7898
                                                                       -5.7825
 -6.2973
            -6.2966
                       -6.0060
                                                                                   -5.5709
                       -5.4950 -5.4015 -5.3738
                                                                       -5.2212
 -5.5701 -5.4984
                                                           -5.3728
                                                                                   -5.2200
```

```
-4.7419
                                -4.7398
                                           -4.6863
                                                      -4.6815
                                                                -4.5506
                                                                           -4.5488
 -5.1675
           -5.1567
                                                     -2.9621
 -3.7368
           -3.7356
                     -3.5225
                                -3.5166
                                           -3.3135
                                                                -2.7906
                                                                           -1.8801
 -0.6690
            0.0467
                       0.5466
                                 0.5481
                                           1.8216
                                                      1.8255
                                                                 1.9230
                                                                           1.9392
                                            2.4657
                                                                            2.7084
  2.2447
            2.3292
                                  2.4480
                                                       2.4679
                                                                 2.4954
                       2.4469
                                                                 3.2670
  2.7126
            2.7747
                       2.7909
                                  3.0318
                                            3.1544
                                                       3.1696
                                                                            3.2710
  3.2829
            3.2842
        k = 0.1667 - 0.5774 \ 0.0000 \ (64864 \ PWs)
                                                       bands (ev):
-21.1632 -21.1591 -21.1133 -21.1120 -20.7870 -20.7723 -20.1558 -20.0002
-19.5596 \ -19.5586 \ -19.2361 \ -19.2345 \ -19.0189 \ -19.0179 \ -18.7889 \ -18.7875
-19.3390 -19.3360 -19.2361 -19.2343 -19.0169 -19.0179 -18.7669 -18.7673 -18.4791 -18.4770 -18.3427 -18.3412 -18.1018 -18.1005 -17.7639 -17.7624 -17.4931 -17.3637 -17.3618 -17.2489 -15.9596 -15.9543 -15.1928 -14.5467 -14.4595 -14.3567 -14.3545 -13.9962 -13.0138 -13.0090 -12.3128 -12.3069 -12.2755 -12.0753 -12.0743 -11.9716 -11.7295 -11.4516 -11.4505 -11.3800 -11.3757 -10.9520 -10.9510 -10.7178 -10.2859 -10.2852 -10.0810 -9.7423

      -9.4848
      -9.4764
      -9.2088
      -9.0692
      -9.0615

      -8.5950
      -8.5871
      -8.4615
      -8.4600
      -8.3811

                                                                -9.0382
                                                                          -9.0379
 -9.7383
                                                                          -8.3476
 -8.6015
                                                     -8.3811
                                                                -8.3484
                                                                -7.7510
                                                                          -7.7336
           -8.2025
                                          -8.0127
                                                     -7.8322
 -8.2056
                     -8.1976 -8.1930
           -7.6612
                     -7.6612
                               -7.2964
-6.7935
                                          -7.2958
 -7.6621
                                                     -7.2893
                                                                -7.1713
                                                                          -7.1711
                                           -6.7623
 -7.1420
           -7.0026
                     -7.0008
                                                     -6.7564
                                                                -6.4137
                                                                           -6.3249
 -6.3133
                                                                           -5.5510
           -6.3125
                     -5.9776
                                -5.9160
                                           -5.9035
                                                     -5.7940
                                                                -5.7851
 -5.5502
                                -5.3809
           -5.4954
                                           -5.3797
                                                                -5.2182
                                                                           -5.2170
                     -5.4920
                                                     -5.3781
 -5.1765
                                           -4.7182
                                                     -4.7134
           -5.1656
                     -4.7486
                                -4.7466
                                                                -4.5757
                                                                           -4.5739
 -3.7227
                      -3.5000
                                                     -2.9560
           -3.7215
                                -3.4941
                                           -3.3234
                                                                -2.8098
                                                                           -1.8538
 -0.6931
                       0.5248
                                                      1.8646
            0.0587
                                 0.5265
                                            1.8606
                                                                 1.9272
                                                                            1.9434
  2.2418
            2.3298
                       2.4354
                                  2.4366
                                            2.4689
                                                       2.4719
                                                                 2.4753
                                                                            2.7127
  2.7169
            2.7734
                       2.7895
                                  3.0104
                                            3.1585
                                                       3.1736
                                                                 3.2636
                                                                            3.2716
  3.2753
            3.3111
        k = 0.1746 - 0.5774 \ 0.0000 \ (64816 \ PWs)
                                                       bands (ev):
-18.4581 -18.4560 -18.3599 -18.3584 -18.0988 -18.0975 -17.7549 -17.7533
-17.4999 -17.3956 -17.3937 -17.2451 -15.9265 -15.9210 -15.2056 -14.5287 -14.4718 -14.3836 -14.3815 -13.9921 -12.9786 -12.9738 -12.3111 -12.3057
-12.3021 -12.0814 -12.0804 -11.9784 -11.7263 -11.4292 -11.4281 -11.4215
                                                                          -9.7091
-11.4172 -10.9510 -10.9500 -10.6778 -10.3170 -10.3163 -10.0930
 -9.7051
          -9.5051 -9.4967
                               -9.1827
                                          -9.0655
                                                     -9.0576
                                                               -9.0125
                                                                          -9.0122
                               -8.4579 -8.4564
 -8.6149
           -8.5768
                     -8.5669
                                                     -8.4186
                                                                -8.3635
                                                                          -8.3627
 -8.2012
           -8.1991
                     -8.1942
                                -8.1902 -8.0303
                                                     -7.8681
                                                                -7.7645
                                                                          -7.7471
           -7.6440
                     -7.6358
                                -7.3223
                                          -7.2969
 -7.6449
                                                     -7.2963
                                                                -7.1644
                                                                          -7.1642
           -7.0126
                     -7.0108
                               -6.7797
                                          -6.7739
                                                                -6.4397
 -7.1183
                                                     -6.7564
                                                                          -6.3291
           -6.2900
                     -5.9493
                               -5.8982 -5.8834
                                                     -5.7974
                                                                -5.7864
 -6.3283
                                                                          -5.5310
           -5.4921
 -5.5302
                     -5.4889
                                -5.3877
                                          -5.3866
                                                     -5.3559
                                                                -5.2151
                                                                          -5.2139
           -5.1749
                     -4.7555
                                -4.7535
                                          -4.7500
                                                     -4.7453
                                                                -4.6010
 -5.1857
                                                                           -4.5992
                                                                -2.8288
 -3.7090
           -3.7078
                     -3.4781
                                -3.4721
                                          -3.3333
                                                     -2.9501
                                                                          -1.8273
 -0.7174
                      0.5038
                                 0.5056
                                                      1.9039
           0.0704
                                           1.8998
                                                                 1.9316
                                                                            1.9478
  2.2391
            2.3303
                       2.4245
                                  2.4256
                                            2.4526
                                                       2.4748
                                                                 2.4765
                                                                            2.7171
  2.7213
            2.7720
                       2.7881
                                  2.9892
                                            3.1629
                                                       3.1778
                                                                 3.2424
                                                                            3.2758
  3.2797
            3.3394
        k = 0.1825 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                       bands (ev):
-21.1568 -21.1526 -21.1079 -21.1065 -20.8124 -20.8027 -20.1214 -19.9573
-19.5821 -19.5812 -19.2660 -19.2644 -18.9908 -18.9898 -18.7843 -18.7829
-18.4370 -18.4349 -18.3772 -18.3757 -18.0957 -18.0944 -17.7461 -17.7445
-17.5066 -17.4274 -17.4256 -17.2414 -15.8937 -15.8880 -15.2182 -14.5106
-14.4840 -14.4101 -14.4081 -13.9888 -12.9433 -12.9384 -12.3304 -12.3084
-12.3026 -12.0871 -12.0861 -11.9852 -11.7232 -11.4629 -11.4587 -11.4065
-11.4054 -10.9500 -10.9490 -10.6379 -10.3480 -10.3474 -10.1044 -9.6764
```

```
-9.6725
           -9.5253
                      -9.5169
                                 -9.1565
                                           -9.0616
                                                      -9.0535
                                                                 -8.9872
                                                                           -8.9869
           -8.5553
                                                      -8.4508
 -8.6327
                      -8.5454
                                 -8.4587
                                           -8.4534
                                                                 -8.3786
                                                                           -8.3778
                      -8.1905
                                                      -7.9041
 -8.1968
           -8.1954
                                 -8.1871
                                           -8.0477
                                                                -7.7786
                                                                           -7.7613
                                           -7.2973
                                                      -7.2968
           -7.6268
                      -7.6103
                                -7.3554
                                                                 -7.1571
 -7.6277
                                                                           -7.1569
                                                      -6.7196
 -7.0944
           -7.0231
                      -7.0213
                                 -6.7969
                                           -6.7912
                                                                 -6.4657
                                                                           -6.3448
 -6.3440
           -6.2552
                      -5.9212
                                 -5.8831
                                           -5.8656
                                                      -5.7987
                                                                 -5.7853
                                                                           -5.5110
                                -5.3951
                                           -5.3941
 -5.5102
           -5.4887
                      -5.4856
                                                      -5.3333
                                                                 -5.2119
                                                                           -5.2107
 -5.1952
           -5.1845
                      -4.7819
                                 -4.7773
                                           -4.7627
                                                      -4.7607
                                                                 -4.6263
                                                                           -4.6245
 -3.6957
           -3.6945
                                                                 -2.8476
                      -3.4566
                                -3.4506
                                           -3.3432
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                                                                           -1.8007
 -0.7421
            0.0819
                      0.4835
                                 0.4854
                                            1.9361
                                                      1.9392
                                                                 1.9434
                                                                            1.9526
                                  2.4153
  2.2365
            2.3307
                       2.4141
                                             2.4320
                                                       2.4792
                                                                  2.4811
                                                                             2.7218
            2.7705
  2.7260
                       2.7867
                                  2.9682
                                             3.1673
                                                       3.1820
                                                                  3.2214
                                                                             3.2804
  3.2844
             3.3678
        k = 0.1905 - 0.5774 \ 0.0000 \ (64822 \ PWs)
                                                       bands (ev):
-21.1533 -21.1492 -21.1049 -21.1036 -20.8250 -20.8177 -20.1041 -19.9356
-21.1533 -21.1492 -21.1049 -21.1036 -20.8250 -20.8177 -20.1041 -19.9356 -19.5933 -19.5923 -19.2808 -19.2791 -18.9767 -18.9757 -18.7819 -18.7805 -18.4157 -18.4136 -18.3946 -18.3931 -18.0924 -18.0911 -17.7376 -17.7360 -17.5134 -17.4591 -17.4573 -17.2379 -15.8611 -15.8553 -15.2308 -14.4962 -14.4924 -14.4361 -14.4342 -13.9864 -12.9078 -12.9029 -12.3560 -12.3063 -12.3004 -12.0924 -12.0913 -11.9920 -11.7204 -11.5044 -11.5002 -11.3835 -11.3824 -10.9490 -10.9480 -10.5981 -10.3791 -10.3784 -10.1153 -9.6443 -9.6404 -9.5454 -9.5371 -9.1301 -9.0576 -9.0493 -8.9621 -8.9619
           -8.5338
                     -8.5239
                                -8.4943
                                                      -8.4483
                                                                           -8.3928
 -8.6505
                                           -8.4498
                                                                -8.3936
                                                      -7.9400
                                                                -7.7933
                                                                           -7.7760
 -8.1934
           -8.1906
                      -8.1866
                                -8.1833
                                           -8.0649
                                -7.3885
                                           -7.2977
                                                      -7.2972
                      -7.5845
 -7.6104
           -7.6096
                                                                 -7.1497
                                                                           -7.1495
                                                                 -6.4917
 -7.0704
           -7.0340
                      -7.0321
                                -6.8140
                                           -6.8084
                                                      -6.6828
                                                                           -6.3604
                                                                 -5.7803
           -6.2206
                      -5.8933
                                                      -5.7952
 -6.3596
                                 -5.8722
                                           -5.8530
                                                                           -5.4912
 -5.4902
                                 -5.4030
           -5.4850
                      -5.4820
                                           -5.4020
                                                      -5.3109
                                                                 -5.2088
                                                                           -5.2077
 -5.2044
           -5.1942
                      -4.8139
                                 -4.8093
                                           -4.7702
                                                      -4.7682
                                                                 -4.6518
                                                                            -4.6500
                                                      -2.9389
 -3.6829
           -3.6817
                      -3.4357
                                 -3.4297
                                            -3.3532
                                                                 -2.8663
                                                                            -1.7739
 -0.7670
            0.0931
                       0.4639
                                  0.4659
                                             1.9409
                                                       1.9570
                                                                  1.9789
                                                                             1.9834
  2.2339
                       2.4043
                                  2.4054
                                             2.4115
                                                       2.4840
                                                                  2.4859
             2.3310
                                                                             2.7267
  2.7308
             2.7689
                                  2.9474
                                                       3.1852
                                                                  3.2019
                       2.7851
                                             3.1719
                                                                             3.2853
  3.2892
             3.3951
        k = 0.1984 - 0.5774 \ 0.0000 \ (64802 \ PWs)
                                                       bands (ev):
-21.1497 -21.1456 -21.1019 -21.1005 -20.8376 -20.8324 -20.0867 -19.9137
-19.6044 -19.6034 -19.2954 -19.2937 -18.9626 -18.9616 -18.7793 -18.7779
-18.4121 -18.4106 -18.3943 -18.3922 -18.0890 -18.0877 -17.7294 -17.7278
-17.5201 -17.4906 -17.4889 -17.2345 -15.8289 -15.8229 -15.2432 -14.5083
-14.4741 -14.4615 -14.4597 -13.9850 -12.8723 -12.8673 -12.3806 -12.3040
-12.2980 -12.0972 -12.0961 -11.9987 -11.7177 -11.5460 -11.5417 -11.3602
-11.3591 -10.9479 -10.9469 -10.5583 -10.4101 -10.4094 -10.1256
                                                                           -9.6127
 -9.6090
           -9.5652 -9.5571
                                -9.1037
                                           -9.0534
                                                     -9.0448
                                                                -8.9374
                                                                           -8.9372
           -8.5317
                      -8.5122
                                -8.5022 -8.4457
                                                      -8.4441
                                                                -8.4085
 -8.6682
                                                                           -8.4077
 -8.1905
           -8.1857
                     -8.1824
                                -8.1784
                                           -8.0819
                                                      -7.9759
                                                                -7.8086
                                                                           -7.7913
 -7.5932
           -7.5923
                     -7.5586
                                -7.4217
                                           -7.2981
                                                      -7.2975
                                                                -7.1419
                                                                           -7.1417
 -7.0463
           -7.0453
                     -7.0435
                                -6.8309
                                           -6.8254
                                                      -6.6461
                                                                 -6.5177
                                                                            -6.3759
 -6.3751
           -6.1860
                      -5.8673
                                -5.8649
                                           -5.8479
                                                      -5.7843
                                                                 -5.7706
                                                                           -5.4817
 -5.4788
           -5.4705
                      -5.4697
                                 -5.4112
                                            -5.4103
                                                      -5.2886
                                                                 -5.2154
                                                                            -5.2062
 -5.2039
           -5.2027
                      -4.8458
                                 -4.8413
                                            -4.7778
                                                      -4.7759
                                                                 -4.6773
                                                                            -4.6756
                      -3.4154
                                 -3.4094
                                            -3.3631
                                                                 -2.8847
 -3.6704
           -3.6692
                                                      -2.9337
                                                                            -1.7469
 -0.7922
            0.1040
                       0.4451
                                  0.4472
                                            1.9459
                                                       1.9621
                                                                  2.0187
                                                                             2.0234
                       2.3912
                                  2.3950
                                             2.3962
                                                       2.4890
                                                                  2.4909
  2.2313
             2.3312
                                                                             2.7318
  2.7359
                       2.7835
                                  2.9268
                                             3.1739
                                                       3.1792
                                                                  3.1947
                                                                             3.2903
             2.7673
  3.2943
             3.4008
        k = 0.2063 - 0.5774 \ 0.0000 \ (64806 \ PWs)
                                                       bands (ev):
```

```
-21.1459 -21.1418 -21.0987 -21.0974 -20.8502 -20.8468 -20.0692 -19.8918
-19.6153 -19.6144 -19.3098 -19.3082 -18.9484 -18.9474 -18.7767 -18.7753
-18.4298 -18.4283 -18.3728 -18.3707 -18.0854 -18.0841 -17.7214 -17.7198
-17.5269 -17.5221 -17.5204 -17.2313 -15.7971 -15.7909 -15.2555 -14.5203 -14.4862 -14.4846 -14.4556 -13.9846 -12.8366 -12.8316 -12.4041 -12.3016
-12.2956 -12.1015 -12.1005 -12.0054 -11.7152 -11.5875 -11.5833 -11.3367
-11.3355 -10.9468 -10.9458 -10.5185 -10.4410 -10.4403 -10.1354 -9.5876
           -9.5770 -9.5747 -9.0772 -9.0491 -9.0402 -8.9131
 -9.5829
                                                                            -8.9128
                                                                 -8.4233
 -8.6857
           -8.5691 -8.4906 -8.4806 -8.4414
                                                      -8.4398
                                                                            -8.4225
                                                                            -7.8072
 -8.1877
           -8.1819
                      -8.1769
                                 -8.1726
                                           -8.0988
                                                      -8.0117
                                                                 -7.8245
 -7.5759
           -7.5750
                      -7.5325
                                 -7.4549
                                           -7.2983
                                                      -7.2978
                                                                 -7.1339
                                                                            -7.1336
           -7.0552
                                                                            -6.3912
 -7.0570
                      -7.0221
                                 -6.8477
                                           -6.8423
                                                      -6.6096
                                                                 -6.5438
                                           -5.8371
 -6.3904
           -6.1515
                      -5.8657
                                 -5.8504
                                                      -5.7673
                                                                 -5.7563
                                                                            -5.4777
                                                      -5.2665
 -5.4749
           -5.4504
                      -5.4496
                                 -5.4199
                                           -5.4189
                                                                 -5.2256
                                                                            -5.2151
 -5.2010
           -5.1998
                      -4.8778
                                 -4.8733
                                           -4.7857
                                                       -4.7838
                                                                 -4.7030
                                                                            -4.7012
 -3.6584
           -3.6572
                      -3.3957
                                 -3.3896
                                           -3.3729
                                                      -2.9287
                                                                 -2.9030
                                                                            -1.7197
 -0.8177
             0.1147
                       0.4270
                                  0.4293
                                             1.9511
                                                        1.9673
                                                                   2.0586
                                                                             2.0636
  2.2289
             2.3314
                       2.3711
                                  2.3863
                                             2.3874
                                                        2.4942
                                                                   2.4961
                                                                              2.7370
  2.7411
             2.7656
                        2.7818
                                  2.9064
                                             3.1561
                                                        3.1826
                                                                   3.1986
                                                                              3.2956
  3.2995
             3.3655
        k = 0.2143 - 0.5774 \ 0.0000 \ (64814 \ PWs)
                                                        bands (ev):
-21.1420 -21.1379 -21.0954 -21.0941 -20.8634 -20.8604 -20.0516 -19.8696 -19.6262 -19.6253 -19.3242 -19.3225 -18.9343 -18.9333 -18.7739 -18.7725 -18.4474 -18.4459 -18.3512 -18.3490 -18.0817 -18.0804 -17.7137 -17.7122 -17.5535 -17.5518 -17.5336 -17.2282 -15.7657 -15.7594 -15.2676 -14.5323 -14.5104 -14.5089 -14.4371 -13.9852 -12.8008 -12.7958 -12.4264 -12.2991 -12.2931 -12.1054 -12.1044 -12.0121 -11.7129 -11.6290 -11.6248 -11.3129 -11.3117 -10.9457 -10.9447 -10.4788 -10.4719 -10.4712 -10.1445 -9.6060 -9.5976 -9.5510 -9.5468 -9.0506 -9.0448 -9.0354 -8.8891 -8.8889
 -8.7031
                      -8.4691
           -8.6063
                                 -8.4590
                                           -8.4381
                                                      -8.4373
                                                                 -8.4369
                                                                            -8.4353
 -8.1849
            -8.1788
                      -8.1703
                                 -8.1662
                                            -8.1156
                                                       -8.0475
                                                                 -7.8409
                                                                            -7.8237
 -7.5585
           -7.5577
                      -7.5063
                                 -7.4882
                                            -7.2986
                                                      -7.2980
                                                                 -7.1255
                                                                            -7.1253
           -7.0673
                      -6.9977
                                                                 -6.5699
 -7.0691
                                 -6.8644
                                            -6.8590
                                                      -6.5731
                                                                            -6.4064
                      -5.8684
 -6.4056
                                 -5.8550
                                            -5.8100
                                                       -5.7472
                                                                  -5.7388
                                                                            -5.4737
           -6.1172
 -5.4710
            -5.4302
                      -5.4294
                                 -5.4289
                                            -5.4280
                                                       -5.2444
                                                                 -5.2361
                                                                            -5.2255
 -5.1972
           -5.1960
                      -4.9098
                                 -4.9053
                                            -4.7938
                                                       -4.7919
                                                                 -4.7287
                                                                            -4.7270
                                                       -2.9239
 -3.6469
           -3.6457
                      -3.3828
                                 -3.3766
                                            -3.3704
                                                                  -2.9211
                                                                            -1.6924
 -0.8435
            0.1252
                       0.4097
                                  0.4121
                                             1.9565
                                                       1.9727
                                                                   2.0987
                                                                              2.1040
  2.2265
             2.3314
                       2.3514
                                  2.3781
                                             2.3793
                                                        2.4996
                                                                   2.5015
                                                                              2.7425
  2.7465
             2.7638
                       2.7800
                                  2.8861
                                             3.1360
                                                        3.1878
                                                                   3.2035
                                                                              3.3009
  3.3049
             3.3267
        k = 0.2222 - 0.5774 \ 0.0000 \ (64840 \ PWs)
                                                        bands (ev):
-21.1380 -21.1339 -21.0920 -21.0907 -20.8772 -20.8731 -20.0339 -19.8474
-19.6370 -19.6360 -19.3383 -19.3367 -18.9201 -18.9191 -18.7711 -18.7697
-18.4652 -18.4637 -18.3294 -18.3272 -18.0779 -18.0766 -17.7063 -17.7048
-17.5847 -17.5830 -17.5403 -17.2253 -15.7349 -15.7284 -15.2797 -14.5442
-14.5337 -14.5324 -14.4184 -13.9869 -12.7650 -12.7599 -12.4474 -12.2965
-12.2905 -12.1088 -12.1078 -12.0188 -11.7108 -11.6706 -11.6664 -11.2888
-11.2876 -10.9445 -10.9435 -10.5027 -10.5020 -10.4392 -10.1531
           -9.5213
                      -9.5172
                                 -9.0403
                                           -9.0304
                                                      -9.0239
 -9.6175
                                                                 -8.8655
                                                                            -8.8653
           -8.6434
                      -8.4527
                                 -8.4520
                                            -8.4475
                                                       -8.4374
                                                                  -8.4322
 -8.7203
                                                                            -8.4306
 -8.1821
           -8.1759
                      -8.1629
                                 -8.1592
                                            -8.1321
                                                       -8.0833
                                                                 -7.8579
                                                                            -7.8407
 -7.5412
            -7.5403
                      -7.5215
                                 -7.4799
                                            -7.2988
                                                       -7.2982
                                                                  -7.1169
                                                                            -7.1167
 -7.0817
           -7.0799
                      -6.9732
                                 -6.8809
                                            -6.8756
                                                       -6.5960
                                                                  -6.5367
                                                                            -6.4214
 -6.4206
           -6.0829
                      -5.8735
                                 -5.8619
                                            -5.7828
                                                       -5.7256
                                                                 -5.7193
                                                                            -5.4695
 -5.4669
           -5.4384
                      -5.4375
                                 -5.4100
                                           -5.4091
                                                      -5.2468
                                                                 -5.2362
                                                                            -5.2225
                      -4.9417
                                 -4.9374
                                           -4.8020
                                                      -4.8002
                                                                 -4.7545
 -5.1933
           -5.1921
                                                                            -4.7528
           -3.6345 -3.3926 -3.3581 -3.3520
                                                      -2.9390
 -3.6357
                                                                 -2.9195
                                                                            -1.6649
```

```
2.1388
 -0.8695
             0.1354
                        0.3932
                                  0.3957
                                             1.9621
                                                        1.9783
                                                                              2.1445
                                                                   2.5071
                                                                              2.7482
  2.2242
             2.3314
                        2.3320
                                  2.3705
                                             2.3716
                                                        2.5052
  2.7521
             2.7621
                        2.7781
                                  2.8661
                                             3.1158
                                                        3.1933
                                                                   3.2089
                                                                              3.2870
  3.2930
             3.3070
        k = 0.2302 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                        bands (ev):
-21.1338 -21.1297 -21.0885 -21.0871 -20.8913 -20.8853 -20.0161 -19.8250
-19.6477 -19.6468 -19.3524 -19.3508 -18.9059 -18.9049 -18.7681 -18.7667
-18.4831 -18.4816 -18.3074 -18.3053 -18.0739 -18.0726 -17.6992 -17.6977 -17.6158 -17.6142 -17.5470 -17.2226 -15.7048 -15.6981 -15.2916 -14.5564 -14.5559 -14.5550 -14.3996 -13.9898 -12.7290 -12.7238 -12.4671 -12.2938
-12.2878 -12.1118 -12.1108 -12.0255 -11.7121 -11.7088 -11.7079 -11.2644
-11.2632 -10.9433 -10.9423 -10.5334 -10.5327 -10.3996 -10.1611 -9.6456
 -9.6373
           -9.4923
                      -9.4881 -9.0358 -9.0252 -8.9972
                                                                 -8.8423
                                                                            -8.8421
 -8.7374
           -8.6804
                      -8.4673
                                 -8.4666 -8.4273
                                                      -8.4260
                                                                 -8.4257
                                                                            -8.4158
                                                                 -7.8754
                                                                            -7.8582
 -8.1793
           -8.1730
                      -8.1550
                                 -8.1526 -8.1473
                                                      -8.1190
                                           -7.2989
-6.8920
           -7.5239
                                                      -7.2983
 -7.5549
                      -7.5230
                                 -7.4533
                                                                 -7.1080
                                                                            -7.1078
           -7.0928
                      -6.9486
                                                                 -6.5005
                                                                            -6.4364
 -7.0946
                                 -6.8972
                                                      -6.6222
           -6.0488
                      -5.8804
                                 -5.8700
                                            -5.7558
                                                       -5.7033
                                                                 -5.6985
                                                                            -5.4652
 -6.4356
 -5.4627
           -5.4483
                      -5.4474
                                 -5.3896
                                            -5.3888
                                                       -5.2576
                                                                  -5.2470
                                                                            -5.2007
 -5.1892
           -5.1880
                      -4.9737
                                 -4.9694
                                            -4.8104
                                                       -4.8086
                                                                  -4.7805
                                                                            -4.7787
                                            -3.3341
                                                       -2.9568
                      -3.4024
                                 -3.3403
 -3.6251
           -3.6238
                                                                  -2.9152
                                                                             -1.6373
                       0.3775
                                  0.3801
                                             1.9679
                                                        1.9840
 -0.8959
             0.1454
                                                                   2.1787
                                                                              2.1851
                       2.3313
                                  2.3635
                                             2.3646
                                                        2.5110
                                                                   2.5129
                                                                              2.7541
  2.2222
             2.3134
  2.7570
             2.7611
                        2.7762
                                  2.8463
                                             3.0957
                                                        3.1990
                                                                   3.2145
                                                                              3.2475
  3.2533
             3.3127
        k = 0.2381 - 0.5774 \ 0.0000 \ (64812 \ PWs)
                                                        bands (ev):
-21.1295 -21.1254 -21.0848 -21.0835 -20.9054 -20.8972 -19.9983 -19.8025
-21.1295 -21.1254 -21.0848 -21.0835 -20.9054 -20.8972 -19.9983 -19.8025 -19.6583 -19.6574 -19.3663 -19.3647 -18.8916 -18.8906 -18.7650 -18.7637 -18.5010 -18.4995 -18.2854 -18.2832 -18.0698 -18.0685 -17.6924 -17.6909 -17.6468 -17.6452 -17.5537 -17.2201 -15.6754 -15.6684 -15.3034 -14.5778 -14.5768 -14.5678 -14.3807 -13.9939 -12.6929 -12.6877 -12.4854 -12.2910 -12.2850 -12.1143 -12.1133 -12.0321 -11.7537 -11.7495 -11.7071 -11.2397 -11.2386 -10.9420 -10.9410 -10.5641 -10.5634 -10.3602 -10.1684 -9.6653
           -9.4639
                     -9.4598
                                -9.0314 -9.0198
                                                      -8.9705
                                                                 -8.8195
 -9.6571
                                                                            -8.8193
                                                      -8.4208
 -8.7542
           -8.7171
                      -8.4818
                                -8.4811
                                           -8.4223
                                                                 -8.4043
                                                                            -8.3942
                                                                 -7.8934
 -8.1766
           -8.1702
                      -8.1653
                                 -8.1547
                                           -8.1464
                                                      -8.1427
                                                                            -7.8763
                      -7.5056
           -7.5065
                                -7.4266
                                           -7.2990
                                                      -7.2984
 -7.5883
                                                                 -7.1080
                                                                            -7.1063
                                           -6.9083
 -7.0987
           -7.0984
                      -6.9239
                                 -6.9135
                                                      -6.6484
                                                                 -6.4643
                                                                            -6.4512
                      -5.8885
                                 -5.8790
                                            -5.7289
                                                       -5.6805
                                                                 -5.6769
 -6.4504
           -6.0147
                                                                            -5.4608
           -5.4584
                                 -5.3693
                                                       -5.2685
                      -5.4575
                                            -5.3685
                                                                  -5.2580
 -5.4587
                                                                            -5.1849
           -5.1790
                      -5.0056
                                 -5.0014
                                            -4.8190
                                                       -4.8173
                                                                 -4.8065
                                                                            -4.8047
 -5.1837
           -3.6136
 -3.6148
                      -3.4122
                                -3.3231
                                           -3.3170
                                                      -2.9743
                                                                 -2.9113
                                                                            -1.6095
 -0.9225
                                             1.9740
                       0.3626
                                                       1.9900
            0.1551
                                  0.3654
                                                                   2.2169
                                                                              2.2188
                                  2.3570
  2.2274
             2,2967
                                                        2.5170
                                                                   2.5189
                       2.3311
                                             2.3581
                                                                              2.7571
  2.7603
             2.7650
                        2.7741
                                  2.8267
                                             3.0758
                                                        3.2049
                                                                   3.2078
                                                                              3.2136
  3.2204
             3.3187
        k = 0.2460 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                        bands (ev):
-21.1250 -21.1209 -21.0810 -21.0797 -20.9193 -20.9090 -19.9804 -19.7798
-19.6688 -19.6679 -19.3800 -19.3784 -18.8774 -18.8764 -18.7619 -18.7605
-18.5190 -18.5175 -18.2632 -18.2610 -18.0656 -18.0642 -17.6859 -17.6843
-17.6778 -17.6762 -17.5604 -17.2178 -15.6468 -15.6397 -15.3151 -14.5983
-14.5974 -14.5794 -14.3616 -13.9993 -12.6566 -12.6515 -12.5024 -12.2881
-12.2821 -12.1164 -12.1154 -12.0387 -11.7952 -11.7911 -11.7055 -11.2148
-11.2137 -10.9407 -10.9397 -10.5947 -10.5940 -10.3208 -10.1752 -9.6851
 -9.6769 -9.4363 -9.4321 -9.0270 -9.0143 -8.9437 -8.7970
                                                                            -8.7969
 -8.7709 -8.7534 -8.4963 -8.4955 -8.4171 -8.4156 -8.3828 -8.3726
```

```
-8.1903
           -8.1813
                      -8.1738
                                                      -8.1339
                                                                 -7.9121
                                                                           -7.8950
                                 -8.1673
                                           -8.1372
                                -7.3998
 -7.6218
           -7.4891
                     -7.4882
                                           -7.2990
                                                      -7.2984
                                                                 -7.1218
                                                                           -7.1200
 -7.0892
                      -6.9295
                                           -6.8990
                                                                 -6.4658
           -7.0889
                                -6.9244
                                                      -6.6745
                                                                           -6.4650
           -5.9809
 -6.4283
                      -5.8976
                                -5.8887
                                           -5.7022
                                                      -5.6574
                                                                 -5.6547
                                                                           -5.4694
 -5.4686
           -5.4561
                      -5.4538
                                -5.3489
                                           -5.3481
                                                      -5.2795
                                                                 -5.2690
                                                                           -5.1805
 -5.1793
           -5.1575
                      -5.0376
                                -5.0333
                                           -4.8325
                                                      -4.8308
                                                                 -4.8278
                                                                           -4.8260
                                           -3.3005
                                                      -2.9917
 -3.6050
           -3.6038
                      -3.4220
                                -3.3066
                                                                 -2.9076
                                                                           -1.5815
 -0.9494
            0.1646
                      0.3485
                                 0.3515
                                            1.9802
                                                      1.9962
                                                                 2.2176
                                                                            2.2465
                       2.3309
  2.2670
            2.2898
                                  2.3511
                                             2.3522
                                                       2.5232
                                                                  2.5251
                                                                             2.7552
  2.7665
            2.7710
                       2.7721
                                  2.8073
                                             3.0560
                                                       3.1681
                                                                  3.1737
                                                                             3.2111
  3.2265
             3.3250
        k = 0.2540 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                       bands (ev):
-21.1204 -21.1163 -21.0771 -21.0758 -20.9332 -20.9207 -19.9624 -19.7570
-21.1204 -21.1163 -21.0771 -21.0758 -20.9332 -20.9207 -19.9624 -19.7570 -19.6793 -19.6783 -19.3936 -19.3921 -18.8631 -18.8621 -18.7586 -18.7572 -18.5370 -18.5355 -18.2409 -18.2387 -18.0612 -18.0598 -17.7085 -17.7070 -17.6796 -17.6781 -17.5671 -17.2156 -15.6193 -15.6119 -15.3266 -14.6176 -14.6168 -14.5910 -14.3424 -14.0059 -12.6203 -12.6151 -12.5179 -12.2851 -12.2791 -12.1180 -12.1170 -12.0453 -11.8367 -11.8326 -11.7041 -11.1897 -11.1885 -10.9394 -10.9384 -10.6252 -10.6245 -10.2815 -10.1814 -9.7047 -9.6966 -9.4094 -9.4052 -9.0230 -9.0086 -8.9169 -8.7892 -8.7874
           -8.7749
 -8.7750
                      -8.5106
                                -8.5099
                                           -8.4117
                                                      -8.4102
                                                                 -8.3612
                                                                           -8.3510
           -8.1972
                      -8.1710
 -8.2259
                                -8.1645
                                           -8.1274
                                                      -8.1243
                                                                 -7.9312
                                                                           -7.9142
                                -7.3728
                                           -7.2990
                                                      -7.2984
                                                                 -7.1359
 -7.6552
           -7.4717
                      -7.4708
                                                                           -7.1342
 -7.0794
           -7.0791
                     -6.9454
                                -6.9403
                                           -6.8740
                                                      -6.7007
                                                                 -6.4804
                                                                           -6.4796
                      -5.9076
 -6.3925
           -5.9471
                                -5.8991
                                           -5.6758
                                                      -5.6341
                                                                 -5.6322
                                                                            -5.4806
 -5.4798
           -5.4514
                      -5.4492
                                -5.3286
                                           -5.3278
                                                      -5.2904
                                                                 -5.2800
                                                                           -5.1760
 -5.1748
                      -5.0694
                                 -5.0652
           -5.1362
                                           -4.8587
                                                      -4.8570
                                                                 -4.8367
                                                                            -4.8350
 -3.5956
           -3.5944
                                 -3.2908
                      -3.4317
                                           -3.2847
                                                      -3.0089
                                                                 -2.9042
                                                                            -1.5533
 -0.9766
            0.1739
                       0.3353
                                  0.3384
                                            1.9866
                                                       2.0026
                                                                  2.2159
                                                                             2.2447
                                  2.3459
  2.3074
             2.3146
                       2.3305
                                             2.3470
                                                       2.5296
                                                                  2.5316
                                                                             2.7530
  2.7696
             2.7733
                       2.7775
                                  2.7881
                                             3.0365
                                                       3.1283
                                                                  3.1338
                                                                             3.2174
  3.2328
             3.3315
        k = 0.2619 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                       bands (ev):
-21.1156 -21.1115 -21.0731 -21.0717 -20.9469 -20.9322 -19.9443 -19.7341
-19.6896 -19.6887 -19.4071 -19.4055 -18.8488 -18.8479 -18.7552 -18.7539
-18.5551 -18.5536 -18.2184 -18.2162 -18.0566 -18.0553 -17.7392 -17.7377
-17.6737 -17.6721 -17.5738 -17.2136 -15.5929 -15.5853 -15.3381 -14.6356
-14.6349 -14.6025 -14.3232 -14.0139 -12.5839 -12.5786 -12.5319 -12.2821
-12.2760 -12.1192 -12.1182 -12.0519 -11.8782 -11.8741 -11.7029 -11.1643
-11.1631 -10.9381 -10.9370 -10.6556 -10.6549 -10.2424 -10.1870
                                                                           -9.7243
          -9.3833
                     -9.3790
                                -9.0195
                                          -9.0028
                                                     -8.8900
                                                                -8.8242
 -9.7162
                                                                           -8.8036
 -8.7534
           -8.7533 -8.5249
                                -8.5241
                                           -8.4062
                                                      -8.4047
                                                                -8.3397
                                                                           -8.3294
           -8.2130
                     -8.1681
                                -8.1616
                                           -8.1170
                                                      -8.1141
                                                                -7.9509
 -8.2614
                                                                           -7.9339
 -7.6888
           -7.4543
                     -7.4534
                                -7.3456 -7.2989
                                                      -7.2984
                                                                -7.1505
                                                                           -7.1487
 -7.0692
           -7.0689
                     -6.9612
                                -6.9561
                                           -6.8489
                                                      -6.7270
                                                                -6.4948
                                                                           -6.4940
 -6.3567
           -5.9183
                     -5.9135
                                -5.9102
                                           -5.6496
                                                      -5.6109
                                                                 -5.6094
                                                                           -5.4922
 -5.4915
           -5.4466
                      -5.4445
                                -5.3092
                                           -5.3082
                                                      -5.3001
                                                                -5.2904
                                                                           -5.1713
 -5.1701
           -5.1150
                      -5.1012
                                -5.0971
                                           -4.8849
                                                      -4.8832
                                                                 -4.8457
                                                                            -4.8441
 -3.5867
           -3.5855
                      -3.4413
                                 -3.2758
                                            -3.2696
                                                      -3.0259
                                                                 -2.9011
                                                                            -1.5250
 -1.0041
            0.1830
                       0.3230
                                  0.3262
                                            1.9932
                                                       2.0091
                                                                  2.2142
                                                                             2.2294
                                  2.3494
                                             2.3543
                                                       2.5363
  2.3301
             2.3399
                       2.3412
                                                                  2.5382
                                                                             2.7507
  2.7674
             2.7690
                       2.7799
                                  2.7842
                                             3.0171
                                                       3.0884
                                                                  3.0939
                                                                             3.2239
  3.2392
             3.3382
        k = 0.2698 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                       bands (ev):
-21.1106 -21.1066 -21.0689 -21.0676 -20.9604 -20.9436 -19.9261 -19.7110
-19.6999 -19.6989 -19.4204 -19.4189 -18.8346 -18.8336 -18.7518 -18.7504
```

```
-18.5733 -18.5718 -18.1958 -18.1936 -18.0520 -18.0506 -17.7698 -17.7683
-17.6680 -17.6665 -17.5804 -17.2118 -15.5678 -15.5600 -15.3494 -14.6520
-14.6513 -14.6139 -14.3037 -14.0232 -12.5481 -12.5441 -12.5417 -12.2790
-12.2729 -12.1199 -12.1189 -12.0584 -11.9198 -11.9156 -11.7019 -11.1386 -11.1374 -10.9367 -10.9357 -10.6859 -10.6852 -10.2033 -10.1919 -9.7438
 -9.7358
           -9.3580 -9.3536 -9.0172 -8.9967
                                                       -8.8632 -8.8578
                                                                             -8.8197
           -8.7321
                      -8.5390 -8.5383 -8.4005
                                                       -8.3990
                                                                  -8.3181
                                                                             -8.3078
 -8.7322
 -8.2969
           -8.2286
                      -8.1653 -8.1587
                                            -8.1059
                                                       -8.1032
                                                                  -7.9711
                                                                             -7.9541
 -7.7223
           -7.4369
                      -7.4360 -7.3183 -7.2988
                                                       -7.2982
                                                                  -7.1654
                                                                             -7.1636
 -7.0588
           -7.0585
                      -6.9767
                                 -6.9717
                                            -6.8237
                                                       -6.7532
                                                                  -6.5090
                                                                             -6.5082
 -6.3212
           -5.9298
                      -5.9219
                                 -5.8800
                                            -5.6237
                                                       -5.5877
                                                                   -5.5863
                                                                             -5.5043
 -5.5036
           -5.4417
                      -5.4397
                                 -5.3132
                                            -5.3031
                                                       -5.2867
                                                                   -5.2857
                                                                             -5.1664
 -5.1652
           -5.1330
                      -5.1288
                                 -5.0939
                                            -4.9111
                                                       -4.9094
                                                                   -4.8549
                                                                             -4.8533
                                                                  -2.8984
 -3.5783
           -3.5770
                      -3.4510
                                 -3.2614
                                            -3.2553
                                                       -3.0428
                                                                             -1.4965
 -1.0318
             0.1918
                       0.3116
                                   0.3149
                                              2.0000
                                                         2.0159
                                                                    2.2120
                                                                               2.2125
  2.3296
             2.3365
                        2.3376
                                   2.3898
                                              2.3948
                                                         2.5431
                                                                    2.5450
                                                                               2.7482
  2.7503
             2.7650
                        2.7869
                                   2.7911
                                              2.9979
                                                         3.0486
                                                                    3.0539
                                                                               3.2307
  3.2459
             3.3451
        k = 0.2778 - 0.5774 \ 0.0000 \ (64818 \ PWs)
                                                         bands (ev):
-21.1056 -21.1015 -21.0647 -21.0633 -20.9738 -20.9549 -19.9078 -19.7100 -19.7090 -19.6878 -19.4336 -19.4321 -18.8203 -18.8193 -18.7482 -18.7468 -18.5916 -18.5901 -18.1731 -18.1708 -18.0472 -18.0458 -17.8002 -17.7987 -17.6627 -17.6611 -17.5870 -17.2103 -15.5443 -15.5363 -15.3606 -14.6668 -14.6660 -14.6252 -14.2842 -14.0339 -12.5555 -12.5107 -12.5054 -12.2757 -12.2696 -12.1202 -12.1192 -12.0649 -11.9612 -11.9571 -11.7009 -11.1127 -11.1115 -10.9352 -10.9342 -10.7161 -10.7154 -10.1963 -10.1644 -9.7633 -9.7553 -9.3336 -9.3290 -9.0171 -8.9905 -8.8889 -8.8363 -8.8356 -8.7115 -8.7113 -8.5531 -8.5534 -8.83046 -8.3031 -8.3323 -8.3066
 -8.7115
           -8.7113
                      -8.5531
                                 -8.5524
                                            -8.3946
                                                       -8.3931
                                                                  -8.3323
                                                                             -8.2966
 -8.2862
           -8.2441
                      -8.1624
                                 -8.1558
                                            -8.0942
                                                       -8.0917
                                                                   -7.9918
                                                                             -7.9749
           -7.4194
                      -7.4185
                                 -7.2987
                                            -7.2981
                                                       -7.2908
 -7.7560
                                                                  -7.1806
                                                                             -7.1789
                      -6.9922
                                 -6.9872
                                            -6.7984
                                                       -6.7794
 -7.0480
           -7.0477
                                                                  -6.5232
                                                                             -6.5224
 -6.2857
           -5.9419
                      -5.9342
                                 -5.8467
                                             -5.5981
                                                       -5.5649
                                                                   -5.5630
                                                                             -5.5168
 -5.5162
           -5.4367
                       -5.4349
                                 -5.3237
                                            -5.3132
                                                        -5.2665
                                                                   -5.2657
                                                                             -5.1647
 -5.1615
            -5.1605
                       -5.1603
                                  -5.0730
                                             -4.9374
                                                        -4.9358
                                                                   -4.8642
                                                                             -4.8626
 -3.5703
            -3.5690
                       -3.4606
                                 -3.2478
                                            -3.2417
                                                        -3.0595
                                                                   -2.8959
                                                                             -1.4678
                                                        2.0228
 -1.0598
             0.2004
                       0.3010
                                  0.3045
                                              2.0070
                                                                    2.1942
                                                                               2.2110
                                              2.4364
                                                                    2.5520
  2.3290
             2.3330
                        2.3340
                                   2.4313
                                                         2.5501
                                                                               2.7317
  2.7458
             2.7625
                        2.7940
                                   2.7983
                                              2.9790
                                                         3.0087
                                                                    3.0140
                                                                               3.2376
  3.2527
             3.3522
        k = 0.2857 - 0.5774 \ 0.0000 \ (64838 \ PWs)
                                                         bands (ev):
-21.1004 -21.0963 -21.0603 -21.0589 -20.9871 -20.9661 -19.8895 -19.7200
-19.7191 -19.6644 -19.4466 -19.4451 -18.8060 -18.8050 -18.7445 -18.7432
-18.6098 -18.6084 -18.1503 -18.1480 -18.0422 -18.0408 -17.8306 -17.8291
-17.6576 -17.6560 -17.5936 -17.2089 -15.5226 -15.5143 -15.3716 -14.6795
-14.6787 -14.6364 -14.2646 -14.0459 -12.5650 -12.4740 -12.4686 -12.2724
-12.2663 -12.1200 -12.1190 -12.0713 -12.0027 -11.9986 -11.7002 -11.0865
-11.0853 -10.9338 -10.9328 -10.7462 -10.7455 -10.2001 -10.1256
                                                                             -9.7827
                                            -8.9842
 -9.7748
           -9.3100
                      -9.3052
                                 -9.0217
                                                       -8.9151
                                                                  -8.8512
                                                                             -8.8094
 -8.6912
           -8.6910
                      -8.5671
                                 -8.5664
                                             -8.3886
                                                        -8.3870
                                                                   -8.3676
                                                                             -8.2752
           -8.2594
                       -8.1595
                                 -8.1529
                                             -8.0818
                                                        -8.0794
                                                                   -8.0130
                                                                             -7.9961
 -8.2646
 -7.7896
           -7.4019
                       -7.4010
                                 -7.2985
                                             -7.2979
                                                        -7.2632
                                                                   -7.1963
                                                                             -7.1945
 -7.0371
           -7.0367
                       -7.0073
                                  -7.0024
                                             -6.8057
                                                        -6.7729
                                                                   -6.5371
                                                                              -6.5363
 -6.2505
            -5.9548
                       -5.9471
                                  -5.8135
                                             -5.5729
                                                        -5.5423
                                                                   -5.5396
                                                                             -5.5298
 -5.5292
            -5.4318
                       -5.4300
                                  -5.3340
                                             -5.3234
                                                        -5.2461
                                                                   -5.2452
                                                                              -5.1962
                                             -4.9638
                                                        -4.9622
 -5.1920
            -5.1564
                       -5.1552
                                 -5.0522
                                                                   -4.8735
                                                                              -4.8720
 -3.5627
           -3.5614
                      -3.4701
                                 -3.2350
                                            -3.2289
                                                       -3.0759
                                                                  -2.8937
                                                                             -1.4390
                                                        2.0299
                       0.2913
                                  0.2950
                                                                   2.1764
 -1.0881
            0.2088
                                             2.0142
                                                                              2.2098
                       2.3309
                                  2.4730
                                             2.4783
                                                        2.5573
                                                                   2.5593
  2.3282
             2.3300
                                                                              2.7134
```

```
2.7432
             2.7599
                        2.8014
                                   2.8056
                                             2.9601
                                                        2.9690
                                                                   2.9740
                                                                              3.2447
  3.2597
             3.3594
        k = 0.2936 - 0.5774 \ 0.0000 \ (64858 \ PWs)
                                                        bands (ev):
-21.0950 -21.0909 -21.0557 -21.0544 -21.0002 -20.9771 -19.8711 -19.7300
-19.7290 -19.6409 -19.4595 -19.4580 -18.7917 -18.7907 -18.7408 -18.7394
-18.6282 -18.6267 -18.1273 -18.1250 -18.0371 -18.0357 -17.8608 -17.8593 -17.6528 -17.6512 -17.6001 -17.2077 -15.5029 -15.4944 -15.3825 -14.6901 -14.6891 -14.6475 -14.2448 -14.0592 -12.5730 -12.4371 -12.4318 -12.2690 -12.2629 -12.1194 -12.1184 -12.0777 -12.0442 -12.0401 -11.6996 -11.0601
-11.0589 -10.9323 -10.9313 -10.7762 -10.7755 -10.2033 -10.0869
                                                                            -9.8020
                                                                            -8.7826
 -9.7941
           -9.2873 -9.2822 -9.0340
                                           -8.9776
                                                       -8.9334
                                                                 -8.8666
                                                                  -8.3808
                                                                             -8.2746
           -8.6711 -8.5810
                                 -8.5802
                                            -8.4029
                                                       -8.3824
 -8.6713
                                                       -8.0665
 -8.2537
           -8.2431
                      -8.1566 -8.1500
                                            -8.0688
                                                                  -8.0347
                                                                             -8.0178
                      -7.3836
                                 -7.2983
                                            -7.2977
 -7.8232
           -7.3845
                                                       -7.2354
                                                                  -7.2123
                                                                             -7.2105
           -7.0261
                      -7.0210
                                                                  -6.5510
                                                                             -6.5502
 -7.0270
                                 -7.0169
                                            -6.8319
                                                       -6.7474
                                                       -5.5434
           -5.9682
                                            -5.5481
                                                                             -5.5202
 -6.2154
                      -5.9606
                                 -5.7804
                                                                  -5.5428
                                                                             -5.2246
 -5.5164
           -5.4271
                      -5.4250
                                 -5.3437
                                            -5.3330
                                                       -5.2280
                                                                  -5.2258
                      -5.1499
 -5.2227
            -5.1511
                                 -5.0316
                                            -4.9902
                                                       -4.9886
                                                                  -4.8830
                                                                             -4.8815
 -3.5556
           -3.5543
                      -3.4796
                                 -3.2229
                                            -3.2168
                                                       -3.0922
                                                                  -2.8918
                                                                             -1.4100
                                  0.2865
 -1.1166
             0.2169
                       0.2826
                                             2.0215
                                                        2.0371
                                                                   2.1587
                                                                              2.2086
                        2.3285
                                   2.5150
                                             2.5204
                                                        2.5648
                                                                   2.5667
  2.3268
             2.3281
                                                                              2.6953
  2.7404
             2.7572
                                             2.9288
                                                        2.9340
                                                                   2.9420
                        2.8089
                                   2.8132
                                                                              3.2520
  3.2669
             3.3666
        k = 0.3016 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                        bands (ev):
-21.0895 -21.0854 -21.0511 -21.0497 -21.0132 -20.9880 -19.8526 -19.7399 -19.7389 -19.6173 -19.4723 -19.4708 -18.7774 -18.7764 -18.7369 -18.7355 -18.6466 -18.6451 -18.1042 -18.1019 -18.0319 -18.0305 -17.8909 -17.8894 -17.6483 -17.6467 -17.6066 -17.2067 -15.4854 -15.4767 -15.3933 -14.6983 -14.6971 -14.6585 -14.2250 -14.0739 -12.5794 -12.4002 -12.3948 -12.2655 -12.2593 -12.1183 -12.1173 -12.0856 -12.0840 -12.0815 -11.6991 -11.0335
-11.0323 -10.9308 -10.9298 -10.8061 -10.8054 -10.2059 -10.0483
                                                                            -9.8213
 -9.8134
           -9.2656
                      -9.2601
                                 -9.0554
                                            -8.9709
                                                       -8.9423
                                                                 -8.8818
                                                                             -8.7557
 -8.6518
                      -8.5948
                                 -8.5940
                                            -8.4381
                                                       -8.3760
                                                                  -8.3744
           -8.6517
                                                                             -8.2896
 -8.2324
           -8.2216
                      -8.1536
                                 -8.1471
                                            -8.0569
                                                       -8.0551
                                                                  -8.0528
                                                                             -8.0399
                                 -7.2981
 -7.8569
           -7.3670
                      -7.3661
                                            -7.2975
                                                       -7.2287
                                                                  -7.2269
                                                                             -7.2075
 -7.0380
           -7.0332
                      -7.0133
                                 -7.0129
                                            -6.8582
                                                       -6.7217
                                                                  -6.5647
                                                                             -6.5639
                                 -5.7475
                                                       -5.5567
 -6.1806
           -5.9823
                      -5.9747
                                            -5.5573
                                                                  -5.5240
                                                                             -5.4992
                                                       -5.2590
                                                                  -5.2541
 -5.4936
           -5.4225
                      -5.4198
                                 -5.3525
                                            -5.3417
                                                                             -5.2049
                                 -5.0167
                                            -5.0151
           -5.1457
                                                       -5.0111
                      -5.1445
                                                                  -4.8925
 -5.2041
                                                                             -4.8911
           -3.5477
                      -3.4890
 -3.5490
                                 -3.2116
                                            -3.2055
                                                       -3.1083
                                                                  -2.8903
                                                                             -1.3809
            0.2248
                       0.2748
                                                        2.0444
 -1.1454
                                  0.2788
                                             2.0291
                                                                   2.1413
                                                                              2.2078
  2.3250
             2.3263
                       2.3273
                                   2.5567
                                             2.5626
                                                        2.5726
                                                                   2.5745
                                                                              2.6776
  2.7376
             2.7545
                        2.8167
                                   2.8209
                                             2.8890
                                                        2.8941
                                                                   2.9235
                                                                              3.2595
  3.2742
             3.3687
        k = 0.3095 - 0.5774 \ 0.0000 \ (64832 \ PWs)
                                                        bands (ev):
-21.0839 -21.0798 -21.0463 -21.0450 -21.0260 -20.9988 -19.8340 -19.7496
-19.7487 -19.5935 -19.4849 -19.4834 -18.7631 -18.7621 -18.7329 -18.7315
-18.6650 -18.6635 -18.0809 -18.0786 -18.0265 -18.0251 -17.9209 -17.9194
-17.6441 -17.6425 -17.6131 -17.2059 -15.4704 -15.4615 -15.4040 -14.7038
-14.7024 -14.6694 -14.2050 -14.0899 -12.5844 -12.3632 -12.3577 -12.2619
-12.2557 -12.1270 -12.1229 -12.1168 -12.1158 -12.0903 -11.6988 -11.0066
-11.0054 -10.9292 -10.9282 -10.8358 -10.8351 -10.2079 -10.0099
                                                                            -9.8405
 -9.8326
          -9.2448
                     -9.2388
                                -9.0835
                                           -8.9641
                                                      -8.9442
                                                                 -8.8966
                                                                            -8.7289
 -8.6328
           -8.6326
                     -8.6085
                                -8.6077
                                            -8.4733
                                                       -8.3694
                                                                  -8.3679
                                                                             -8.3044
                      -8.1505 -8.1441
                                           -8.0795
 -8.2112
           -8.2002
                                                       -8.0631
                                                                  -8.0403
                                                                             -8.0384
 -7.8906 -7.3495 -7.3486 -7.2978 -7.2972 -7.2454
                                                                 -7.2436
                                                                            -7.1795
```

```
-6.8844
 -7.0527
          -7.0478
                    -7.0015
                               -7.0010
                                                   -6.6959
                                                             -6.5783
                                                                       -6.5775
                    -5.9894
                                                             -5.5009
 -6.1459
          -5.9971
                              -5.7148
                                        -5.5717
                                                   -5.5711
                                                                       -5.4801
          -5.4180
                    -5.4138
                              -5.3597
                                        -5.3490
 -5.4722
                                                  -5.2902
                                                            -5.2842
                                                                       -5.1844
          -5.1402
 -5.1835
                    -5.1390
                              -5.0432
                                        -5.0416
                                                  -4.9908
                                                             -4.9022
                                                                       -4.9008
          -3.5415
                    -3.4984
                              -3.2011
                                        -3.1951
                                                  -3.1242
                                                             -2.8891
 -3.5428
                                                                       -1.3515
 -1.1744
           0.2325
                     0.2679
                               0.2721
                                         2.0368
                                                   2.0517
                                                              2.1243
                                                                       2.2071
  2.3236
            2.3249
                      2.3265
                                2.5799
                                          2.5819
                                                    2.5993
                                                              2.6049
                                                                        2.6608
                                          2.8493
                                                    2.8543
  2.7347
            2.7516
                      2.8247
                                2.8288
                                                              2.9054
                                                                        3.2672
  3.2814
            3.3531
       k = 0.3175 - 0.5774 \ 0.0000 \ (64832 \ PWs)
                                                    bands (ev):
-21.0781 -21.0741 -21.0414 -21.0401 -21.0385 -21.0095 -19.8154 -19.7593
-19.7583 -19.5696 -19.4974 -19.4959 -18.7489 -18.7478 -18.7289 -18.7275
-18.6835 -18.6820 -18.0576 -18.0552 -18.0210 -18.0196 -17.9507 -17.9493 -17.6402 -17.6386 -17.6196 -17.2054 -15.4581 -15.4491 -15.4144 -14.7064 -14.7049 -14.6803 -14.1849 -14.1072 -12.5879 -12.3261 -12.3206 -12.2582 -12.2520 -12.1683 -12.1642 -12.1148 -12.1138 -12.0966 -11.6985 -10.9795 -10.9783 -10.9277 -10.9267 -10.8655 -10.8648 -10.2093 -9.9717 -9.8596
                    -9.2184
                              -9.1152
                                        -8.9571
                                                  -8.9422
                                                            -8.9111
 -9.8518
          -9.2250
                                                                      -8.7021
 -8.6221
          -8.6214
                    -8.6142
                              -8.6140
                                        -8.5084
                                                   -8.3627
                                                             -8.3612
                                                                       -8.3191
                    -8.1471
 -8.1902
          -8.1789
                              -8.1409
                                        -8.1026
                                                   -8.0862
                                                             -8.0253
                                                                       -8.0233
                              -7.2975
                                                             -7.2606
                    -7.3311
                                         -7.2969
                                                                       -7.1513
 -7.9244
          -7.3320
                                                   -7.2624
 -7.0673
                    -6.9892
                              -6.9887
                                                   -6.6700
          -7.0624
                                         -6.9107
                                                             -6.5917
                                                                       -6.5909
                    -6.0048
                                         -5.5865
                                                             -5.4795
                              -5.6822
                                                   -5.5860
 -6.1115
          -6.0125
                                                                       -5.4648
 -5.4541
           -5.4122
                    -5.4060
                              -5.3646
                                         -5.3540
                                                   -5.3212
                                                             -5.3126
                                                                       -5.1638
 -5.1629
           -5.1345
                    -5.1333
                               -5.0698
                                         -5.0681
                                                   -4.9706
                                                             -4.9119
                                                                       -4.9105
 -3.5370
           -3.5358
                    -3.5078
                               -3.1915
                                         -3.1855
                                                             -2.8882
                                                   -3.1399
                                                                       -1.3221
 -1.2037
            0.2399
                      0.2620
                                0.2664
                                          2.0447
                                                    2.0587
                                                                        2.2065
                                                              2.1080
                                2.5880
                                          2.5899
  2.3228
            2.3240
                      2.3256
                                                    2.6320
                                                              2.6455
                                                                        2.6547
  2.7317
            2.7486
                      2.8095
                                2.8145
                                          2.8329
                                                    2.8371
                                                              2.8875
                                                                        3.2750
  3.2885
            3.3370
       k = 0.3254 - 0.5774 \ 0.0000 \ (64802 \ PWs)
                                                    bands (ev):
-21.0723 -21.0683 -21.0508 -21.0364 -21.0351 -21.0201 -19.7967 -19.7688
-19.7679 -19.5456 -19.5097 -19.5082 -18.7347 -18.7336 -18.7247 -18.7233
-18.7019 -18.7004 -18.0341 -18.0317 -18.0154 -18.0139 -17.9805 -17.9790
-17.6366 -17.6350 -17.6259 -17.2051 -15.4487 -15.4396 -15.4245 -14.7059
-14.7043 -14.6910 -14.1648 -14.1257 -12.5899 -12.2889 -12.2834 -12.2545
-12.2483 -12.2096 -12.2055 -12.1124 -12.1114 -12.1028 -11.6984 -10.9522
-10.9510 -10.9261 -10.9251 -10.8950 -10.8943 -10.2102
                                                            -9.9336
                                                                      -9.8786
                                                                      -8.6754
                                                  -8.9382
 -9.8708
          -9.2065
                    -9.1990
                              -9.1485
                                        -8.9501
                                                            -8.9249
                    -8.5961
                                                            -8.3543
                              -8.5959
                                        -8.5434
 -8.6356
          -8.6349
                                                  -8.3559
                                                                      -8.3336
                              -8.1374
                                        -8.1260
                                                  -8.1098
                                                            -8.0095
 -8.1701
          -8.1582
                    -8.1430
                                                                       -8.0075
 -7.9581
          -7.3145
                    -7.3136
                              -7.2971
                                        -7.2966
                                                  -7.2797
                                                             -7.2780
                                                                      -7.1230
                                        -6.9370
          -7.0769
                    -6.9765
                              -6.9760
                                                  -6.6440
                                                            -6.6050
 -7.0818
                                                                       -6.6042
 -6.0775
          -6.0285
                    -6.0207
                              -5.6498
                                        -5.6019
                                                  -5.6014
                                                            -5.4622
                                                                       -5.4552
                    -5.3952
 -5.4438
          -5.4014
                              -5.3665
                                        -5.3562
                                                  -5.3516
                                                            -5.3376
                                                                      -5.1433
 -5.1424
          -5.1287
                    -5.1274
                              -5.0963
                                        -5.0947
                                                   -4.9507
                                                             -4.9217
                                                                       -4.9203
 -3.5318
          -3.5305
                    -3.5170
                              -3.1827
                                         -3.1767
                                                  -3.1552
                                                            -2.8877
                                                                       -1.2924
 -1.2332
           0.2468
                      0.2572
                                0.2618
                                          2.0524
                                                    2.0643
                                                              2.0939
                                                                        2.2062
  2.3224
            2.3237
                      2.3247
                                2.5962
                                          2.5981
                                                    2.6220
                                                              2.6861
                                                                        2.6916
                      2.7701
                                2.7752
                                          2.8412
                                                    2.8452
                                                              2.8700
  2.7286
            2.7455
                                                                        3.2827
  3.2942
            3.3227
       k = 0.3333 - 0.5774 \ 0.0000 \ (64770 \ PWs)
                                                    bands (ev):
-21.0680 -21.0637 -21.0599 -21.0317 -21.0305 -21.0296 -19.7788 -19.7777
-19.7771 -19.5227 -19.5210 -19.5200 -18.7213 -18.7207 -18.7203 -18.7196
-18.7191 -18.7176 -18.0114 -18.0103 -18.0098 -18.0084 -18.0079 -18.0071
-17.6337 -17.6324 -17.6312 -17.2049 -15.4430 -15.4356 -15.4312 -14.7024
```

```
-14.7016 -14.7005 -14.1484 -14.1415 -12.5906 -12.2536 -12.2512 -12.2497
-12.2491 -12.2456 -12.2411 -12.1099 -12.1088 -12.1084 -11.6984 -10.9253
-10.9246 -10.9243 -10.9240 -10.9234 -10.9223 -10.2105
                                                               -9.8982
                                                                          -9.8955
           -9.1938 -9.1829
                               -9.1756
                                          -8.9441
                                                     -8.9388
                                                                -8.9314
 -9.8893
                                                                          -8.6491
                                                     -8.3495
                                                                -8.3473
 -8.6488
           -8.6480
                     -8.5787
                                -8.5784
                                          -8.5780
                                                                          -8.3472
 -8.1534
           -8.1506
                     -8.1411 -8.1358
                                          -8.1331
                                                     -8.1300
                                                                -7.9932
                                                                          -7.9919
           -7.2981
                     -7.2975
                                -7.2968
                                          -7.2962
                                                     -7.2954
                                                                          -7.0968
 -7.9909
                                                                -7.2952
 -7.0946
           -7.0905
                     -6.9642
                                -6.9633
                                          -6.9623
                                                                          -6.6170
                                                     -6.6187
                                                                -6.6177
 -6.0471
           -6.0430
                     -6.0359
                                -5.6179
                                          -5.6175
                                                                -5.4554
                                                     -5.6171
                                                                          -5.4503
 -5.4425
           -5.3862
                     -5.3844
                                -5.3803
                                          -5.3641
                                                     -5.3546
                                                                -5.3521
                                                                          -5.1234
 -5.1231
           -5.1229
                      -5.1218
                                -5.1214
                                           -5.1202
                                                     -4.9320
                                                                -4.9305
                                                                           -4.9300
                                                                -2.8875
 -3.5274
           -3.5262
                     -3.5253
                                -3.1761
                                          -3.1711
                                                     -3.1667
                                                                          -1.2643
                                            2.0573
 -1.2613
                                                       2.0657
            0.2509
                      0.2548
                                 0.2593
                                                                 2.0872
                                                                            2.2061
  2.3224
                                  2.6033
                                            2.6059
                                                       2.6073
                                                                 2.7218
                                                                            2.7252
            2.3238
                       2.3241
  2.7265
             2.7365
                       2.7412
                                  2.7453
                                            2.8487
                                                       2.8510
                                                                 2.8564
                                                                            3.2876
  3.2958
             3.3159
        k = 0.3294 - 0.5705 \ 0.0000 \ (64806 \ PWs)
                                                       bands (ev):
-21.0766 -21.0604 -21.0544 -21.0409 -21.0260 -21.0246 -19.7874 -19.7870 -19.7590 -19.5337 -19.5326 -19.4973 -18.7392 -18.7376 -18.7162 -18.7147 -18.7057 -18.7053 -18.0403 -18.0382 -18.0035 -18.0015 -17.9864 -17.9846 -17.6389 -17.6302 -17.6285 -17.2051 -15.4454 -15.4373 -15.4299 -14.7128 -14.6949 -14.6937 -14.1686 -14.1219 -12.5899 -12.2928 -12.2898 -12.2460 -12.2391 -12.2135 -12.2089 -12.1152 -12.1062 -12.1052 -11.6984 -10.9534 -10.9530 -10.9229 -10.9218 -10.8969 -10.8955 -10.2102 -9.9150 -9.9087 -9.8593 -9.2219 -9.1688 -9.1620 -8.9560 -8.9327 -8.9257 -8.6623
                     -9.1688
                               -9.1620 -8.9560
                                                     -8.9327
           -9.2219
                                                                -8.9257
 -9.8593
                                                                          -8.6623
                                -8.5612
                                          -8.5610
                                                     -8.3622
                                                                -8.3415
 -8.6615
           -8.6220
                     -8.6132
                                                                           -8.3400
                     -8.1415
                                -8.1340
                                          -8.1186
 -8.1776
           -8.1601
                                                     -8.1128
                                                                -8.0264
                                                                          -7.9751
 -7.9740
           -7.3156
                      -7.3137
                                -7.2964
                                           -7.2959
                                                     -7.2795
                                                                -7.2785
                                                                           -7.1093
                                          -6.9499
 -7.1061
           -7.0663
                     -6.9895
                                -6.9501
                                                     -6.6310
                                                                -6.6307
                                                                           -6.5916
                                -5.6341
                                           -5.6335
 -6.0625
           -6.0543
                      -6.0105
                                                      -5.5855
                                                                -5.4593
                                                                           -5.4540
                                                                           -5.1496
 -5.4465
           -5.4132
                      -5.3763
                                -5.3708
                                           -5.3567
                                                     -5.3497
                                                                -5.3426
                                                     -4.9415
                                                                -4.9401
                                                                           -4.9111
 -5.1480
           -5.1168
                      -5.1155
                                -5.1016
                                           -5.1013
 -3.5355
           -3.5226
                      -3.5212
                                -3.1863
                                                      -3.1611
                                                                -2.8877
                                                                           -1.2940
                                           -3.1672
 -1.2316
            0.2490
                       0.2546
                                 0.2622
                                            2.0479
                                                       2.0723
                                                                 2.0903
                                                                            2.2062
                                            2.6132
                                                       2.6146
             2.3239
                       2.3248
                                  2.5886
                                                                 2.6895
  2.3221
                                                                            2.6929
                                            2.8344
  2.7221
             2.7406
                       2.7734
                                  2.7785
                                                       2.8591
                                                                 2.8631
                                                                            3.2781
  3.3024
             3.3191
        k = 0.3254 - 0.5636 \ 0.0000 \ (64824 \ PWs)
                                                       bands (ev):
-21.0886 -21.0541 -21.0512 -21.0481 -21.0207 -21.0192 -19.7967 -19.7963
-19.7400 -19.5456 -19.5445 -19.4729 -18.7578 -18.7562 -18.7117 -18.7102
-18.6914 -18.6911 -18.0697 -18.0676 -17.9974 -17.9954 -17.9625 -17.9607
-17.6451 -17.6275 -17.6258 -17.2054 -15.4547 -15.4371 -15.4293 -14.7232
-14.6850 -14.6838 -14.1907 -14.1014 -12.5880 -12.3340 -12.3309 -12.2420
-12.2351 -12.1761 -12.1715 -12.1212 -12.1025 -12.1015 -11.6985 -10.9825
-10.9821 -10.9213 -10.9201 -10.8689 -10.8675 -10.2093
                                                               -9.9338
                                                                          -9.9275
 -9.8218
           -9.2570
                     -9.1533
                                -9.1450
                                          -8.9690
                                                     -8.9252
                                                                -8.9191
                                                                          -8.6755
 -8.6747
           -8.6480
                     -8.5954
                                -8.5445
                                           -8.5442
                                                     -8.3762
                                                                -8.3341
                                                                          -8.3326
 -8.2025
           -8.1851
                     -8.1371
                                -8.1304
                                           -8.0989
                                                     -8.0921
                                                                -8.0601
                                                                          -7.9573
 -7.9562
           -7.3339
                      -7.3320
                                -7.2960
                                           -7.2955
                                                     -7.2621
                                                                -7.2610
                                                                           -7.1233
 -7.1200
           -7.0378
                      -7.0156
                                -6.9366
                                           -6.9363
                                                      -6.6439
                                                                -6.6435
                                                                           -6.5652
 -6.0805
           -6.0722
                                -5.6508
                                           -5.6503
                                                      -5.5536
                                                                -5.4768
                      -5.9775
                                                                           -5.4614
                                -5.3633
 -5.4536
           -5.4433
                      -5.3690
                                           -5.3449
                                                      -5.3307
                                                                -5.3245
                                                                           -5.1762
           -5.1105
                      -5.1092
                                -5.0811
                                           -5.0807
                                                      -4.9514
                                                                -4.9500
 -5.1746
                                                                           -4.8916
 -3.5446
           -3.5187
                      -3.5173
                                -3.2010
                                           -3.1610
                                                      -3.1548
                                                                -2.8882
                                                                           -1.3242
 -1.2015
            0.2470
                      0.2529
                                 0.2685
                                           2.0334
                                                      2.0807
                                                                 2.0973
                                                                           2.2066
  2.3211
            2.3251
                       2.3261
                                  2.5720
                                            2.6205
                                                       2.6220
                                                                 2.6519
                                                                            2.6546
                                            2.8217
                                                                 2.8719
  2.7186
             2.7372
                       2.8152
                                  2.8181
                                                       2.8681
                                                                            3.2636
  3.3107
             3.3261
```

```
k = 0.3214 - 0.5567 \ 0.0000 \ (64846 \ PWs)
                                                        bands (ev):
-18.6772 -18.6769 -18.0990 -18.0968 -17.9912 -17.9892 -17.9385 -17.9367
-17.6514 -17.6250 -17.6233 -17.2060 -15.4645 -15.4392 -15.4314 -14.7335 -14.6721 -14.6708 -14.2139 -14.0807 -12.5847 -12.3751 -12.3721 -12.2379 -12.2309 -12.1385 -12.1339 -12.1273 -12.0984 -12.0973 -11.6987 -11.0114
-11.0110 -10.9196 -10.9184 -10.8407 -10.8393 -10.2080 -9.9525
                                                                            -9.9462
 -9.7844
           -9.2927
                      -9.1388
                                -9.1287
                                            -8.9816
                                                       -8.9174
                                                                  -8.9119
                                                                             -8.6886
 -8.6878
           -8.6827
                      -8.5689
                                 -8.5281 -8.5279
                                                       -8.3901
                                                                  -8.3266
                                                                             -8.3251
 -8.2279
           -8.2105
                      -8.1337
                                 -8.1273
                                            -8.0940
                                                       -8.0781
                                                                  -8.0708
                                                                             -7.9389
                                 -7.2956 -7.2951
 -7.9377
           -7.3526
                      -7.3507
                                                       -7.2446
                                                                  -7.2435
                                                                             -7.1372
                                                                             -6.5388
 -7.1339
           -7.0424
                      -7.0084
                                 -6.9227
                                            -6.9224
                                                       -6.6566
                                                                  -6.6563
 -6.0992
           -6.0908
                      -5.9450
                                 -5.6681
                                            -5.6676
                                                       -5.5220
                                                                  -5.5017
                                                                             -5.4751
                                 -5.3568
                                                                  -5.3032
                                                                             -5.2029
 -5.4685
           -5.4620
                      -5.3623
                                            -5.3273
                                                       -5.3084
                                                                  -4.9600
 -5.2013
            -5.1042
                      -5.1029
                                 -5.0605
                                            -5.0602
                                                       -4.9613
                                                                             -4.8723
                                 -3.2158
                                                       -3.1493
                                                                             -1.3547
 -3.5536
            -3.5153
                      -3.5138
                                            -3.1554
                                                                  -2.8891
 -1.1712
             0.2458
                        0.2520
                                   0.2749
                                             2.0178
                                                        2.0895
                                                                   2.1055
                                                                              2.2071
  2.3200
             2.3269
                        2.3279
                                   2.5554
                                              2.6065
                                                         2.6106
                                                                   2.6348
                                                                               2.6361
  2.7150
             2.7336
                        2.8005
                                   2.8595
                                              2.8646
                                                         2.8774
                                                                   2.8811
                                                                              3.2481
  3.3195
             3.3341
        k = 0.3175 - 0.5499 \ 0.0000 \ (64838 \ PWs)
                                                        bands (ev):
-21.1123 -21.0712 -21.0409 -21.0349 -21.0095 -21.0081 -19.8149 -19.8145 -19.7019 -19.5689 -19.5679 -19.4236 -18.7951 -18.7935 -18.7026 -18.7010 -18.6631 -18.6627 -18.1281 -18.1259 -17.9849 -17.9829 -17.9143 -17.9125 -17.6576 -17.6229 -17.6211 -17.2068 -15.4743 -15.4438 -15.4361 -14.7437 -14.6563 -14.6551 -14.2381 -14.0599 -12.5803 -12.4162 -12.4132 -12.2337 -12.2267 -12.1332 -12.1008 -12.0962 -12.0938 -12.0927 -11.6989 -11.0401 -11.0398 -10.9179 -10.9167 -10.8123 -10.8109 -10.2060 -9.9711 -9.9649 -9.7471 -9.3287 -9.1258 -9.1131 -8.9932 -8.9095 -8.9043 -8.7173
            -8.7007
                      -8.5424
                                 -8.5122
                                            -8.5120
                                                       -8.4038
                                                                  -8.3189
 -8.7015
                                                                             -8.3174
 -8.2537
            -8.2364
                      -8.1314
                                 -8.1277
                                            -8.1236
                                                       -8.0571
                                                                  -8.0495
                                                                             -7.9198
                                 -7.2951
                                            -7.2947
 -7.9186
            -7.3716
                      -7.3696
                                                       -7.2271
                                                                  -7.2260
                                                                             -7.1509
 -7.1476
           -7.0685
                      -6.9795
                                 -6.9085
                                            -6.9083
                                                       -6.6692
                                                                  -6.6689
                                                                             -6.5122
                                 -5.6858
 -6.1185
           -6.1100
                      -5.9131
                                            -5.6854
                                                       -5.5297
                                                                  -5.5036
                                                                             -5.4904
 -5.4791
           -5.4717
                      -5.3553
                                 -5.3502
                                            -5.3071
                                                       -5.2850
                                                                  -5.2806
                                                                             -5.2295
           -5.0977
                      -5.0964
                                                                  -4.9701
                                 -5.0399
                                                       -4.9713
 -5.2279
                                            -5.0396
                                                                             -4.8531
 -3.5626
           -3.5122
                      -3.5108
                                 -3.2305
                                            -3.1506
                                                       -3.1446
                                                                  -2.8904
                                                                             -1.3854
                                                        2.0986
 -1.1407
             0.2454
                       0.2519
                                   0.2813
                                             2.0020
                                                                   2.1143
                                                                              2.2079
                                   2.5389
                                                         2.5729
  2.3189
             2.3293
                        2.3303
                                              2.5691
                                                                   2.6421
                                                                              2.6435
  2.7113
                                                         2.9031
                                                                   2.9082
             2.7300
                        2.7839
                                   2.8866
                                              2.8904
                                                                              3.2323
  3.3285
             3.3394
        k = 0.3135 - 0.5430 \ 0.0000 \ (64840 \ PWs)
                                                        bands (ev):
-21.1240 -21.0811 -21.0341 -21.0281 -21.0038 -21.0023 -19.8239 -19.8235
-19.6828 -19.5804 -19.5793 -19.3987 -18.8137 -18.8121 -18.6978 -18.6963
-18.6489 -18.6486 -18.1572 -18.1549 -17.9784 -17.9764 -17.8901 -17.8882
-17.6638 -17.6210 -17.6192 -17.2078 -15.4840 -15.4509 -15.4433 -14.7538
-14.6380 -14.6366 -14.2633 -14.0389 -12.5747 -12.4573 -12.4543 -12.2295
-12.2225 -12.1391 -12.0888 -12.0877 -12.0630 -12.0583 -11.6991 -11.0688
-11.0684 -10.9162 -10.9150 -10.7836 -10.7823 -10.2036
                                                                 -9.9897
                                                                             -9.9834
 -9.7101
           -9.3648
                      -9.1147
                                 -9.0983
                                            -9.0035
                                                       -8.9014
                                                                  -8.8965
                                                                             -8.7519
           -8.7136
                      -8.5160
                                 -8.4968
                                            -8.4965
                                                       -8.4174
                                                                  -8.3110
 -8.7144
                                                                             -8.3095
 -8.2800
           -8.2628
                      -8.1619
                                 -8.1274
                                            -8.1212
                                                       -8.0359
                                                                  -8.0282
                                                                             -7.9001
 -7.8989
           -7.3908
                      -7.3889
                                 -7.2947
                                            -7.2942
                                                       -7.2096
                                                                  -7.2085
                                                                             -7.1644
                      -6.9503 -6.8941
                                            -6.8939
                                                       -6.6817
 -7.1611
           -7.0947
                                                                  -6.6813
                                                                             -6.4856
           -6.1299 -5.8822 -5.7040 -5.7036 -5.5590
 -6.1385
                                                                  -5.5322
                                                                             -5.4895
```

```
-5.4819
          -5.4591
                    -5.3481
                              -5.3433
                                        -5.2860
                                                  -5.2612
                                                            -5.2577
                                                                      -5.2556
                                                  -4.9813
                                                            -4.9801
 -5.2541
          -5.0911
                    -5.0898
                              -5.0194
                                        -5.0190
                                                                      -4.8342
                    -3.5082
 -3.5715
          -3.5097
                              -3.2450
                                        -3.1466
                                                  -3.1406
                                                            -2.8921
                                                                      -1.4163
           0.2461
                     0.2527
                               0.2875
                                         1.9861
                                                   2.1079
 -1.1101
                                                             2.1234
                                                                       2.2091
           2.3322
                     2.3332
                                2.5220
                                         2.5308
                                                   2.5339
                                                             2.6511
 2.3176
                                                                       2.6525
  2.7075
           2.7262
                      2.7674
                                2.8963
                                         2.9000
                                                   2.9466
                                                             2.9519
                                                                       3.2166
  3.3252
            3.3381
       k = 0.3095 - 0.5361 \ 0.0000 \ (64836 \ PWs)
                                                   bands (ev):
-21.1355 -21.0908 -21.0271 -21.0211 -20.9979 -20.9964 -19.8327 -19.8323
 -19.6636 \ -19.5917 \ -19.5907 \ -19.3738 \ -18.8324 \ -18.8308 \ -18.6930 \ -18.6914 
-18.6348 -18.6345 -18.1861 -18.1838 -17.9718 -17.9698 -17.8657 -17.8638 -17.6699 -17.6194 -17.6176 -17.2091 -15.4936 -15.4601 -15.4527 -14.7638 -14.6173 -14.6158 -14.2894 -14.0178 -12.5681 -12.4984 -12.4954 -12.2252 -12.2181 -12.1450 -12.0833 -12.0823 -12.0251 -12.0204 -11.6993 -11.0972 -11.0969 -10.9144 -10.9133 -10.7548 -10.7535 -10.2006 -10.0081 -10.0019
                              -9.0842 -9.0118
                                                            -8.8884
 -9.6733
          -9.4011 -9.1063
                                                  -8.8931
                                                                      -8.7863
                                        -8.4815
                                                  -8.4307
                                                            -8.3066
                                                                      -8.3029
 -8.7271
          -8.7263
                    -8.4897
                              -8.4818
          -8.2895
                    -8.1956
                              -8.1245
                                        -8.1184
                                                  -8.0147
                                                                      -7.8799
 -8.3014
                                                            -8.0069
                              -7.2942
                                        -7.2937
 -7.8786
          -7.4103
                    -7.4084
                                                  -7.1920
                                                            -7.1910
                                                                      -7.1778
                                        -6.8792
                                                  -6.6940
 -7.1745
          -7.1210
                    -6.9210
                              -6.8794
                                                            -6.6936
                                                                      -6.4588
          -6.1504
                                                  -5.5890
 -6.1590
                    -5.8527
                              -5.7227
                                        -5.7223
                                                            -5.5597
                                                                      -5.5002
                    -5.3407
                              -5.3360
                                        -5.2838
                                                  -5.2818
                                                            -5.2621
                                                                      -5.2368
 -5.4925
           -5.4280
 -5.2334
          -5.0843
                    -5.0830
                              -4.9988
                                        -4.9985
                                                  -4.9914
                                                            -4.9902
                                                                      -4.8154
 -3.5803
          -3.5075
                    -3.5061
                              -3.2593
                                        -3.1435
                                                            -2.8941
                                                  -3.1375
                                                                      -1.4475
 -1.0792
           0.2476
                     0.2545
                               0.2936
                                         1.9704
                                                   2.1174
                                                             2.1327
                                                                       2.2105
                                                   2.5077
  2.3164
            2.3356
                      2.3367
                                2.4903
                                         2.4944
                                                             2.6606
                                                                        2.6618
  2.7036
            2.7224
                      2.7512
                                2.9062
                                         2.9099
                                                   2.9903
                                                             2.9957
                                                                       3.2011
  3.3093
            3.3475
       k = 0.3056 - 0.5292 \ 0.0000 \ (64844 \ PWs)
                                                   bands (ev):
-21.1469 -21.1005 -21.0200 -21.0140 -20.9919 -20.9905 -19.8415 -19.8411
-19.6443 -19.6029 -19.6019 -19.3486 -18.8511 -18.8495 -18.6881 -18.6865
-18.6207 -18.6203 -18.2149 -18.2125 -17.9650 -17.9630 -17.8411 -17.8393
-17.6760 -17.6180 -17.6163 -17.2106 -15.5031 -15.4712 -15.4640 -14.7737
-14.5945 -14.5929 -14.3164 -13.9967 -12.5606 -12.5392 -12.5363 -12.2208
-12.2137 -12.1508 -12.0775 -12.0764 -11.9871 -11.9824 -11.6996 -11.1255
-11.1251 -10.9127 -10.9116 -10.7258 -10.7244 -10.1972 -10.0265 -10.0203
         -9.4373 -9.1015 -9.0708
                                       -9.0170 -8.8846
                                                                     -8.8207
 -9.6367
                                                           -8.8801
 -8.7397
          -8.7389 -8.4673 -8.4670
                                        -8.4634
                                                  -8.4440
                                                            -8.3337
                                                                      -8.3167
                                                  -7.9934
          -8.2932
                   -8.2294
                              -8.1216
                                        -8.1155
                                                            -7.9856
 -8.2947
                                                                      -7.8591
                                                            -7.1877
          -7.4302
                    -7.4282
                              -7.2937
                                        -7.2932
                                                  -7.1910
 -7.8578
                                                                      -7.1745
                              -6.8645
                    -6.8915
                                        -6.8642
                                                  -6.7061
                                                            -6.7058
 -7.1735
          -7.1472
                                                                      -6.4319
 -6.1802
          -6.1715
                    -5.8253
                              -5.7419
                                        -5.7414
                                                  -5.6193
                                                            -5.5851
                                                                      -5.5112
                                                            -5.2406
 -5.5034
          -5.3971
                    -5.3330
                              -5.3285
                                        -5.3100
                                                  -5.3083
                                                                      -5.2124
                                                                      -4.7968
 -5.2093
          -5.0774
                    -5.0761
                              -5.0014
                                        -5.0003
                                                  -4.9783
                                                            -4.9780
 -3.5890
          -3.5059
                    -3.5044
                              -3.2734
                                        -3.1412
                                                  -3.1352
                                                            -2.8965
                                                                      -1.4789
 -1.0483
           0.2501
                     0.2571
                               0.2995
                                        1.9548
                                                  2.1270
                                                             2.1423
                                                                       2.2122
 2.3150
           2.3396
                     2.3406
                                2.4514
                                         2.4552
                                                   2.4915
                                                             2.6702
                                                                       2.6712
  2.6998
            2.7185
                      2.7351
                               2.9162
                                         2.9199
                                                   3.0342
                                                             3.0397
                                                                       3.1856
  3.2934
            3.3572
       k = 0.3016 - 0.5224 \ 0.0000 \ (64832 \ PWs)
                                                   bands (ev):
-21.1581 -21.1100 -21.0127 -21.0068 -20.9858 -20.9843 -19.8502 -19.8497
-19.6249 -19.6140 -19.6129 -19.3234 -18.8699 -18.8683 -18.6830 -18.6815
-18.6066 -18.6063 -18.2435 -18.2411 -17.9581 -17.9561 -17.8165 -17.8146
-17.6821 -17.6170 -17.6153 -17.2124 -15.5125 -15.4840 -15.4770 -14.7834
-14.5697 -14.5680 -14.3442 -13.9754 -12.5804 -12.5775 -12.5513 -12.2163
-12.2092 -12.1566 -12.0712 -12.0702 -11.9490 -11.9443 -11.6998 -11.1536
```

```
-11.1532 -10.9109 -10.9098 -10.6966 -10.6952 -10.1932 -10.0448 -10.0386
                               -9.0581 -9.0184 -8.8760
 -9.6003
           -9.4736 -9.1009
                                                                -8.8716 -8.8549
                                                     -8.4374
                                                                           -8.3442
 -8.7522
           -8.7514
                     -8.4570
                                -8.4531
                                           -8.4528
                                                                -8.3612
                      -8.2631
                                                      -7.9722
                                                                -7.9643
           -8.2849
                                -8.1188
                                           -8.1127
 -8.2864
                                                                           -7.8378
           -7.4502
                      -7.4483
                                -7.2932
                                           -7.2927
                                                      -7.2041
                                                                -7.2008
 -7.8364
                                                                           -7.1735
 -7.1570
           -7.1559
                      -6.8619
                                -6.8492
                                           -6.8490
                                                      -6.7182
                                                                -6.7178
                                                                           -6.4050
                      -5.8019
                                -5.7615
                                           -5.7610
                                                      -5.6499
 -6.2020
           -6.1932
                                                                 -5.6067
                                                                           -5.5222
                      -5.3366
                                -5.3349
 -5.5144
           -5.3664
                                           -5.3250
                                                      -5.3207
                                                                 -5.2184
                                                                           -5.1878
                                                                -4.9575
 -5.1850
           -5.0704
                      -5.0691
                                -5.0115
                                           -5.0104
                                                      -4.9578
                                                                           -4.7784
 -3.5977
           -3.5046
                      -3.5031
                                -3.2874
                                           -3.1396
                                                      -3.1338
                                                                 -2.8993
                                                                           -1.5105
 -1.0171
            0.2535
                       0.2607
                                 0.3052
                                            1.9394
                                                       2.1369
                                                                  2.1520
                                                                            2.2141
  2.3136
            2.3440
                       2.3451
                                  2.4125
                                             2.4161
                                                       2.4759
                                                                  2.6795
                                                                             2.6806
                                  2.9265
            2.7146
                                             2.9302
  2.6965
                       2.7193
                                                       3.0781
                                                                  3.0838
                                                                             3.1703
  3.2777
             3.3671
        k = 0.2976 - 0.5155 \ 0.0000 \ (64828 \ PWs)
                                                       bands (ev):
-21.1692 -21.1194 -21.0053 -20.9993 -20.9796 -20.9781 -19.8587 -19.8583
-21.1692 -21.1194 -21.0053 -20.9993 -20.9796 -20.9781 -19.8587 -19.8583 -19.6249 -19.6238 -19.6055 -19.2980 -18.8886 -18.8870 -18.6779 -18.6764 -18.5926 -18.5923 -18.2720 -18.2696 -17.9511 -17.9491 -17.7917 -17.7898 -17.6881 -17.6162 -17.6145 -17.2144 -15.5218 -15.4983 -15.4915 -14.7931 -14.5434 -14.5414 -14.3728 -13.9539 -12.6213 -12.6183 -12.5418 -12.2117 -12.2046 -12.1623 -12.0646 -12.0635 -11.9109 -11.9061 -11.7000 -11.1815 -11.1811 -10.9092 -10.9081 -10.6671 -10.6658 -10.1887 -10.0629 -10.0568 -9.5641 -9.5098 -9.1046 -9.0461 -9.0162 -8.8891 -8.8672 -8.8629
 -8.7646
           -8.7638
                     -8.4699
                                -8.4394
                                           -8.4391
                                                      -8.4114
                                                                -8.3890
                                                                           -8.3722
                                                      -7.9510
                      -8.2761
                                -8.1160
                                                                -7.9430
 -8.2973
           -8.2776
                                           -8.1098
                                                                           -7.8159
                                -7.2926
                                           -7.2921
                      -7.4687
                                                      -7.2170
 -7.8145
           -7.4706
                                                                -7.2137
                                                                           -7.1996
                                                      -6.7300
                                                                 -6.7297
 -7.1395
           -7.1384
                      -6.8338
                                -6.8335
                                           -6.8322
                                                                           -6.3779
 -6.2244
           -6.2155
                      -5.7853
                                -5.7815
                                           -5.7811
                                                      -5.6805
                                                                 -5.6216
                                                                           -5.5334
 -5.5255
           -5.3632
                      -5.3616
                                 -5.3359
                                           -5.3169
                                                      -5.3126
                                                                 -5.1962
                                                                           -5.1632
           -5.0632
                                                                 -4.9371
                                                                           -4.7601
 -5.1606
                      -5.0619
                                 -5.0216
                                           -5.0206
                                                      -4.9374
 -3.6063
           -3.5038
                      -3.5023
                                 -3.3012
                                           -3.1389
                                                      -3.1331
                                                                 -2.9025
                                                                            -1.5423
            0.2577
                       0.2652
                                  0.3108
                                            1.9241
 -0.9858
                                                       2.1468
                                                                  2.1619
                                                                             2.2164
                                  2.3740
                                                       2.4604
                       2.3498
                                             2.3774
  2.3122
             2.3488
                                                                  2.6853
                                                                             2.6900
             2.7036
  2.6966
                       2.7110
                                  2.9369
                                             2.9406
                                                       3.1222
                                                                  3.1280
                                                                             3.1552
  3.2622
             3.3773
        k = 0.2936 - 0.5086 \ 0.0000 \ (64836 \ PWs)
                                                       bands (ev):
-21.1802 -21.1286 -20.9978 -20.9918 -20.9732 -20.9718 -19.8672 -19.8667
-19.6356 -19.6346 -19.5860 -19.2725 -18.9073 -18.9057 -18.6727 -18.6711
-18.5786 -18.5783 -18.3005 -18.2980 -17.9439 -17.9419 -17.7668 -17.7649
-17.6940 -17.6157 -17.6140 -17.2167 -15.5311 -15.5138 -15.5072 -14.8026
-14.5155 -14.5134 -14.4021 -13.9324 -12.6621 -12.6592 -12.5313 -12.2071
-12.1999 -12.1679 -12.0575 -12.0564 -11.8726 -11.8678 -11.7002 -11.2092
-11.2089 -10.9074 -10.9063 -10.6375 -10.6361 -10.1838 -10.0810 -10.0749
 -9.5461
           -9.5282
                                                                -8.8582
                     -9.1114
                                -9.0348 -9.0113
                                                     -8.9232
                                                                           -8.8541
 -8.7769
           -8.7761
                     -8.4826
                                -8.4261
                                          -8.4258
                                                     -8.4173
                                                                -8.4005
                                                                           -8.3856
 -8.3310
           -8.2690
                      -8.2674
                                -8.1132
                                           -8.1070
                                                      -7.9298
                                                                -7.9218
                                                                           -7.7936
 -7.7921
           -7.4912
                     -7.4893
                                -7.2921
                                           -7.2916
                                                      -7.2297
                                                                 -7.2264
                                                                           -7.2258
 -7.1220
           -7.1209
                      -6.8181
                                -6.8179
                                           -6.8023
                                                      -6.7418
                                                                -6.7414
                                                                           -6.3508
 -6.2474
           -6.2383
                      -5.8021
                                 -5.8016
                                           -5.7798
                                                      -5.7112
                                                                 -5.6257
                                                                            -5.5446
                      -5.3882
                                 -5.3085
                                           -5.3057
                                                      -5.3044
 -5.5367
           -5.3899
                                                                 -5.1741
                                                                           -5.1385
                      -5.0546
                                 -5.0318
                                           -5.0307
                                                      -4.9170
 -5.1360
           -5.0559
                                                                 -4.9167
                                                                            -4.7421
 -3.6149
           -3.5034
                      -3.5019
                                 -3.3148
                                            -3.1390
                                                      -3.1332
                                                                 -2.9061
                                                                            -1.5743
 -0.9544
            0.2629
                       0.2706
                                  0.3162
                                            1.9090
                                                       2.1569
                                                                  2.1718
                                                                             2.2188
                                                       2.4452
                                                                  2.6837
  2.3107
             2.3347
                       2.3375
                                  2.3551
                                             2.3563
                                                                             2.6881
  2.6976
             2.7035
                       2.7099
                                  2.9476
                                             2.9512
                                                       3.1403
                                                                  3.1664
                                                                             3.1723
  3.2469
             3.3876
        k = 0.2897 - 0.5017 \ 0.0000 \ (64852 \ PWs)
                                                       bands (ev):
```

```
-21.1910 -21.1378 -20.9900 -20.9841 -20.9667 -20.9653 -19.8755 -19.8751
-19.6462 -19.6452 -19.5665 -19.2468 -18.9261 -18.9245 -18.6674 -18.6658
-14.4864 -14.4841 -14.4320 -13.9107 -12.7028 -12.6999 -12.5199 -12.2024 -12.1952 -12.1735 -12.0500 -12.0490 -11.8343 -11.8295 -11.7004 -11.2367 -11.2364 -10.9056 -10.9045 -10.6077 -10.6063 -10.1784 -10.0990 -10.0930
 -9.5823
           -9.4925
                      -9.1203 -9.0240 -9.0048 -8.9572 -8.8491
                                                                            -8.8452
 -8.7890
           -8.7882
                      -8.4952
                                 -8.4459
                                            -8.4292
                                                       -8.4133
                                                                  -8.4130
                                                                             -8.3647
 -8.3599
           -8.2601
                      -8.2586 -8.1104
                                            -8.1042
                                                       -7.9087
                                                                  -7.9006
                                                                             -7.7709
                                 -7.2915
                                                                             -7.2389
 -7.7693
           -7.5120
                      -7.5101
                                            -7.2911
                                                       -7.2520
                                                                  -7.2422
                                                                             -6.3235
 -7.1045
           -7.1034
                      -6.8022
                                 -6.8020
                                            -6.7724
                                                       -6.7533
                                                                  -6.7530
                                                                             -5.5559
 -6.2710
           -6.2618
                      -5.8231
                                 -5.8226
                                            -5.7870
                                                       -5.7419
                                                                  -5.6171
                                 -5.2999
 -5.5479
           -5.4166
                      -5.4149
                                            -5.2959
                                                       -5.2756
                                                                  -5.1520
                                                                             -5.1137
 -5.1114
           -5.0485
                      -5.0472
                                 -5.0419
                                            -5.0409
                                                       -4.8966
                                                                  -4.8963
                                                                             -4.7241
                                                                  -2.9102
                                                                             -1.6065
 -3.6233
           -3.5035
                      -3.5020
                                 -3.3282
                                            -3.1398
                                                       -3.1341
 -0.9228
             0.2690
                        0.2769
                                   0.3214
                                             1.8941
                                                        2.1668
                                                                   2.1815
                                                                              2.2216
                                                                              2.6797
  2.2969
             2.2996
                        2.3092
                                   2.3607
                                              2.3618
                                                        2.4302
                                                                   2.6729
  2.6977
             2.7131
                        2.7161
                                   2.9585
                                              2.9621
                                                        3.1255
                                                                   3.2103
                                                                              3.2164
  3.2322
             3.3981
        k = 0.2857 - 0.4949 \ 0.0000 \ (64842 \ PWs)
                                                        bands (ev):
-21.2017 -21.1468 -20.9822 -20.9762 -20.9601 -20.9587 -19.8838 -19.8833 -19.6567 -19.6557 -19.5469 -19.2211 -18.9448 -18.9432 -18.6620 -18.6604 -18.5507 -18.5504 -18.3569 -18.3543 -17.9292 -17.9271 -17.7166 -17.7147 -17.7057 -17.6156 -17.6138 -17.2221 -15.5516 -15.5462 -15.5415 -14.8213 -14.4627 -14.4561 -14.4535 -13.8890 -12.7435 -12.7407 -12.5078 -12.1976 -12.1904 -12.1790 -12.0421 -12.0411 -11.7959 -11.7910 -11.7004 -11.2641 -11.2637 -10.9039 -10.9027 -10.5777 -10.5763 -10.1725 -10.1169 -10.1109 -9.6185 -9.4570 -9.1303 -9.0139 -8.9975 -8.9911 -8.8398 -8.8361
                      -8.5076
                                            -8.4583
                                                       -8.4008
                                                                  -8.4005
                                                                             -8.3985
 -8.8010
           -8.8002
                                 -8.4748
                                                                             -7.7478
 -8.3343
            -8.2510
                      -8.2495
                                                       -7.8875
                                                                  -7.8794
                                 -8.1076
                                            -8.1014
 -7.7462
            -7.5330
                      -7.5311
                                 -7.2909
                                            -7.2905
                                                                  -7.2546
                                                       -7.2781
                                                                             -7.2513
 -7.0870
           -7.0859
                      -6.7861
                                 -6.7859
                                            -6.7648
                                                       -6.7644
                                                                  -6.7423
                                                                             -6.2963
                                            -5.8039
                                                       -5.7726
                                 -5.8440
                                                                             -5.5671
 -6.2951
           -6.2857
                      -5.8445
                                                                  -5.5991
 -5.5591
            -5.4432
                      -5.4415
                                 -5.2912
                                            -5.2873
                                                       -5.2458
                                                                  -5.1302
                                                                             -5.0889
 -5.0868
            -5.0521
                      -5.0511
                                 -5.0409
                                            -5.0396
                                                       -4.8763
                                                                  -4.8760
                                                                             -4.7065
 -3.6317
            -3.5039
                      -3.5024
                                 -3.3415
                                            -3.1414
                                                       -3.1358
                                                                  -2.9146
                                                                             -1.6390
                                                                              2.2248
 -0.8910
             0.2759
                       0.2840
                                  0.3265
                                             1.8794
                                                        2.1761
                                                                   2.1903
  2.2601
             2.2623
                        2.3076
                                   2.3671
                                              2.3682
                                                        2.4154
                                                                   2.6578
                                                                              2.6752
  2.6940
             2.7236
                        2.7260
                                   2.9696
                                              2.9731
                                                        3.1110
                                                                   3.2163
                                                                              3.2551
             3,4088
  3.2613
        k = 0.2817 - 0.4880 \ 0.0000 \ (64834 \ PWs)
                                                        bands (ev):
-21.2122 -21.1557 -20.9742 -20.9683 -20.9534 -20.9520 -19.8919 -19.8915
-19.6671 -19.6660 -19.5272 -19.1951 -18.9636 -18.9620 -18.6565 -18.6550
-18.5369 -18.5366 -18.3849 -18.3823 -17.9216 -17.9195 -17.7115 -17.6913
-17.6894 -17.6159 -17.6142 -17.2251 -15.5680 -15.5615 -15.5557 -14.8305
-14.4938 -14.4248 -14.4221 -13.8671 -12.7842 -12.7813 -12.4948 -12.1928
-12.1855 -12.1845 -12.0339 -12.0328 -11.7574 -11.7525 -11.7004 -11.2912
-11.2909 -10.9021 -10.9009 -10.5475 -10.5462 -10.1662 -10.1347 -10.1288
           -9.4218
                      -9.1410
                                 -9.0249
                                            -9.0043
                                                       -8.9900
                                                                  -8.8304
 -9.6546
                                                                            -8.8268
 -8.8129
            -8.8121
                      -8.5198
                                 -8.5042
                                            -8.4877
                                                       -8.4322
                                                                  -8.3887
                                                                             -8.3884
                      -8.2403
 -8.3088
            -8.2418
                                 -8.1048
                                            -8.0986
                                                       -7.8665
                                                                  -7.8582
                                                                             -7.7242
                                 -7.3044
 -7.7226
            -7.5544
                      -7.5525
                                            -7.2903
                                                       -7.2898
                                                                  -7.2668
                                                                             -7.2635
           -7.0684
                      -6.7761
                                 -6.7757
                                            -6.7698
                                                       -6.7695
                                                                  -6.7121
                                                                             -6.3198
 -7.0695
 -6.3104
           -6.2687
                      -5.8664
                                 -5.8659
                                            -5.8265
                                                       -5.8033
                                                                  -5.5793
                                                                             -5.5749
           -5.4698
                                 -5.2822
                                            -5.2784
                                                                  -5.1085
 -5.5700
                      -5.4681
                                                       -5.2162
                                                                             -5.0641
           -5.0620
                      -5.0613 -5.0332 -5.0319
                                                                  -4.8557
 -5.0623
                                                       -4.8560
                                                                             -4.6890
```

```
-3.6399
          -3.5048
                    -3.5033
                              -3.3545
                                                           -2.9194
                                                                     -1.6716
                                        -3.1438
                                                  -3.1383
                     0.2920
                                                                      2.2250
 -0.8591
           0.2837
                               0.3315
                                         1.8649
                                                   2.1818
                                                            2.1937
           2.2313
                                                   2.4008
 2.2297
                     2.3061
                               2.3740
                                         2.3751
                                                            2.6430
                                                                      2.6703
           2.7345
                                                   3.0967
  2.6895
                               2.9808
                                         2.9844
                                                            3.2017
                     2.7367
                                                                      3.2994
  3.3058
           3.4198
       k = 0.2778 - 0.4811 \ 0.0000 \ (64838 \ PWs)
                                                   bands (ev):
-21.2226 -21.1645 -20.9660 -20.9601 -20.9466 -20.9451 -19.8999 -19.8995
 -19.6772 \ -19.6762 \ -19.5075 \ -19.1691 \ -18.9823 \ -18.9807 \ -18.6509 \ -18.6494 
-18.5231 -18.5228 -18.4128 -18.4102 -17.9139 -17.9118 -17.7173 -17.6659 -17.6639 -17.6165 -17.6148 -17.2284 -15.5869 -15.5865 -15.5651 -14.8396 -14.5254 -14.3927 -14.3898 -13.8451 -12.8248 -12.8219 -12.4812 -12.1899 -12.1878 -12.1806 -12.0253 -12.0242 -11.7188 -11.7139 -11.7003 -11.3181 -11.3178 -10.9003 -10.8991 -10.5172 -10.5158 -10.1594 -10.1524 -10.1465
 -9.6907
          -9.3869 -9.1521 -9.0586 -8.9952 -8.9825
                                                           -8.8246
                                                                     -8.8239
                                                 -8.4658
-7.8454
                    -8.5338
                                                           -8.3771
                                                                     -8.3768
 -8.8208
          -8.8175
                             -8.5318 -8.5175
                                                                     -7.7004
                             -8.1021 -8.0959
 -8.2835
          -8.2324
                   -8.2309
                                                           -7.8371
                                       -7.2897
 -7.6987
          -7.5759
                   -7.5740
                             -7.3305
                                                 -7.2892
                                                           -7.2789
                                                                     -7.2755
                    -6.7872
                              -6.7868
                                       -6.7533
                                                 -6.7531
                                                           -6.6818
                                                                     -6.3451
 -7.0520
          -7.0510
 -6.3355
          -6.2412
                    -5.8887
                              -5.8881
                                       -5.8520
                                                 -5.8339
                                                           -5.5898
                                                                     -5.5816
 -5.5492
          -5.4964
                    -5.4944
                              -5.2731
                                       -5.2694
                                                 -5.1868
                                                           -5.0871
                                                                     -5.0725
 -5.0715
          -5.0393
                    -5.0373
                              -5.0253
                                        -5.0240
                                                  -4.8358
                                                           -4.8355
                                                                     -4.6717
                    -3.5046
 -3.6481
          -3.5061
                              -3.3674
                                                                     -1.7044
                                        -3.1470
                                                  -3.1415
                                                           -2.9247
 -0.8270
           0.2923
                     0.3009
                               0.3363
                                         1.8506
                                                   2.1677
                                                            2.1745
                                                                      2.2115
  2.2245
           2.2323
                     2.3044
                               2.3814
                                         2.3824
                                                   2.3864
                                                            2.6284
                                                                      2.6653
  2.6846
           2.7457
                     2.7478
                               2.9923
                                         2.9958
                                                   3.0826
                                                            3.1872
                                                                      3.3436
  3.3503
           3.4309
       k = 0.2738 - 0.4743 \ 0.0000 \ (64838 \ PWs)
                                                   bands (ev):
-18.5094 -18.5090 -18.4406 -18.4379 -17.9060 -17.9039 -17.7229 -17.6404
-17.6384 -17.6173 -17.6156 -17.2320 -15.6065 -15.6003 -15.5738 -14.8486 -14.5576 -14.3598 -14.3567 -13.8229 -12.8653 -12.8625 -12.4669 -12.1952
-12.1828 -12.1756 -12.0163 -12.0152 -11.7001 -11.6801 -11.6752 -11.3448
-11.3445 -10.8985 -10.8974 -10.4867 -10.4853 -10.1700 -10.1642 -10.1522
                                       -8.9867
 -9.7267
          -9.3521 -9.1634
                             -9.0922
                                                 -8.9751 -8.8362 -8.8355
 -8.8111
          -8.8080
                   -8.5638
                             -8.5476 -8.5437
                                                 -8.4994
                                                           -8.3658
                                                                     -8.3655
                             -8.0994
                                       -8.0931 -7.8244
                                                                     -7.6763
 -8.2583
          -8.2228
                   -8.2213
                                                           -7.8161
          -7.5976
 -7.6745
                   -7.5957
                             -7.3566
                                       -7.2907
                                                 -7.2891
                                                           -7.2886
                                                                     -7.2873
                    -6.7982
                             -6.7978
                                       -6.7367
                                                 -6.7364
 -7.0346
          -7.0335
                                                           -6.6514
                                                                     -6.3709
                   -5.9114
                              -5.9109
                                       -5.8793
                                                 -5.8645
                                                           -5.6010
 -6.3611
          -6.2136
                                                                     -5.5927
                                       -5.2601
          -5.5225
                    -5.5148
                             -5.2638
                                                 -5.1577
                                                           -5.0827
 -5.5279
                                                                     -5.0818
 -5.0658
          -5.0181
                    -5.0168
                             -5.0134
                                       -5.0120
                                                 -4.8157
                                                           -4.8153
                                                                     -4.6545
          -3.5078
                    -3.5063
                             -3.3801
                                                 -3.1454
                                                           -2.9303
 -3.6562
                                       -3.1508
                                                                     -1.7374
           0.3017
                     0.3105
 -0.7947
                               0.3410
                                        1.8364
                                                  2.1345
                                                            2.1397
                                                                      2.2176
 2.2322
           2.2364
                     2.3029
                               2.3722
                                         2.3892
                                                   2.3902
                                                            2.6140
                                                                      2.6600
  2.6795
           2.7571
                     2.7591
                               3.0040
                                         3.0073
                                                   3.0689
                                                            3.1729
                                                                      3.3874
  3.3945
           3.4423
       k = 0.2698 - 0.4674 \ 0.0000 \ (64830 \ PWs)
                                                   bands (ev):
-21.2429 -21.1817 -20.9493 -20.9434 -20.9325 -20.9311 -19.9157 -19.9152
-19.6972 -19.6962 -19.4679 -19.1166 -19.0198 -19.0182 -18.6395 -18.6380
-18.4957 -18.4954 -18.4682 -18.4655 -17.8980 -17.8959 -17.7285 -17.6185
-17.6167 -17.6147 -17.6127 -17.2359 -15.6268 -15.6207 -15.5823 -14.8574
-14.5902 -14.3262 -14.3229 -13.8007 -12.9057 -12.9029 -12.4519 -12.2005
-12.1778 -12.1705 -12.0069 -12.0058 -11.6998 -11.6413 -11.6364 -11.3713
```

```
-8.7984
 -8.8012
                      -8.5942
                                -8.5780
                                           -8.5554
                                                      -8.5329
                                                                -8.3549
                                                                           -8.3546
                                -8.0967
                                           -8.0904
                                                                -7.7951
 -8.2333
           -8.2131
                     -8.2116
                                                      -7.8035
                                                                           -7.6518
                                                     -7.2990
                                                                           -7.2880
 -7.6501
           -7.6196
                     -7.6177
                                -7.3827
                                           -7.3024
                                                                -7.2885
                                           -6.7199
                      -6.8090
                                -6.8087
 -7.0171
           -7.0160
                                                      -6.7196
                                                                -6.6210
                                                                           -6.3972
 -6.3871
           -6.1859
                      -5.9346
                                -5.9340
                                           -5.9074
                                                      -5.8950
                                                                -5.6122
                                                                           -5.6039
 -5.5501
           -5.5485
                      -5.4910
                                -5.2544
                                           -5.2507
                                                      -5.1289
                                                                -5.0929
                                                                           -5.0920
                                -4.9892
                                                                -4.7953
 -5.0448
           -5.0095
                      -5.0082
                                           -4.9876
                                                      -4.7956
                                                                           -4.6376
           -3.5099
                                                                           -1.7706
 -3.6643
                      -3.5084
                                -3.3926
                                           -3.1554
                                                      -3.1500
                                                                -2.9364
 -0.7623
            0.3119
                      0.3209
                                 0.3455
                                            1.8225
                                                       2.0979
                                                                 2.1025
                                                                            2.2277
  2.2408
            2.2425
                       2.3012
                                  2.3582
                                            2.3975
                                                       2.3985
                                                                  2.5998
                                                                            2.6546
  2.6742
            2.7688
                       2.7707
                                  3.0158
                                            3.0188
                                                       3.0556
                                                                  3.1588
                                                                            3,4277
  3.4358
             3.4537
        k = 0.2659 - 0.4605 \ 0.0000 \ (64854 \ PWs)
                                                       bands (ev):
-21.2528 -21.1901 -20.9407 -20.9349 -20.9253 -20.9239 -19.9234 -19.9230 -19.7069 -19.7059 -19.4480 -19.0901 -19.0385 -19.0369 -18.6337 -18.6321 -18.4958 -18.4930 -18.4821 -18.4818 -17.8899 -17.8878 -17.7341 -17.6198 -17.6181 -17.5889 -17.5869 -17.2400 -15.6475 -15.6416 -15.5907 -14.8661 -14.6232 -14.2921 -14.2885 -13.7783 -12.9461 -12.9433 -12.4363 -12.2057 -12.1727 -12.1653 -11.9971 -11.9961 -11.6993 -11.6025 -11.5975 -11.3976 -11.3973 -10.8950 -10.8938 -10.4251 -10.4237 -10.2049 -10.1991 -10.1367 -9.7987 -9.2836 -9.1860 -9.1590 -8.9712 -8.9612 -8.8591 -8.8583
                                -9.1590
                                                     -8.9612 -8.8591
                                          -8.9712
 -9.7987
                     -9.1860
           -9.2836
                                                                          -8.8583
                                           -8.5671
                                                     -8.5661
                                                                -8.3444
           -8.7887
 -8.7913
                      -8.6248
                                -8.6088
                                                                           -8.3441
 -8.2085
                      -8.2017
                                -8.0940
                                           -8.0877
                                                      -7.7826
                                                                -7.7741
                                                                           -7.6417
           -8.2032
 -7.6398
           -7.6272
                      -7.6254
                                -7.4087
                                           -7.3140
                                                     -7.3105
                                                                -7.2879
                                                                           -7.2874
                                           -6.7030
                      -6.8197
                                                      -6.7027
 -6.9997
           -6.9986
                                -6.8194
                                                                -6.5907
                                                                           -6.4240
                                -5.9575
                                           -5.9362
                                                      -5.9255
                                                                -5.6234
 -6.4134
           -6.1581
                      -5.9582
                                                                           -5.6150
 -5.5765
           -5.5749
                                -5.2447
                      -5.4621
                                           -5.2411
                                                      -5.1033
                                                                -5.1025
                                                                           -5.0999
 -5.0239
           -5.0013
                      -5.0000
                                -4.9644
                                           -4.9628
                                                      -4.7756
                                                                -4.7752
                                                                           -4.6209
 -3.6722
           -3.5124
                      -3.5109
                                -3.4050
                                           -3.1607
                                                      -3.1554
                                                                -2.9429
                                                                           -1.8040
 -0.7298
            0.3229
                       0.3321
                                 0.3499
                                            1.8087
                                                       2.0605
                                                                 2.0648
                                                                            2.2388
             2.2537
                       2.2995
  2.2456
                                  2.3444
                                            2.4062
                                                       2.4072
                                                                  2.5858
                                                                            2.6490
                                  3.0269
                                            3.0296
                                                       3.0443
  2.6687
             2.7806
                       2.7826
                                                                  3.1448
                                                                            3.4261
  3.4281
             3.4649
        k = 0.2619 - 0.4536 \ 0.0000 \ (64842 \ PWs)
                                                       bands (ev):
-21.2626 -21.1984 -20.9320 -20.9262 -20.9180 -20.9165 -19.9310 -19.9306
-19.7165 -19.7155 -19.4280 -19.0635 -19.0572 -19.0556 -18.6277 -18.6262
-18.5231 -18.5203 -18.4685 -18.4682 -17.8816 -17.8795 -17.7396 -17.6214
-17.6197 -17.5630 -17.5610 -17.2444 -15.6686 -15.6628 -15.5989 -14.8748
-14.6567 -14.2574 -14.2537 -13.7559 -12.9864 -12.9836 -12.4202 -12.2108
-12.1675 -12.1601 -11.9871 -11.9860 -11.6987 -11.5636 -11.5586 -11.4236
-11.4233 -10.8932 -10.8920 -10.3940 -10.3926 -10.2222 -10.2165 -10.1283
 -9.8346
          -9.2497 -9.1974 -9.1923
                                          -8.9641 -8.9548 -8.8702
                                                                          -8.8695
 -8.7814
           -8.7789 -8.6558 -8.6399
                                          -8.5992 -8.5784
                                                                -8.3342
                                                                          -8.3339
 -8.1932
           -8.1917
                     -8.1839
                                -8.0913
                                          -8.0850
                                                     -7.7617
                                                                -7.7532
                                                                           -7.6640
 -7.6622
           -7.6023
                     -7.6005
                                -7.4348
                                          -7.3253
                                                     -7.3218
                                                                -7.2872
                                                                           -7.2867
 -6.9823
           -6.9812
                     -6.8303
                                -6.8299
                                           -6.6859
                                                      -6.6856
                                                                -6.5607
                                                                           -6.4514
 -6.4398
           -6.1302
                      -5.9821
                                -5.9815
                                           -5.9653
                                                      -5.9558
                                                                -5.6346
                                                                           -5.6261
 -5.6029
           -5.6014
                      -5.4328
                                -5.2349
                                           -5.2314
                                                      -5.1135
                                                                -5.1126
                                                                           -5.0719
 -5.0034
           -4.9929
                      -4.9916
                                -4.9396
                                           -4.9380
                                                      -4.7556
                                                                -4.7553
                                                                           -4.6044
                      -3.5138
                                           -3.1667
           -3.5153
                                                                -2.9498
 -3.6800
                                -3.4171
                                                      -3.1614
                                                                           -1.8375
 -0.6970
            0.3346
                      0.3440
                                 0.3543
                                            1.7952
                                                       2.0230
                                                                  2.0270
                                                                            2.2503
  2.2509
             2.2653
                       2.2978
                                  2.3309
                                            2.4153
                                                       2.4164
                                                                  2.5720
                                                                            2.6433
                                  3.0248
                                            3.0408
                                                       3.0464
                                                                  3.1311
  2.6631
             2.7927
                       2.7946
                                                                            3.3984
  3.3994
             3.4771
        k = 0.2579 - 0.4468 \ 0.0000 \ (64830 \ PWs)
                                                       bands (ev):
-21.2723 -21.2066 -20.9231 -20.9174 -20.9105 -20.9091 -19.9385 -19.9381
```

```
-19.7260 -19.7250 -19.4080 -19.0759 -19.0743 -19.0368 -18.6217 -18.6201
-18.5504 -18.5476 -18.4550 -18.4547 -17.8732 -17.8711 -17.7450 -17.6233
-17.6216 -17.5370 -17.5350 -17.2490 -15.6900 -15.6843 -15.6069 -14.8832
-14.6904 -14.2222 -14.2183 -13.7333 -13.0267 -13.0239 -12.4035 -12.2159 -12.1622 -12.1548 -11.9766 -11.9756 -11.6979 -11.5246 -11.5195 -11.4495
-11.4492 -10.8914 -10.8903 -10.3628 -10.3614 -10.2394 -10.2337 -10.1195
           -9.2254 -9.2162 -9.2086 -8.9575
                                                     -8.9487
                                                                -8.8813
 -9.8704
                                                                          -8.8805
           -8.7689
                     -8.6870
                                -8.6712
                                          -8.6316
                                                     -8.5896
                                                                -8.3244
 -8.7720
                                                                           -8.3241
 -8.1830
           -8.1815
                      -8.1594
                                -8.0887
                                           -8.0823
                                                     -7.7410
                                                                -7.7323
                                                                           -7.6865
                                                                           -7.2861
 -7.6847
           -7.5773
                      -7.5755
                                -7.4608
                                           -7.3364
                                                     -7.3328
                                                                -7.2866
 -6.9649
           -6.9638
                     -6.8407
                                -6.8403
                                           -6.6687
                                                      -6.6684
                                                                -6.5323
                                                                           -6.4792
                      -6.0065
                                                                           -5.6372
 -6.4651
           -6.1022
                                -6.0058
                                           -5.9946
                                                      -5.9861
                                                                -5.6458
                      -5.4035
 -5.6294
           -5.6278
                                -5.2249
                                           -5.2214
                                                      -5.1237
                                                                -5.1229
                                                                           -5.0438
 -4.9845
           -4.9832
                      -4.9829
                                -4.9148
                                           -4.9133
                                                      -4.7358
                                                                -4.7354
                                                                           -4.5880
                                                                -2.9572
                                                                           -1.8712
 -3.6878
           -3.5185
                      -3.5170
                                -3.4291
                                           -3.1733
                                                      -3.1681
 -0.6641
            0.3470
                       0.3560
                                 0.3592
                                            1.7818
                                                      1.9854
                                                                 1.9894
                                                                            2.2563
  2.2624
            2.2772
                       2.2961
                                  2.3175
                                            2.4249
                                                       2.4260
                                                                  2.5584
                                                                            2.6374
  2.6573
             2.8050
                       2.8069
                                  3.0130
                                            3.0532
                                                       3.0577
                                                                  3.1176
                                                                            3.3693
  3.3700
             3.4893
        k = 0.2540 - 0.4399 \ 0.0000 \ (64852 \ PWs)
                                                       bands (ev):
-21.2818 -21.2147 -20.9141 -20.9084 -20.9028 -20.9015 -19.9459 -19.9455 -19.7353 -19.7344 -19.3880 -19.0945 -19.0930 -19.0100 -18.6156 -18.6140 -18.5775 -18.5747 -18.4416 -18.4413 -17.8646 -17.8625 -17.7504 -17.6254 -17.6237 -17.5109 -17.5088 -17.2540 -15.7116 -15.7061 -15.6148 -14.8916 -14.7246 -14.1866 -14.1825 -13.7106 -13.0668 -13.0641 -12.3863 -12.2209 -12.1569 -12.1494 -11.9658 -11.9648 -11.6970 -11.4855 -11.4804 -11.4750 -11.4747 -10.8897 -10.8885 -10.3314 -10.3300 -10.2565 -10.2508 -10.1103
 -9.9061
           -9.2585
                     -9.2197
                                -9.1829
                                          -8.9513
                                                     -8.9429
                                                                -8.8922
                                                                          -8.8914
                                           -8.6627
 -8.7638
           -8.7586
                     -8.7185
                                -8.7029
                                                      -8.6007
                                                                -8.3150
                                                                           -8.3146
           -8.1711
                                -8.0861
                                           -8.0797
                                                      -7.7203
                                                                -7.7115
                                                                           -7.7092
 -8.1726
                      -8.1351
           -7.5521
                      -7.5503
                                -7.4868
 -7.7073
                                           -7.3474
                                                     -7.3437
                                                                -7.2859
                                                                           -7.2854
           -6.9464
                      -6.8509
                                           -6.6515
 -6.9475
                                -6.8505
                                                      -6.6512
                                                                -6.5157
                                                                           -6.5072
 -6.4790
           -6.0742
                      -6.0313
                                -6.0305
                                           -6.0240
                                                      -6.0163
                                                                -5.6570
                                                                           -5.6558
 -5.6543
           -5.6482
                      -5.3741
                                -5.2148
                                           -5.2113
                                                      -5.1341
                                                                 -5.1333
                                                                           -5.0160
 -4.9759
           -4.9746
                      -4.9629
                                 -4.8900
                                           -4.8886
                                                      -4.7160
                                                                 -4.7157
                                                                           -4.5720
                                                                           -1.9051
 -3.6955
           -3.5222
                      -3.5207
                                 -3.4409
                                           -3.1806
                                                      -3.1755
                                                                 -2.9650
 -0.6311
            0.3594
                       0.3628
                                  0.3706
                                            1.7687
                                                       1.9480
                                                                  1.9518
                                                                            2.2622
  2.2746
            2.2892
                       2.2943
                                  2.3046
                                            2.4349
                                                       2.4359
                                                                  2.5450
                                                                            2.6313
  2.6513
             2.8174
                       2.8193
                                  3.0004
                                            3.0658
                                                       3.0701
                                                                  3.1043
                                                                            3.3399
  3.3406
             3.5016
        k = 0.2500 - 0.4330 \ 0.0000 \ (64834 \ PWs)
                                                       bands (ev):
-21.2911 -21.2226 -20.9049 -20.8994 -20.8951 -20.8938 -19.9532 -19.9528
-19.7445 -19.7435 -19.3679 -19.1132 -19.1116 -18.9830 -18.6094 -18.6078
-18.6045 -18.6016 -18.4283 -18.4280 -17.8559 -17.8538 -17.7557 -17.6278
-17.6261 -17.4846 -17.4825 -17.2592 -15.7335 -15.7281 -15.6226 -14.8998
-14.7590 -14.1507 -14.1464 -13.6877 -13.1069 -13.1042 -12.3686 -12.2258
-12.1515 -12.1440 -11.9547 -11.9537 -11.6959 -11.5004 -11.5001 -11.4464
-11.4413 -10.8880 -10.8868 -10.2999 -10.2985 -10.2734 -10.2678 -10.1008
 -9.9418
           -9.2914
                      -9.2307
                                -9.1499
                                           -8.9455
                                                      -8.9374
                                                                -8.9029
                                                                           -8.9021
                                                                 -8.3058
 -8.7592
           -8.7517
                      -8.7465
                                 -8.7348
                                           -8.6902
                                                      -8.6115
                                                                           -8.3055
                                 -8.0835
                                           -8.0771
                                                      -7.7320
                                                                 -7.7302
                                                                           -7.6997
 -8.1620
           -8.1605
                      -8.1110
 -7.6908
           -7.5269
                      -7.5250
                                 -7.5127
                                           -7.3582
                                                      -7.3544
                                                                 -7.2853
                                                                           -7.2848
 -6.9301
           -6.9290
                      -6.8610
                                 -6.8606
                                           -6.6341
                                                      -6.6338
                                                                 -6.5365
                                                                           -6.5321
 -6.4596
           -6.0564
                      -6.0557
                                 -6.0535
                                           -6.0465
                                                      -6.0461
                                                                 -5.6822
                                                                           -5.6807
 -5.6681
           -5.6593
                      -5.3449
                                -5.2045
                                           -5.2010
                                                      -5.1444
                                                                -5.1436
                                                                           -4.9885
 -4.9671
           -4.9659
                      -4.9431
                                -4.8652
                                           -4.8639
                                                      -4.6963
                                                                -4.6960
                                                                           -4.5561
                      -3.5247
                                -3.4525
                                           -3.1886
                                                      -3.1835
                                                                -2.9732
 -3.7030
           -3.5262
                                                                           -1.9392
                                0.3846
                                           1.7557
                                                      1.9107
                                                                 1.9144
 -0.5979
           0.3655
                      0.3746
                                                                           2.2685
```

```
2.2869
              2.2909
                         2.2926
                                     2.3025
                                                2.4452
                                                            2.4463
                                                                        2.5318
                                                                                   2.6250
                                                3.0787
                                                            3.0827
  2.6451
              2.8301
                         2.8320
                                     2.9878
                                                                        3.0914
                                                                                    3.3107
  3.3112
              3.5141
         k = 0.2460 - 0.4261 \ 0.0000 \ (64858 \ PWs)
                                                            bands (ev):
-21.3004 -21.2305 -20.8956 -20.8903 -20.8871 -20.8859 -19.9604 -19.9599
-19.7536 -19.7526 -19.3477 -19.1318 -19.1303 -18.9559 -18.6314 -18.6285
-18.6031 -18.6015 -18.4151 -18.4148 -17.8471 -17.8450 -17.7610 -17.6304 -17.6287 -17.4582 -17.4562 -17.2646 -15.7556 -15.7502 -15.6303 -14.9080 -14.7937 -14.1144 -14.1099 -13.6648 -13.1469 -13.1442 -12.3504 -12.2307 -12.1461 -12.1386 -11.9433 -11.9422 -11.6946 -11.5255 -11.5252 -11.4072
-11.4020 -10.8863 -10.8851 -10.2902 -10.2846 -10.2682 -10.2668 -10.0909

      -9.3242
      -9.2416
      -9.1173
      -8.9400
      -8.9323
      -8.9135

      -8.7672
      -8.7648
      -8.7367
      -8.7073
      -8.6223
      -8.2970

      -8.1498
      -8.0871
      -8.0809
      -8.0745
      -7.7551
      -7.7532

      -7.5387
      -7.5015
      -7.4996
      -7.3687
      -7.3649
      -7.2846

      -6.9116
      -6.8710
      -6.8706
      -6.6167
      -6.6164
      -6.5656

 -9.9774
                                                                                  -8.9127
 -8.7827
                                                                                  -8.2967
                                                                                  -7.6791
 -8.1513
 -7.6701
                                                                                  -7.2841
                                                                                  -6.5592
 -6.9127
            -6.0830
                                                                      -5.7086
                                                                                  -5.7071
 -6.4305
                       -6.0819
                                   -6.0812
                                               -6.0765
                                                          -6.0179
                        -5.3158
                                   -5.1940
                                               -5.1906
                                                          -5.1548
                                                                      -5.1540
 -5.6793
            -5.6703
                                                                                  -4.9612
 -4.9583
            -4.9570
                        -4.9235
                                   -4.8405
                                               -4.8392
                                                           -4.6767
                                                                      -4.6764
                                                                                  -4.5403
                                               -3.1971
 -3.7105
            -3.5306
                        -3.5291
                                   -3.4640
                                                           -3.1921
                                                                      -2.9818
                                                                                  -1.9734
                         0.3890
 -0.5645
             0.3694
                                     0.3994
                                                1.7429
                                                            1.8735
                                                                        1.8772
                                                                                   2.2751
  2.2782
              2.2908
                         2.2998
                                     2.3149
                                                            2.4570
                                                                        2.5189
                                                2.4560
                                                                                    2.6186
  2.6387
              2.8430
                         2.8449
                                     2.9752
                                                3.0781
                                                            3.0919
                                                                        3.0961
                                                                                    3.2815
  3.2820
              3.5268
         k = 0.2421 - 0.4193 \ 0.0000 \ (64846 \ PWs)
                                                            bands (ev):
-18.5967 -18.5952 -18.4019 -18.4016 -17.8382 -17.8360 -17.7661 -17.6332 -17.6315 -17.4317 -17.4297 -17.2704 -15.7778 -15.7725 -15.6378 -14.9160 -14.8286 -14.0778 -14.0732 -13.6417 -13.1868 -13.1841 -12.3318 -12.2355 -12.1406 -12.1331 -11.9315 -11.9304 -11.6931 -11.5503 -11.5500 -11.3679
-11.3627 -10.8846 -10.8834 -10.3070 -10.3014 -10.2364 -10.2350 -10.0807
-10.0130
           -9.3568
                       -9.2524
                                  -9.0850
                                              -8.9349
                                                          -8.9275
                                                                      -8.9239
                                                                                  -8.9231
 -8.8151
            -8.7997
                       -8.7858
                                  -8.7256
                                              -8.7089
                                                          -8.6328
                                                                      -8.2885
                                                                                  -8.2882
                       -8.0784
                                   -8.0719
                                               -8.0634
 -8.1405
            -8.1389
                                                          -7.7782
                                                                      -7.7764
                                                                                  -7.6587
            -7.5645
                       -7.4761
 -7.6495
                                   -7.4742
                                               -7.3790
                                                          -7.3751
                                                                      -7.2839
                                                                                  -7.2834
                                   -6.8804
                                               -6.5992
 -6.8953
            -6.8943
                       -6.8807
                                                          -6.5989
                                                                      -6.5953
                                                                                  -6.5880
                                                          -5.9896
 -6.3999
            -6.1125
                       -6.1078
                                   -6.1070
                                               -6.1064
                                                                      -5.7349
                                                                                  -5.7334
                       -5.2869
            -5.6813
                                   -5.1834
                                               -5.1800
 -5.6905
                                                          -5.1652
                                                                      -5.1645
                                                                                  -4.9493
            -4.9342
                       -4.9041
                                   -4.8159
                                               -4.8146
                                                          -4.6572
                                                                      -4.6569
 -4.9481
                                                                                  -4.5248
            -3.5354
                       -3.5338
                                   -3.4752
                                                          -3.2013
                                                                      -2.9909
 -3.7179
                                               -3.2062
                                                                                  -2.0078
 -0.5310
             0.3731
                        0.4042
                                    0.4149
                                               1.7304
                                                           1.8366
                                                                       1.8401
                                                                                   2,2657
             2.2891
                         2.3127
                                     2.3277
                                                2.4672
                                                            2.4682
                                                                        2.5061
  2.2821
                                                                                   2.6120
              2.8561
                         2.8579
                                     2.9629
                                                3.0655
                                                            3.1053
                                                                        3.1093
  2.6322
                                                                                   3.2525
  3.2530
              3.5397
         k = 0.2381 - 0.4124 \ 0.0000 \ (64854 \ PWs)
                                                            bands (ev):
-21.3183 -21.2457 -20.8767 -20.8727 -20.8703 -20.8693 -19.9744 -19.9740
-19.7712 -19.7702 -19.3073 -19.1691 -19.1675 -18.9013 -18.6848 -18.6817
-18.5903 -18.5887 -18.3889 -18.3886 -17.8291 -17.8269 -17.7713 -17.6363
-17.6346 -17.4051 -17.4030 -17.2764 -15.8001 -15.7949 -15.6453 -14.9239
-14.8638 -14.0409 -14.0361 -13.6186 -13.2267 -13.2240 -12.3128 -12.2402
-12.1351 -12.1275 -11.9194 -11.9184 -11.6914 -11.5749 -11.5746 -11.3285
-11.3233 -10.8829 -10.8818 -10.3235 -10.3180 -10.2044 -10.2030 -10.0701
-10.0485 -9.3894 -9.2630 -9.0530 -8.9341 -8.9334 -8.9302 -8.9230
           -8.8325
                       -8.8146 -8.7142 -8.7025 -8.6431
 -8.8477
                                                                      -8.2804
                                                                                  -8.2800
 -8.1294 -8.1279 -8.0758 -8.0694 -8.0399 -7.8015 -7.7997
                                                                                  -7.6385
```

```
-7.3850
 -7.6291
           -7.5904
                     -7.4506
                                -7.4488
                                                               -7.2833
                                                                          -7.2828
                                          -7.3891
 -6.8904
           -6.8900
                     -6.8780
                                -6.8769
                                          -6.6253
                                                     -6.6176
                                                               -6.5817
                                                                          -6.5814
           -6.1420
                                          -6.1333
                                                                          -5.7596
 -6.3688
                     -6.1363
                                -6.1341
                                                     -5.9613
                                                               -5.7612
 -5.7017
           -5.6922
                     -5.2582
                                -5.1756
                                          -5.1749
                                                               -5.1692
                                                                          -4.9403
                                                     -5.1726
 -4.9390
           -4.9076
                     -4.8850
                                -4.7913
                                          -4.7901
                                                     -4.6379
                                                                          -4.5096
                                                                -4.6376
 -3.7251
           -3.5405
                     -3.5389
                                -3.4863
                                          -3.2159
                                                     -3.2110
                                                               -3.0003
                                                                          -2.0423
 -0.4973
            0.3766
                      0.4201
                                0.4309
                                           1.7180
                                                     1.7998
                                                                1.8033
                                                                           2.2534
  2.2872
                                                      2.4797
                                                                 2.4936
            2.2895
                       2.3258
                                 2.3408
                                            2.4787
                                                                           2.6052
                                                                 3.1228
  2.6255
            2.8694
                       2.8712
                                 2.9507
                                            3.0530
                                                      3.1188
                                                                           3.2237
  3.2242
            3.5528
        k = 0.2341 - 0.4055 \ 0.0000 \ (64854 \ PWs)
                                                      bands (ev):
-21.3271 -21.2532 -20.8670 -20.8642 -20.8619 -20.8600 -19.9812 -19.9808
-19.7798 \ -19.7788 \ -19.2870 \ -19.1876 \ -19.1860 \ -18.8738 \ -18.7112 \ -18.7082
-19.7760 -19.7760 -19.1670 -19.1670 -19.1600 -18.8738 -18.7112 -18.7682 -18.5837 -18.5822 -18.3759 -18.3756 -17.8198 -17.8176 -17.7763 -17.6396 -17.6378 -17.3784 -17.3763 -17.2827 -15.8225 -15.8174 -15.6526 -14.9317 -14.8992 -14.0038 -13.9989 -13.5952 -13.2664 -13.2638 -12.2934 -12.2449 -12.1295 -12.1219 -11.9070 -11.9060 -11.6894 -11.5992 -11.5989 -11.2891 -11.2838 -10.8813 -10.8802 -10.3400 -10.3345 -10.1722 -10.1708 -10.0839 -10.0592 -9.4218 -9.2734 -9.0214 -8.9442 -8.9435 -8.9257 -8.9188
                     -8.8461
                               -8.7027
 -8.8806
           -8.8655
                                          -8.6932
                                                     -8.6532
                                                               -8.2725
                                                                          -8.2722
                                                                          -7.6184
           -8.1167
                                                               -7.8231
 -8.1182
                     -8.0733
                                -8.0669
                                          -8.0167
                                                     -7.8249
                                                     -7.3946
                                                               -7.2826
           -7.6088
                     -7.4252
                                -7.4233
                                          -7.3990
 -7.6162
                                                                          -7.2821
                     -6.8607
 -6.8999
                                -6.8596
                                          -6.6558
                                                     -6.6478
                                                               -6.5642
           -6.8995
                                                                          -6.5638
 -6.3374
           -6.1714
                     -6.1660
                                -6.1607
                                          -6.1598
                                                     -5.9329
                                                               -5.7874
                                                                          -5.7859
 -5.7129
           -5.7032
                                          -5.1854
                     -5.2298
                                -5.1861
                                                     -5.1616
                                                               -5.1583
                                                                          -4.9310
 -4.9298
                                -4.7668
                                          -4.7656
           -4.8812
                     -4.8662
                                                     -4.6186
                                                                -4.6183
                                                                          -4.4945
           -3.5459
                     -3.5443
 -3.7323
                                -3.4971
                                          -3.2262
                                                     -3.2213
                                                                -3.0103
                                                                          -2.0770
 -0.4635
            0.3800
                       0.4365
                                 0.4476
                                            1.7058
                                                      1.7633
                                                                 1.7667
                                                                           2.2412
  2.2854
            2.2973
                       2.3391
                                 2.3540
                                            2.4813
                                                      2.4906
                                                                 2.4916
                                                                           2.5982
                                            3.0407
  2.6186
            2.8828
                       2.8847
                                 2.9388
                                                      3.1326
                                                                 3.1366
                                                                           3.1950
  3.1955
            3.5661
        k = 0.2302 - 0.3987 \ 0.0000 \ (64836 \ PWs)
                                                      bands (ev):
-21.3357 -21.2605 -20.8573 -20.8558 -20.8535 -20.8503 -19.9880 -19.9875
-19.7883 -19.7873 -19.2667 -19.2062 -19.2046 -18.8461 -18.7376 -18.7345
-18.5771 -18.5755 -18.3630 -18.3628 -17.8104 -17.8083 -17.7813 -17.6431
-17.6413 -17.3516 -17.3494 -17.2893 -15.8450 -15.8400 -15.6597 -14.9395
-14.9345 -13.9665 -13.9614 -13.5718 -13.3061 -13.3035 -12.2735 -12.2495
-12.1239 -12.1162 -11.8943 -11.8933 -11.6872 -11.6232 -11.6230 -11.2496
-11.2443 -10.8797 -10.8786 -10.3563 -10.3509 -10.1399 -10.1385 -10.1192
                               -8.9903
                                          -8.9541
                                                               -8.9217
          -9.4541 -9.2837
                                                    -8.9534
-10.0480
                                                                          -8.9156
                               -8.6910
                                                     -8.6630
          -8.8986
                     -8.8784
                                          -8.6830
                                                               -8.2649
 -8.9130
                                                                          -8.2645
 -8.1068
           -8.1053
                     -8.0709
                               -8.0643
                                          -7.9937
                                                     -7.8485
                                                               -7.8467
                                                                          -7.6420
 -7.5987
           -7.5887
                     -7.4085
                               -7.4039
                                          -7.3997
                                                     -7.3979
                                                               -7.2819
                                                                          -7.2814
           -6.9088
 -6.9092
                     -6.8434
                               -6.8423
                                          -6.6867
                                                     -6.6786
                                                               -6.5466
                                                                          -6.5462
 -6.3059
           -6.2008
                     -6.1956
                               -6.1876
                                          -6.1867
                                                     -5.9044
                                                               -5.8136
                                                                          -5.8121
 -5.7241
           -5.7141
                     -5.2016
                                -5.1966
                                          -5.1959
                                                     -5.1504
                                                               -5.1471
                                                                          -4.9217
 -4.9204
           -4.8551
                     -4.8476
                                -4.7424
                                          -4.7412
                                                     -4.5995
                                                               -4.5992
                                                                          -4.4796
 -3.7394
           -3.5517
                     -3.5501
                                -3.5078
                                          -3.2369
                                                     -3.2322
                                                                -3.0206
                                                                          -2.1118
 -0.4295
            0.3832
                       0.4535
                                 0.4649
                                           1.6938
                                                      1.7270
                                                                 1.7303
                                                                           2.2293
                                                      2.5028
                                                                 2.5039
  2.2836
            2.3055
                       2.3526
                                 2.3675
                                            2.4692
                                                                           2.5911
  2.6115
            2.8965
                       2.8984
                                 2.9270
                                            3.0286
                                                      3.1465
                                                                 3.1505
                                                                           3.1666
  3.1671
            3.5795
        k = 0.2262 - 0.3918 \ 0.0000 \ (64824 \ PWs)
                                                      bands (ev):
-21.3442 -21.2677 -20.8478 -20.8471 -20.8447 -20.8404 -19.9946 -19.9942
-19.7966 -19.7956 -19.2463 -19.2247 -19.2231 -18.8184 -18.7638 -18.7607
-18.5704 -18.5688 -18.3503 -18.3500 -17.8009 -17.7987 -17.7862 -17.6468
```

```
-17.6451 -17.3246 -17.3225 -17.2961 -15.8676 -15.8626 -15.6668 -14.9706
-14.9467 -13.9290 -13.9237 -13.5483 -13.3457 -13.3431 -12.2540 -12.2533
-12.1182 -12.1105 -11.8813 -11.8803 -11.6848 -11.6470 -11.6467 -11.2100
-11.2046 -10.8782 -10.8770 -10.3725 -10.3671 -10.1545 -10.1075 -10.1061
           -9.4862
                     -9.2938
                                -8.9639
                                          -8.9631
                                                     -8.9602
                                                                -8.9467
-10.0365
                                                                           -8.9325
 -8.9181
           -8.9129
                      -8.9086
                                -8.6793
                                           -8.6756
                                                     -8.6689
                                                                -8.2576
                                                                           -8.2572
 -8.0953
           -8.0938
                      -8.0684
                                -8.0619
                                           -7.9709
                                                     -7.8721
                                                                -7.8703
                                                                           -7.6677
 -7.5792
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                     -7.4176
                                -7.4127
                                           -7.3744
                                                     -7.3725
                                                                -7.2813
                                                                           -7.2808
 -6.9184
           -6.9180
                      -6.8262
                                -6.8251
                                                      -6.7097
                                                                -6.5290
                                           -6.7180
                                                                           -6.5287
 -6.2742
           -6.2302
                      -6.2252
                                -6.2149
                                           -6.2140
                                                      -5.8759
                                                                -5.8397
                                                                           -5.8382
 -5.7354
           -5.7249
                      -5.2071
                                -5.2064
                                           -5.1737
                                                      -5.1391
                                                                -5.1358
                                                                           -4.9123
                                                      -4.5804
 -4.9110
           -4.8294
                      -4.8293
                                -4.7180
                                           -4.7169
                                                                -4.5801
                                                                           -4.4650
                      -3.5562
 -3.7464
           -3.5578
                                -3.5184
                                                     -3.2435
                                                                -3.0314
                                           -3.2482
                                                                           -2.1468
 -0.3954
            0.3864
                       0.4711
                                 0.4827
                                            1.6819
                                                      1.6910
                                                                  1.6942
                                                                            2.2175
  2.2818
            2.3141
                       2.3663
                                  2.3811
                                            2.4573
                                                       2.5154
                                                                  2.5164
                                                                            2.5837
  2.6043
             2.9101
                       2.9121
                                  2.9158
                                            3.0168
                                                       3.1384
                                                                  3.1389
                                                                             3.1607
  3.1647
             3.5932
        k = 0.2222 - 0.3849 \ 0.0000 \ (64820 \ PWs)
                                                       bands (ev):
-21.3525 -21.2748 -20.8389 -20.8381 -20.8354 -20.8303 -20.0011 -20.0007 -19.8048 -19.8038 -19.2432 -19.2416 -19.2259 -18.7907 -18.7897 -18.7867 -18.5636 -18.5620 -18.3376 -18.3374 -17.7913 -17.7910 -17.7891 -17.6507 -17.6490 -17.3033 -17.2976 -17.2954 -15.8902 -15.8853 -15.6737 -15.0065 -14.9541 -13.8914 -13.8859 -13.5247 -13.3851 -13.3826 -12.2585 -12.2328 -12.1125 -12.1047 -11.8681 -11.8671 -11.6822 -11.6704 -11.6702 -11.1704 -11.1650 -10.8767 -10.8755 -10.3886 -10.3832 -10.1897 -10.0749 -10.0735 -10.0247 -9.5183 -9.3038 -8.9811 -8.9734 -8.9727 -8.9664 -8.9453
                                           -8.6667
                                                      -8.6593
 -8.9293
           -8.9126
                      -8.9072
                                -8.6837
                                                                -8.2506
                                                                           -8.2502
 -8.0836
           -8.0821
                      -8.0660
                                -8.0594
                                           -7.9484
                                                     -7.8959
                                                                -7.8940
                                                                           -7.6934
 -7.5604
           -7.5494
                      -7.4262
                                -7.4207
                                           -7.3491
                                                     -7.3473
                                                                -7.2806
                                                                           -7.2801
           -6.9270
                                           -6.7497
 -6.9274
                      -6.8089
                                -6.8078
                                                      -6.7413
                                                                -6.5115
                                                                           -6.5111
 -6.2594
           -6.2546
                      -6.2432
                                -6.2418
                                                      -5.8658
                                           -6.2415
                                                                -5.8642
                                                                           -5.8473
                                 -5.2170
 -5.7467
           -5.7357
                      -5.2177
                                           -5.1462
                                                                -5.1243
                                                                           -4.9027
                                                      -5.1276
           -4.8113
                                -4.6938
                                           -4.6927
 -4.9014
                      -4.8039
                                                      -4.5615
                                                                 -4.5612
                                                                           -4.4506
           -3.5642
 -3.7532
                      -3.5626
                                 -3.5287
                                           -3.2600
                                                      -3.2554
                                                                 -3.0426
                                                                           -2.1819
 -0.3611
            0.3894
                       0.4892
                                  0.5010
                                            1.6550
                                                       1.6582
                                                                  1.6707
                                                                            2.2060
                                                       2.5283
  2.2800
             2.3230
                       2.3802
                                  2.3949
                                            2.4458
                                                                  2.5293
                                                                            2.5762
  2.5968
             2.9038
                       2.9246
                                  2.9264
                                            3.0051
                                                       3.1105
                                                                  3.1109
                                                                             3.1751
  3.1791
             3.6070
        k = 0.2183 - 0.3780 \ 0.0000 \ (64820 \ PWs)
                                                       bands (ev):
-21.3607 -21.2818 -20.8302 -20.8290 -20.8255 -20.8200 -20.0075 -20.0071
-19.8128 -19.8118 -19.2616 -19.2600 -19.2055 -18.8159 -18.8126 -18.7625
-18.5567 -18.5552 -18.3251 -18.3248 -17.7958 -17.7815 -17.7793 -17.6549
-17.6532 -17.3107 -17.2704 -17.2682 -15.9128 -15.9079 -15.6805 -15.0426
-14.9614 -13.8535 -13.8479 -13.5009 -13.4245 -13.4220 -12.2629 -12.2119
-12.1067 -12.0989 -11.8546 -11.8536 -11.6938 -11.6934 -11.6791 -11.1307
-11.1252 -10.8752 -10.8740 -10.4045 -10.3992 -10.2248 -10.0422 -10.0408
-10.0126
           -9.5502
                      -9.3136
                                -9.0148
                                           -9.0002
                                                     -8.9828
                                                                -8.9821
                                                                          -8.9783
                                                                           -8.2435
 -8.9123
           -8.9046
                      -8.8958
                                -8.6930
                                           -8.6545
                                                      -8.6475
                                                                -8.2438
           -8.0703
                                -8.0570
                                                      -7.9196
 -8.0718
                      -8.0636
                                           -7.9262
                                                                -7.9178
                                                                           -7.7191
 -7.5424
           -7.5307
                      -7.4339
                                 -7.4278
                                           -7.3239
                                                      -7.3221
                                                                 -7.2799
                                                                           -7.2794
 -6.9363
           -6.9359
                      -6.7917
                                 -6.7906
                                           -6.7817
                                                      -6.7732
                                                                 -6.4940
                                                                           -6.4936
 -6.2886
           -6.2839
                      -6.2704
                                 -6.2695
                                           -6.2107
                                                      -5.8918
                                                                 -5.8902
                                                                           -5.8187
 -5.7580
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                      -5.2283
                                 -5.2276
                                            -5.1200
                                                      -5.1155
                                                                 -5.1122
                                                                           -4.8930
 -4.8917
            -4.7936
                      -4.7787
                                 -4.6697
                                            -4.6686
                                                      -4.5428
                                                                 -4.5425
                                                                           -4.4364
                                 -3.5389
                                           -3.2723
 -3.7600
           -3.5710
                      -3.5694
                                                      -3.2677
                                                                 -3.0542
                                                                           -2.2171
 -0.3266
            0.3924
                      0.5078
                                 0.5199
                                           1.6194
                                                      1.6226
                                                                 1.6592
                                                                            2.1946
                       2.3943
                                  2.4085
                                            2.4348
                                                       2.5414
                                                                  2.5425
  2.2781
            2.3324
                                                                            2.5685
            2.8927
                       2.9388
                                  2.9407
                                            2.9937
                                                       3.0828
                                                                  3.0832
  2.5892
                                                                            3.1897
```

```
3.1936
              3.6210
         k = 0.2143 - 0.3712 \ 0.0000 \ (64816 \ PWs)
                                                            bands (ev):
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-19.8207 -19.8197 -19.2800 -19.2785 -19.1850 -18.8417 -18.8384 -18.7343 -18.5498 -18.5492 -18.3127 -18.3124 -17.8005 -17.7716 -17.7693 -17.6593 -17.6575 -17.3184 -17.2431 -17.2409 -15.9354 -15.9306 -15.6872 -15.0788 -14.9685 -13.8156 -13.8098 -13.4771 -13.4638 -13.4613 -12.2672 -12.1907 -12.1009 -12.0931 -11.8408 -11.8398 -11.7167 -11.7164 -11.6760 -11.0909
-11.0854 \ -10.8738 \ -10.8726 \ -10.4203 \ -10.4150 \ -10.2598 \ -10.0094 \ -10.0080
                       -9.3233 -9.0488 -9.0343 -9.0116 -8.9920 -8.9913
-10.0001
            -9.5819
                                                                                 -8.2370
 -8.9082
            -8.9014
                       -8.8672 -8.7023
                                              -8.6419
                                                          -8.6354
                                                                     -8.2373
                                                                                 -7.7447
 -8.0613
            -8.0597
                       -8.0583 -8.0546 -7.9436
                                                          -7.9418
                                                                     -7.9041
            -7.5135
                                  -7.4332 -7.2988
 -7.5261
                       -7.4400
                                                          -7.2971
                                                                     -7.2792
                                                                                 -7.2787
                                                                     -6.4766
 -6.9450
            -6.9446 -6.8141
                                   -6.8056
                                              -6.7745
                                                          -6.7734
                                                                                 -6.4762
                                                                                 -5.7904
                       -6.2987
                                                          -5.9177
                                   -6.2977
                                                                      -5.9162
 -6.3176
            -6.3131
                                              -6.1790
                                   -5.2382
                       -5.2390
                                                                                 -4.8832
 -5.7693
            -5.7566
                                              -5.1047
                                                          -5.1016
                                                                     -5.0908
                                   -4.6456
                                               -4.6446
 -4.8819
            -4.7761
                       -4.7539
                                                          -4.5241
                                                                      -4.5238
                                                                                 -4.4225
                        -3.5764
                                   -3.5488
                                                          -3.2804
                                                                      -3.0662
                                                                                 -2.2525
 -3.7667
            -3.5780
                                               -3.2850
 -0.2920
             0.3952
                         0.5269
                                     0.5392
                                                1.5841
                                                            1.5873
                                                                       1.6480
                                                                                   2.1835
             2.3422
                         2.4083
                                                            2.5549
  2.2763
                                     2.4182
                                                2.4284
                                                                       2.5559
                                                                                   2.5606
  2.5813
              2.8817
                         2.9531
                                     2.9551
                                                2.9826
                                                            3.0553
                                                                       3.0558
                                                                                   3.2045
  3.2084
              3.6352
         k = 0.2103 - 0.3643 \ 0.0000 \ (64826 \ PWs)
                                                            bands (ev):
-21.3766 -21.2953 -20.8125 -20.8112 -20.8046 -20.7990 -20.0200 -20.0196 -19.8284 -19.8275 -19.2984 -19.2968 -19.1645 -18.8674 -18.8641 -18.7061 -18.5428 -18.5412 -18.3003 -18.3001 -17.8051 -17.7615 -17.7593 -17.6638 -17.6621 -17.3263 -17.2157 -17.2135 -15.9580 -15.9533 -15.6937 -15.1151 -14.9756 -13.7775 -13.7715 -13.5030 -13.5005 -13.4530 -12.2714 -12.1692 -12.0951 -12.0872 -11.8268 -11.8258 -11.7393 -11.7390 -11.6725 -11.0510 -11.0455 -10.8724 -10.8712 -10.4360 -10.4307 -10.2947 -9.9875 -9.9764 -9.9750 -9.6135 -9.3327 -9.0830 -9.0687 -9.0450 -9.0010 -9.0003
            -9.6135
                       -9.3327
                                   -9.0830
                                              -9.0687
                                                          -9.0450
                                                                     -9.0010
 -9.9750
                                                                                 -9.0003
 -8.9051
            -8.8986
                       -8.8380
                                   -8.7115
                                              -8.6293
                                                          -8.6230
                                                                      -8.2311
                                                                                 -8.2307
                       -8.0476
 -8.0589
            -8.0523
                                  -8.0461
                                              -7.9676
                                                          -7.9658
                                                                     -7.8823
                                                                                 -7.7703
                       -7.4428
                                   -7.4355
 -7.5126
            -7.4996
                                              -7.2786
                                                          -7.2781
                                                                      -7.2739
                                                                                 -7.2722
 -6.9536
            -6.9532
                       -6.8468
                                   -6.8383
                                              -6.7574
                                                          -6.7563
                                                                      -6.4592
                                                                                 -6.4588
                                                          -5.9436
                                                                      -5.9421
 -6.3466
            -6.3422
                       -6.3272
                                   -6.3262
                                              -6.1473
                                                                                 -5.7807
                                   -5.2489
            -5.7582
                       -5.2497
                                              -5.0926
                                                                      -5.0644
 -5.7704
                                                          -5.0895
                                                                                 -4.8733
 -4.8720
                                                          -4.5056
            -4.7589
                       -4.7295
                                   -4.6218
                                              -4.6207
                                                                      -4.5054
                                                                                 -4.4087
                                              -3.2982
                                   -3.5586
 -3.7732
            -3.5854
                       -3.5838
                                                                      -3.0787
                                                          -3.2936
                                                                                 -2.2880
 -0.2572
             0.3979
                         0.5465
                                    0.5590
                                               1.5491
                                                           1.5522
                                                                       1.6370
                                                                                   2.1725
  2.2745
                         2.4100
                                     2.4234
                                                2.4393
                                                            2.5525
                                                                       2.5687
             2.3524
                                                                                   2.5697
  2.5733
              2.8709
                         2.9663
                                     2.9695
                                                2.9733
                                                            3.0282
                                                                       3.0286
                                                                                   3.2195
  3.2234
              3.6496
         k = 0.2063 - 0.3574 \ 0.0000 \ (64820 \ PWs)
                                                            bands (ev):
-21.3844 -21.3019 -20.8035 -20.8021 -20.7939 -20.7882 -20.0261 -20.0257
-19.8360 -19.8351 -19.3167 -19.3152 -19.1439 -18.8929 -18.8896 -18.6777
-18.5356 -18.5341 -18.2882 -18.2879 -17.8097 -17.7513 -17.7490 -17.6686
-17.6669 -17.3345 -17.1882 -17.1860 -15.9806 -15.9759 -15.7002 -15.1515
-14.9825 -13.7393 -13.7332 -13.5421 -13.5396 -13.4289 -12.2756 -12.1474
-12.0892 -12.0813 -11.8125 -11.8115 -11.7616 -11.7613 -11.6688 -11.0111
-11.0056 -10.8711 -10.8699 -10.4515 -10.4463 -10.3296
                                                                     -9.9745
                                                                                 -9.9433
                                                          -9.0784
 -9.9419
            -9.6450
                       -9.3420
                                  -9.1175
                                              -9.1032
                                                                     -9.0098
                                                                                 -9.0090
                                  -8.7205
 -8.9024
            -8.8961
                       -8.8090
                                              -8.6164
                                                          -8.6103
                                                                     -8.2251
                                                                                 -8.2247
 -8.0566
           -8.0500 -8.0352
                                  -8.0337
                                              -7.9916
                                                          -7.9898
                                                                     -7.8609
                                                                                 -7.7958
           -7.4921 -7.4390
                                  -7.4329 -7.2779
                                                          -7.2774
                                                                     -7.2492
 -7.5039
                                                                                 -7.2475
 -6.9620 -6.9616 -6.8799 -6.8713 -6.7402 -6.7391 -6.4419
                                                                                 -6.4415
```

```
-6.3560
                               -6.3550
                                                  -5.9694
                                                            -5.9679
                                                                      -5.7921
 -6.3755
           -6.3711
                                        -6.1157
 -5.7787
          -5.7314
                    -5.2604
                              -5.2596
                                        -5.0805
                                                  -5.0774
                                                            -5.0381
                                                                      -4.8632
 -4.8620
          -4.7420
                    -4.7053
                              -4.5980
                                        -4.5970
                                                  -4.4873
                                                            -4.4870
                                                                      -4.3952
                                        -3.3117
                                                                      -2.3236
 -3.7797
           -3.5930
                    -3.5914
                              -3.5682
                                                  -3.3073
                                                            -3.0916
 -0.2223
           0.4006
                     0.5665
                               0.5792
                                         1.5144
                                                   1.5174
                                                             1.6263
                                                                       2.1618
 2.2727
           2.3629
                     2.3997
                               2.4379
                                          2.4535
                                                   2.5443
                                                              2.5651
                                                                       2.5827
  2.5838
           2.8603
                     2.9599
                                2.9832
                                          2.9847
                                                    3.0014
                                                              3.0018
                                                                       3.2347
  3.2386
            3.6641
       k = 0.2024 - 0.3505 \ 0.0000 \ (64812 \ PWs)
                                                   bands (ev):
-21.3920 -21.3084 -20.7944 -20.7930 -20.7830 -20.7773 -20.0321 -20.0317
-19.8435 -19.8425 -19.3351 -19.3335 -19.1233 -18.9184 -18.9150 -18.6491 -18.5285 -18.5269 -18.2761 -18.2758 -17.8141 -17.7409 -17.7387 -17.6735 -17.6718 -17.3430 -17.1606 -17.1583 -16.0032 -15.9986 -15.7065 -15.1880 -14.9892 -13.7011 -13.6947 -13.5811 -13.5787 -13.4047 -12.2797 -12.1253 -12.0833 -12.0753 -11.7980 -11.7970 -11.7836 -11.7833 -11.6648 -10.9712
-10.9655 -10.8698 -10.8687 -10.4668 -10.4617 -10.3643
                                                            -9.9612
                                                                      -9.9101
                                        -9.1380
                    -9.3512
                              -9.1521
                                                            -9.0184
                                                                      -9.0176
 -9.9086
          -9.6763
                                                  -9.1118
          -8.8937
                    -8.7803
                              -8.7293
                                        -8.6033
                                                  -8.5974
                                                            -8.2193
                                                                      -8.2189
 -8.8998
                                                            -7.8397
 -8.0543
          -8.0477
                    -8.0227
                              -8.0212
                                        -8.0157
                                                  -8.0139
                                                                      -7.8213
 -7.5011
                    -7.4280
                              -7.4243
                                        -7.2772
          -7.4919
                                                  -7.2767
                                                            -7.2246
                                                                      -7.2229
                              -6.9047
                                        -6.7231
 -6.9702
          -6.9699
                                                  -6.7220
                                                            -6.4247
                    -6.9133
                                                                      -6.4243
                    -6.3852
 -6.4043
          -6.4000
                              -6.3841
                                        -6.0844
                                                  -5.9952
                                                            -5.9936
                                                                      -5.8036
                              -5.2704
                    -5.2712
                                        -5.0683
 -5.7885
          -5.7026
                                                  -5.0652
                                                            -5.0120
                                                                      -4.8531
 -4.8518
          -4.7253
                    -4.6814
                              -4.5744
                                        -4.5734
                                                  -4.4691
                                                            -4.4688
                                                                      -4.3819
                              -3.5776
 -3.7860
          -3.6010
                    -3.5994
                                        -3.3257
                                                  -3.3213
                                                             -3.1049
                                                                      -2.3593
                     0.5869
 -0.1873
                               0.5998
                                         1.4800
                                                   1.4830
                                                              1.6157
           0.4031
                                                                       2.1512
  2.2708
            2.3739
                      2.3892
                                2.4527
                                          2.4682
                                                    2.5359
                                                              2.5567
                                                                        2.5970
  2.5981
            2.8499
                                          2.9749
                                                    2.9984
                      2.9495
                                2.9745
                                                              3.0000
                                                                       3.2501
  3.2540
            3.6787
       k = 0.1984 - 0.3437 \ 0.0000 \ (64802 \ PWs)
                                                   bands (ev):
-21.3994 -21.3147 -20.7852 -20.7838 -20.7720 -20.7663 -20.0379 -20.0375
-19.8508 -19.8499 -19.3533 -19.3517 -19.1027 -18.9437 -18.9403 -18.6205
-18.5212 -18.5196 -18.2642 -18.2639 -17.8185 -17.7305 -17.7282 -17.6787
-17.6770 -17.3518 -17.1329 -17.1306 -16.0257 -16.0212 -15.7127 -15.2246
-14.9959 -13.6628 -13.6562 -13.6199 -13.6175 -13.3804 -12.2837 -12.1029
-12.0774 -12.0694 -11.8053 -11.8051 -11.7833 -11.7822 -11.6604 -10.9312
-10.9255 -10.8686 -10.8675 -10.4820 -10.4769 -10.3990
                                                            -9.9477
                                                                      -9.8767
 -9.8753
          -9.7075
                    -9.3601 -9.1868
                                       -9.1728
                                                  -9.1453
                                                            -9.0268
                                                                      -9.0260
                                        -8.5901
          -8.8914
                                                                      -8.2133
                              -8.7380
                                                  -8.5843
                                                            -8.2137
 -8.8975
                    -8.7520
                                                  -8.0086
                    -8.0398
                              -8.0380
                                        -8.0101
                                                            -7.8468
 -8.0521
          -8.0454
                                                                      -7.8188
          -7.4961
                    -7.4127
                              -7.4105
                                        -7.2765
                                                  -7.2761
                                                            -7.2002
 -7.5029
                                                                      -7.1986
          -6.9780
 -6.9783
                    -6.9470
                              -6.9383
                                        -6.7060
                                                  -6.7049
                                                            -6.4329
                                                                      -6.4287
 -6.4146
          -6.4136
                    -6.4075
                              -6.4071
                                        -6.0535
                                                  -6.0209
                                                            -6.0193
                                                                      -5.8151
 -5.7979
          -5.6737
                    -5.2820
                              -5.2813
                                        -5.0559
                                                  -5.0528
                                                            -4.9863
                                                                      -4.8428
 -4.8415
          -4.7090
                    -4.6580
                              -4.5510
                                        -4.5500
                                                  -4.4511
                                                            -4.4508
                                                                      -4.3688
 -3.7922
          -3.6092
                    -3.6076
                              -3.5869
                                        -3.3400
                                                  -3.3357
                                                            -3.1186
                                                                      -2.3952
 -0.1520
           0.4055
                     0.6077
                               0.6209
                                         1.4459
                                                   1.4488
                                                             1.6053
                                                                       2.1409
 2.2690
           2.3788
                      2.3853
                                2.4676
                                          2.4830
                                                    2.5275
                                                              2.5481
                                                                       2.6116
  2.6127
            2.8397
                      2.9391
                                2.9482
                                          2.9486
                                                    3.0136
                                                              3.0152
                                                                        3.2657
  3.2696
            3.6933
       k = 0.1944 - 0.3368 \ 0.0000 \ (64806 \ PWs)
                                                   bands (ev):
-21.4067 -21.3209 -20.7759 -20.7745 -20.7608 -20.7551 -20.0437 -20.0432
-19.8580 -19.8570 -19.3715 -19.3699 -19.0821 -18.9688 -18.9654 -18.5917
-18.5138 -18.5123 -18.2524 -18.2521 -17.8229 -17.7199 -17.7176 -17.6840
-17.6823 -17.3609 -17.1051 -17.1028 -16.0482 -16.0437 -15.7187 -15.2613
-15.0024 -13.6590 -13.6565 -13.6240 -13.6176 -13.3559 -12.2876 -12.0803
```

```
-12.0715 -12.0634 -11.8267 -11.8264 -11.7683 -11.7673 -11.6558 -10.8911
-10.8853 -10.8675 -10.8663 -10.4971 -10.4920 -10.4336
                                                                -9.9340
                                                                           -9.8432
                                                      -9.1787
                                                                 -9.0349
 -9.8418
           -9.7386
                     -9.3689
                                -9.2218
                                           -9.2079
                                                                            -9.0342
                                                                 -8.2084
                                                                            -8.2080
-7.7981
                      -8.7465
                                                      -8.5710
 -8.8953
           -8.8894
                                 -8.7241
                                           -8.5766
                      -8.0499
                                 -8.0432
                                           -7.9973
                                                      -7.9957
 -8.0640
           -8.0622
                                                                 -7.8723
 -7.5074
           -7.5022
                      -7.3958
                                 -7.3934
                                           -7.2759
                                                      -7.2754
                                                                 -7.1760
                                                                            -7.1745
                                                                 -6.4615
           -6.9860
                      -6.9809
                                 -6.9723
                                           -6.6890
                                                      -6.6879
 -6.9863
                                                                            -6.4573
 -6.4443
           -6.4432
                     -6.3905
                                 -6.3901
                                           -6.0465
                                                      -6.0449
                                                                 -6.0233
                                                                            -5.8266
 -5.8066
           -5.6448
                      -5.2929
                                 -5.2922
                                           -5.0433
                                                      -5.0403
                                                                 -4.9610
                                                                            -4.8324
 -4.8312
           -4.6929
                      -4.6349
                                 -4.5277
                                            -4.5268
                                                      -4.4332
                                                                 -4.4329
                                                                            -4.3560
 -3.7984
           -3.6177
                      -3.6161
                                 -3.5959
                                           -3.3547
                                                      -3.3504
                                                                 -3.1327
                                                                            -2.4311
 -0.1167
            0.4079
                      0.6289
                                 0.6423
                                            1.4121
                                                       1.4150
                                                                  1.5951
                                                                             2.1307
  2.2672
             2.3686
                       2.3970
                                  2.4824
                                             2.4976
                                                        2.5194
                                                                  2.5394
                                                                             2.6265
                       2.9222
  2.6275
             2.8297
                                  2.9226
                                             2.9290
                                                        3.0290
                                                                  3.0307
                                                                             3.2815
  3.2855
             3.7071
        k = 0.1905 - 0.3299 \ 0.0000 \ (64806 \ PWs)
                                                        bands (ev):
-21.4139 -21.3270 -20.7665 -20.7650 -20.7494 -20.7437 -20.0493 -20.0489 -19.8650 -19.8641 -19.3897 -19.3881 -19.0615 -18.9939 -18.9904 -18.5628 -18.5064 -18.5049 -18.2407 -18.2405 -17.8271 -17.7091 -17.7068 -17.6895 -17.6878 -17.3702 -17.0772 -17.0748 -16.0706 -16.0662 -15.7247 -15.2980 -15.0088 -13.6975 -13.6951 -13.5857 -13.5790 -13.3313 -12.2915 -12.0656 -12.0581 -12.0566 -11.8478 -11.8475 -11.7532 -11.7522 -11.6509 -10.8664 -10.8653 -10.8509 -10.8451 -10.5121 -10.5070 -10.4679 -9.9200 -9.8096 -9.8082 -9.7695 -9.3775 -9.2568 -9.2431 -9.2121 -9.0429 -9.0422
                      -8.7549
           -8.8875
                                           -8.5630
                                                      -8.5575
                                                                 -8.2033
 -8.8933
                                -8.6966
                                                                            -8.2029
                                           -7.9843
                      -8.0477
                                 -8.0410
                                                      -7.9828
                                                                            -7.7778
           -8.0863
                                                                 -7.8976
 -8.0881
           -7.5092
                      -7.3781
                                -7.3749
                                           -7.2753
 -7.5133
                                                      -7.2748
                                                                 -7.1521
                                                                            -7.1507
 -7.0154
           -7.0067
                      -6.9940
                                 -6.9936
                                           -6.6720
                                                      -6.6709
                                                                 -6.4899
                                                                            -6.4857
                      -6.3737
 -6.4743
           -6.4732
                                 -6.3733
                                           -6.0720
                                                      -6.0705
                                                                 -5.9944
                                                                            -5.8382
                      -5.3039
                                 -5.3031
                                            -5.0306
 -5.8139
           -5.6157
                                                       -5.0276
                                                                 -4.9360
                                                                            -4.8219
                      -4.6121
                                 -4.5047
 -4.8207
           -4.6772
                                            -4.5038
                                                       -4.4154
                                                                 -4.4152
                                                                            -4.3435
 -3.8044
           -3.6265
                      -3.6248
                                 -3.6048
                                            -3.3697
                                                       -3.3655
                                                                 -3.1473
                                                                            -2.4672
             0.4102
 -0.0811
                       0.6504
                                  0.6640
                                             1.3787
                                                        1.3815
                                                                  1.5852
                                                                             2.1208
  2.2654
             2.3586
                       2.4092
                                  2.4957
                                             2.5078
                                                        2.5170
                                                                  2.5311
                                                                             2.6415
                                                        3.0447
  2.6425
             2.8199
                        2.8965
                                  2.8969
                                             2.9189
                                                                  3.0464
                                                                             3,2976
  3.3015
             3.7140
        k = 0.1865 - 0.3230 \ 0.0000 \ (64798 \ PWs)
                                                        bands (ev):
-21.4209 -21.3330 -20.7569 -20.7555 -20.7380 -20.7322 -20.0548 -20.0544
-19.8719 -19.8709 -19.4078 -19.4062 -19.0408 -19.0188 -19.0152 -18.5337
-18.4989 -18.4974 -18.2292 -18.2290 -17.8313 -17.6982 -17.6959 -17.6952
-17.6935 -17.3798 -17.0492 -17.0468 -16.0930 -16.0886 -15.7305 -15.3348
-15.0150 -13.7361 -13.7337 -13.5472 -13.5403 -13.3067 -12.2953 -12.0596
-12.0515 -12.0341 -11.8685 -11.8683 -11.7379 -11.7368 -11.6457 -10.8655
-10.8643 -10.8107 -10.8049 -10.5271 -10.5219 -10.5018
                                                                 -9.9057
                                                                            -9.8002
                                                                            -9.0499
 -9.7759
           -9.7745
                      -9.3859
                                -9.2920
                                           -9.2784
                                                      -9.2454
                                                                 -9.0507
 -8.8915
           -8.8857
                      -8.7630
                                 -8.6696
                                           -8.5492
                                                      -8.5438
                                                                 -8.1983
                                                                            -8.1979
 -8.1123
           -8.1105
                      -8.0456
                                 -8.0389
                                           -7.9711
                                                      -7.9696
                                                                 -7.9229
                                                                            -7.7578
 -7.5200
           -7.5164
                      -7.3597
                                 -7.3559
                                           -7.2746
                                                      -7.2741
                                                                 -7.1285
                                                                            -7.1271
 -7.0500
           -7.0413
                      -7.0016
                                 -7.0013
                                            -6.6550
                                                       -6.6539
                                                                 -6.5182
                                                                            -6.5140
 -6.5045
           -6.5034
                      -6.3569
                                 -6.3565
                                            -6.0975
                                                       -6.0959
                                                                 -5.9679
                                                                            -5.8499
 -5.8188
           -5.5866
                      -5.3149
                                            -5.0178
                                                       -5.0148
                                                                 -4.9114
                                 -5.3141
                                                                            -4.8113
 -4.8101
            -4.6617
                      -4.5898
                                 -4.4818
                                            -4.4809
                                                       -4.3979
                                                                 -4.3976
                                                                            -4.3311
 -3.8103
           -3.6355
                      -3.6338
                                 -3.6135
                                            -3.3851
                                                       -3.3809
                                                                 -3.1622
                                                                            -2.5033
 -0.0455
            0.4124
                      0.6723
                                 0.6861
                                            1.3456
                                                       1.3484
                                                                  1.5754
                                                                            2.1111
  2.2637
             2.3487
                       2.4217
                                  2.4965
                                             2.5133
                                                        2.5227
                                                                  2.5319
                                                                             2.6567
  2.6578
             2.8103
                       2.8711
                                  2.8715
                                             2.9091
                                                        3.0606
                                                                  3.0623
                                                                             3.3138
  3.3177
             3.7076
```

```
k = 0.1825 - 0.3162 \ 0.0000 \ (64790 \ PWs)
                                                         bands (ev):
-17.6849 -17.3896 -17.0211 -17.0187 -16.1154 -16.1110 -15.7362 -15.3717
-15.0211 -13.7745 -13.7722 -13.5087 -13.5016 -13.2819 -12.2990 -12.0537 -12.0455 -12.0107 -11.8889 -11.8887 -11.7223 -11.7213 -11.6402 -10.8646 -10.8634 -10.7705 -10.7646 -10.5442 -10.5376 -10.5323 -9.8912 -9.8308
                     -9.3942 -9.3274 -9.3139
 -9.7421
           -9.7406
                                                       -9.2788
                                                                  -9.0582
                                                                             -9.0574
 -8.8898
           -8.8841
                      -8.7710
                                 -8.6429
                                            -8.5352
                                                       -8.5299
                                                                  -8.1936
                                                                             -8.1932
 -8.1365
           -8.1347
                      -8.0435
                                 -8.0367
                                            -7.9578
                                                       -7.9563
                                                                  -7.9482
                                                                             -7.7381
                                                                  -7.1051
                                                                             -7.1039
 -7.5269
           -7.5238
                      -7.3408
                                 -7.3365
                                            -7.2740
                                                       -7.2735
 -7.0848
           -7.0761
                      -7.0091
                                 -7.0087
                                            -6.6380
                                                       -6.6369
                                                                  -6.5464
                                                                             -6.5422
                                            -6.1229
                                                                  -5.9457
 -6.5349
           -6.5338
                      -6.3403
                                 -6.3399
                                                       -6.1213
                                                                             -5.8616
                                            -5.0048
 -5.8194
            -5.5574
                      -5.3259
                                 -5.3251
                                                       -5.0018
                                                                  -4.8872
                                                                             -4.8006
 -4.7993
            -4.6465
                      -4.5678
                                 -4.4592
                                            -4.4584
                                                       -4.3804
                                                                  -4.3802
                                                                             -4.3190
                                                                  -3.1775
                                 -3.6220
                                            -3.4008
                                                       -3.3966
                                                                             -2.5396
 -3.8161
           -3.6447
                      -3.6431
 -0.0096
             0.4145
                        0.6945
                                   0.7085
                                              1.3129
                                                        1.3157
                                                                   1.5659
                                                                              2.1016
                                              2.5095
                                                                              2.6723
  2.2619
             2.3391
                        2.4346
                                   2.4883
                                                         2.5326
                                                                   2.5467
  2.6733
             2.8009
                        2.8460
                                   2.8464
                                              2.8995
                                                         3.0766
                                                                   3.0784
                                                                               3.3302
  3.3342
             3.6987
        k = 0.1786 - 0.3093 \ 0.0000 \ (64764 \ PWs)
                                                        bands (ev):
-21.4345 -21.3446 -20.7375 -20.7360 -20.7145 -20.7088 -20.0655 -20.0651 -19.8852 -19.8843 -19.4439 -19.4424 -19.0681 -19.0646 -18.9994 -18.4837 -18.4821 -18.4753 -18.2067 -18.2064 -17.8394 -17.7071 -17.7054 -17.6760 -17.6737 -17.3998 -16.9929 -16.9905 -16.1376 -16.1333 -15.7418 -15.4086 -15.0271 -13.8128 -13.8105 -13.4701 -13.4629 -13.2570 -12.3026 -12.0477 -12.0395 -11.9871 -11.9090 -11.9088 -11.7067 -11.7056 -11.6343 -10.8638 -10.8626 -10.7302 -10.7242 -10.5733 -10.5541 -10.5497 -9.8765 -9.8612 -9.7081 -9.7087 -9.4023 -9.3628 -9.3405 -0.3121 -0.0655
                                 -9.3628
                                            -9.3495
                      -9.4023
                                                       -9.3121
                                                                             -9.0647
 -9.7081
           -9.7067
                                                                  -9.0655
                      -8.7789
                                 -8.6167
                                            -8.5211
                                                       -8.5158
 -8.8882
            -8.8826
                                                                  -8.1891
                                                                             -8.1886
                      -8.0414
                                 -8.0346
                                            -7.9734
                                                       -7.9444
                                                                  -7.9429
 -8.1606
            -8.1589
                                                                             -7.7186
 -7.5340
            -7.5311
                      -7.3217
                                 -7.3171
                                            -7.2733
                                                       -7.2729
                                                                  -7.1200
                                                                             -7.1113
                                            -6.6211
                                                       -6.6200
 -7.0819
            -7.0808
                      -7.0164
                                 -7.0161
                                                                  -6.5744
                                                                             -6.5702
 -6.5656
           -6.5645
                      -6.3239
                                 -6.3235
                                            -6.1482
                                                       -6.1466
                                                                  -5.9305
                                                                             -5.8734
                                                       -4.9887
 -5.8130
            -5.5282
                      -5.3370
                                 -5.3362
                                            -4.9917
                                                                  -4.8633
                                                                             -4.7898
 -4.7885
            -4.6316
                      -4.5461
                                 -4.4369
                                            -4.4360
                                                       -4.3632
                                                                  -4.3630
                                                                             -4.3071
                                 -3.6304
                                            -3.4167
                                                       -3.4126
 -3.8218
           -3.6542
                      -3.6526
                                                                  -3.1933
                                                                             -2.5760
  0.0263
             0.4165
                       0.7169
                                  0.7312
                                             1.2805
                                                        1.2833
                                                                   1.5565
                                                                              2.0922
                        2.4478
                                   2.4791
                                              2.5004
                                                         2.5479
  2.2602
             2.3297
                                                                   2.5625
                                                                              2.6879
  2.6889
             2.7917
                        2.8213
                                   2.8217
                                              2.8901
                                                        3.0929
                                                                   3.0946
                                                                              3.3469
  3.3508
             3.6895
        k = 0.1746 - 0.3024 \ 0.0000 \ (64760 \ PWs)
                                                         bands (ev):
-21.4410 -21.3502 -20.7276 -20.7261 -20.7026 -20.6969 -20.0707 -20.0703
-19.8916 -19.8907 -19.4619 -19.4603 -19.0926 -19.0890 -18.9786 -18.4760
-18.4744 -18.4459 -18.1956 -18.1954 -17.8433 -17.7133 -17.7116 -17.6647
-17.6624 -17.4101 -16.9646 -16.9621 -16.1598 -16.1556 -15.7472 -15.4455
-15.0330 -13.8510 -13.8487 -13.4316 -13.4242 -13.2319 -12.3062 -12.0418
-12.0335 -11.9633 -11.9287 -11.9285 -11.6908 -11.6898 -11.6281 -10.8630
-10.8619 -10.6899 -10.6838 -10.6068 -10.5686 -10.5642
                                                                  -9.8915
                                                                             -9.8616
 -9.6741
           -9.6726
                      -9.4103
                                 -9.3983
                                            -9.3851
                                                       -9.3453
                                                                  -9.0725
                                                                             -9.0718
 -8.8868
           -8.8812
                      -8.7865
                                 -8.5909
                                            -8.5068
                                                       -8.5015
                                                                  -8.1849
                                                                             -8.1846
                                            -7.9986
                                                       -7.9308
                                                                  -7.9292
 -8.1843
           -8.1830
                      -8.0394
                                 -8.0326
                                                                             -7.6995
                                 -7.2976
                                                                  -7.1553
 -7.5412
           -7.5384
                      -7.3025
                                            -7.2727
                                                       -7.2722
                                                                             -7.1466
 -7.0592
           -7.0582
                      -7.0236
                                 -7.0232
                                            -6.6044
                                                       -6.6037
                                                                  -6.6017
                                                                             -6.5979
           -6.5954
                      -6.3077
                                 -6.3073
                                            -6.1734
                                                       -6.1718
                                                                  -5.9238
 -6.5966
                                                                             -5.8852
          -5.4989 -5.3482 -5.3474 -4.9784
                                                       -4.9754
                                                                  -4.8399
 -5.7980
                                                                             -4.7788
```

```
-4.6170
                      -4.5249
                                 -4.4148
                                           -4.4140
                                                      -4.3460
                                                                -4.3459
                                                                           -4.2955
 -4.7776
                                                                -3.2094
 -3.8273
           -3.6640
                     -3.6623
                                -3.6385
                                           -3.4330
                                                      -3.4289
                                                                           -2.6124
            0.4185
  0.0625
                       0.7396
                                  0.7541
                                            1.2486
                                                      1.2513
                                                                 1.5473
                                                                           2.0831
                                  2.4709
            2.3204
                                            2.4906
                                                       2.5639
                                                                  2.5787
                                                                            2.7037
  2.2584
                       2.4600
  2.7048
            2.7828
                       2.7970
                                  2.7974
                                            2.8809
                                                       3.1094
                                                                  3.1111
                                                                            3.3637
  3.3677
            3.6804
        k = 0.1706 - 0.2956 \ 0.0000 \ (64764 \ PWs)
                                                       bands (ev):
-21.4475 -21.3556 -20.7176 -20.7161 -20.6905 -20.6848 -20.0758 -20.0753
-19.8979 \ -19.8970 \ -19.4798 \ -19.4783 \ -19.1170 \ -19.1133 \ -18.9579 \ -18.4682
-18.4666 -18.4163 -18.1848 -18.1845 -17.8472 -17.7196 -17.7179 -17.6533 -17.6509 -17.4208 -16.9362 -16.9337 -16.1820 -16.1778 -15.7526 -15.4824 -15.0388 -13.8891 -13.8868 -13.3931 -13.3855 -13.2068 -12.3097 -12.0359 -12.0275 -11.9481 -11.9479 -11.9392 -11.6748 -11.6738 -11.6216 -10.8624 -10.8613 -10.6498 -10.6437 -10.6401 -10.5826 -10.5782 -9.9216 -9.8464
                                                                -9.0793
                     -9.4341 -9.4216 -9.4171 -9.3785
                                                                           -9.0786
 -9.6399
           -9.6385
                     -8.7940
                                                     -8.4871
                                                                           -8.2071
 -8.8854
           -8.8799
                                -8.5656 -8.4922
                                                                -8.2089
                     -8.0374
                                                                -7.9155
                                                                           -7.6808
 -8.1805
           -8.1801
                                -8.0306 -8.0237
                                                     -7.9170
           -7.5457
                     -7.2833
                                -7.2781
 -7.5483
                                           -7.2721
                                                     -7.2716
                                                                -7.1910
                                                                           -7.1822
 -7.0368
           -7.0360
                     -7.0306
                                -7.0302
                                           -6.6300
                                                      -6.6278
                                                                -6.6266
                                                                           -6.6257
 -6.5873
                                                                           -5.8971
           -6.5862
                     -6.2917
                                -6.2912
                                           -6.1985
                                                      -6.1970
                                                                -5.9243
 -5.7758
                      -5.3594
                                           -4.9650
                                -5.3586
           -5.4696
                                                      -4.9620
                                                                -4.8169
                                                                           -4.7678
                      -4.5040
                                -4.3930
 -4.7665
                                           -4.3922
                                                      -4.3291
                                                                -4.3289
           -4.6027
                                                                           -4.2841
                      -3.6723
 -3.8328
                                -3.6465
                                           -3.4495
                                                      -3.4455
                                                                 -3.2259
           -3.6740
                                                                           -2.6489
  0.0987
                                 0.7773
                                            1.2170
                                                      1.2197
            0.4203
                       0.7626
                                                                 1.5384
                                                                            2.0742
  2.2567
            2.3114
                       2.4574
                                  2.4771
                                            2.4809
                                                       2.5803
                                                                  2.5951
                                                                            2.7197
            2.7730
  2.7208
                       2.7734
                                  2.7740
                                            2.8719
                                                       3.1261
                                                                  3.1278
                                                                            3.3808
  3.3847
            3.6717
        k = 0.1667 - 0.2887 \ 0.0000 \ (64766 \ PWs)
                                                       bands (ev):
-21.4537 -21.3610 -20.7075 -20.7060 -20.6783 -20.6726 -20.0807 -20.0803
-19.9041 -19.9032 -19.4977 -19.4961 -19.1412 -19.1375 -18.9371 -18.4604 -18.4588 -18.3867 -18.1741 -18.1738 -17.8510 -17.7262 -17.7245 -17.6417 -17.6394 -17.4317 -16.9078 -16.9053 -16.2040 -16.1999 -15.7578 -15.5193
-15.0444 -13.9270 -13.9248 -13.3546 -13.3469 -13.1815 -12.3131 -12.0300
-12.0215 -11.9671 -11.9669 -11.9149 -11.6587 -11.6577 -11.6148 -10.8619
-10.8607 -10.6747 -10.6092 -10.6033 -10.5959 -10.5919
                                                               -9.9515
                                                                          -9.8310
 -9.6057
           -9.6042 -9.4698 -9.4570
                                          -9.4254
                                                     -9.4116
                                                                -9.0859
                                                                           -9.0851
                                -8.5408 -8.4776
                                                     -8.4725
 -8.8842
           -8.8787 -8.8014
                                                                -8.2329
                                                                           -8.2312
                                                     -7.9030
 -8.1765
           -8.1761 -8.0487
                                -8.0355
                                           -8.0286
                                                                -7.9015
                                                                           -7.6624
                                           -7.2640
                                                     -7.2586
                     -7.2715 -7.2710
                                                                -7.2268
                                                                           -7.2180
 -7.5554
           -7.5528
                                -7.0141
                                          -6.6592
                     -7.0147
 -7.0374
           -7.0371
                                                     -6.6580
                                                                -6.6576
                                                                           -6.6532
                     -6.2758
                                -6.2754
                                           -6.2236
                                                     -6.2220
                                                                -5.9294
 -6.5706
           -6.5694
                                                                           -5.9091
 -5.7489
           -5.4402
                     -5.3707
                                -5.3699
                                          -4.9514
                                                     -4.9484
                                                                -4.7942
                                                                           -4.7566
 -4.7554
           -4.5887
                     -4.4835
                                -4.3715
                                          -4.3708
                                                     -4.3122
                                                                -4.3120
                                                                           -4.2729
 -3.8381
           -3.6842
                     -3.6825
                                -3.6543
                                           -3.4662
                                                     -3.4622
                                                                -3.2428
                                                                           -2.6856
            0.4221
                                                                 1.5296
                      0.7858
                                  0.8007
                                                      1.1885
  0.1352
                                            1.1859
                                                                            2.0655
  2.2550
            2.3026
                       2.4475
                                  2.4700
                                            2.4917
                                                       2.5969
                                                                  2.6116
                                                                            2.7358
  2.7368
            2.7495
                       2.7498
                                  2.7655
                                            2.8632
                                                       3.1430
                                                                  3.1447
                                                                            3.3980
  3.4020
            3.6621
        k = 0.1627 - 0.2818 \ 0.0000 \ (64782 \ PWs)
                                                       bands (ev):
-21.4599 -21.3662 -20.6972 -20.6958 -20.6659 -20.6602 -20.0855 -20.0851
-19.9101 -19.9092 -19.5155 -19.5139 -19.1653 -19.1616 -18.9163 -18.4525
-18.4509 -18.3569 -18.1635 -18.1633 -17.8546 -17.7328 -17.7311 -17.6300
-17.6276 -17.4429 -16.8792 -16.8767 -16.2260 -16.2219 -15.7629 -15.5563
-15.0499 -13.9649 -13.9627 -13.3161 -13.3082 -13.1561 -12.3165 -12.0241
-12.0156 -11.9858 -11.9856 -11.8904 -11.6425 -11.6415 -11.6077 -10.8615 -10.8603 -10.7085 -10.6101 -10.6057 -10.5684 -10.5621 -9.9813 -9.8155
```

```
-9.5713
           -9.5699
                      -9.5055
                                 -9.4929
                                            -9.4453
                                                       -9.4322
                                                                  -9.0922
                                                                             -9.0914
                                                       -8.4576
 -8.8831
           -8.8777
                      -8.8085
                                 -8.5164
                                            -8.4627
                                                                  -8.2569
                                                                             -8.2552
 -8.1727
                                                                  -7.8874
           -8.1722
                      -8.0737
                                 -8.0335
                                            -8.0267
                                                       -7.8890
                                                                             -7.6443
           -7.5599
                      -7.2709
                                                                  -7.2442
                                                                             -7.2388
 -7.5624
                                 -7.2704
                                            -7.2632
                                                       -7.2545
 -7.0441
           -7.0437
                      -6.9931
                                 -6.9928
                                            -6.6909
                                                       -6.6896
                                                                  -6.6849
                                                                             -6.6804
 -6.5538
           -6.5527
                      -6.2602
                                 -6.2598
                                            -6.2486
                                                       -6.2470
                                                                  -5.9372
                                                                             -5.9211
 -5.7193
           -5.4109
                      -5.3820
                                 -5.3812
                                            -4.9377
                                                       -4.9347
                                                                  -4.7720
                                                                             -4.7454
 -4.7441
           -4.5750
                      -4.4635
                                 -4.3505
                                            -4.3498
                                                       -4.2954
                                                                  -4.2953
                                                                             -4.2620
                                                                             -2.7223
 -3.8433
           -3.6946
                      -3.6929
                                 -3.6619
                                            -3.4832
                                                       -3.4793
                                                                  -3.2601
  0.1717
             0.4239
                       0.8092
                                  0.8244
                                             1.1552
                                                        1.1578
                                                                   1.5211
                                                                              2.0570
  2.2533
             2.2939
                        2.4370
                                   2.4594
                                              2.5065
                                                        2.6137
                                                                   2.6284
                                                                              2.7262
  2.7265
             2.7522
                        2.7532
                                   2.7572
                                              2.8546
                                                         3.1600
                                                                   3.1617
                                                                              3.4155
  3.4194
             3.6182
        k = 0.1587 - 0.2749 \ 0.0000 \ (64760 \ PWs)
                                                        bands (ev):
-21.4658 -21.3713 -20.6869 -20.6854 -20.6534 -20.6477 -20.0903 -20.0898 -19.9160 -19.9151 -19.5333 -19.5317 -19.1893 -19.1855 -18.8955 -18.4445 -18.4429 -18.3269 -18.1532 -18.1530 -17.8583 -17.7396 -17.7379 -17.6182 -17.6158 -17.4543 -16.8506 -16.8480 -16.2479 -16.2438 -15.7678 -15.5933 -15.0552 -14.0025 -14.0004 -13.2776 -13.2696 -13.1307 -12.3197 -12.0183 -12.0097 -12.0041 -12.0039 -11.8657 -11.6261 -11.6251 -11.6002 -10.8612 -10.8601 -10.7424 -10.6233 -10.6190 -10.5280 -10.5216 -10.0109 -9.7997 -9.5414 -9.5368 -9.5354 -9.5288 -9.4782 -9.4396 -9.0982 -9.0975 -8.88200 -8.88767 -8.88155 -8.4025 -8.4477 -8.4427 -8.2808 -8.2701
                                 -8.4925
                                            -8.4477
 -8.8820
           -8.8767
                      -8.8155
                                                       -8.4427
                                                                  -8.2808
                                                                             -8.2791
 -8.1690
           -8.1685
                      -8.0986
                                 -8.0317
                                            -8.0248
                                                       -7.8747
                                                                  -7.8732
                                                                             -7.6265
                      -7.2994
                                 -7.2906
                                            -7.2703
                                                       -7.2698
 -7.5693
           -7.5668
                                                                  -7.2252
                                                                             -7.2196
                                            -6.7227
                                                                  -6.7120
 -7.0506
           -7.0503
                      -6.9720
                                 -6.9718
                                                       -6.7215
                                                                             -6.7073
                      -6.2734
           -6.5360
                                 -6.2719
                                            -6.2448
 -6.5371
                                                       -6.2444
                                                                  -5.9465
                                                                             -5.9333
           -5.3935
                      -5.3926
                                 -5.3814
                                            -4.9238
                                                       -4.9209
                                                                  -4.7502
 -5.6882
                                                                             -4.7340
 -4.7328
           -4.5616
                      -4.4438
                                 -4.3298
                                            -4.3292
                                                       -4.2787
                                                                  -4.2786
                                                                             -4.2513
                                 -3.6693
                                            -3.5004
 -3.8484
           -3.7052
                      -3.7036
                                                       -3.4965
                                                                  -3.2777
                                                                             -2.7590
  0.2084
             0.4255
                        0.8328
                                  0.8482
                                             1.1249
                                                        1.1275
                                                                   1.5127
                                                                              2.0487
  2.2517
             2.2855
                        2.4261
                                   2.4485
                                              2.5218
                                                         2.6307
                                                                   2.6453
                                                                               2.7034
  2.7037
             2.7492
                                              2.8462
                                                                   3.1790
                        2.7687
                                   2.7697
                                                         3.1773
                                                                              3.4331
  3.4371
             3.5718
        k = 0.1548 - 0.2681 \ 0.0000 \ (64754 \ PWs)
                                                        bands (ev):
-21.4717 -21.3763 -20.6764 -20.6750 -20.6407 -20.6351 -20.0949 -20.0945
-19.9217 -19.9208 -19.5510 -19.5494 -19.2131 -19.2093 -18.8747 -18.4364
-18.4348 -18.2969 -18.1430 -18.1428 -17.8618 -17.7465 -17.7448 -17.6062
-17.6038 -17.4660 -16.8219 -16.8193 -16.2697 -16.2657 -15.7727 -15.6303
-15.0604 -14.0401 -14.0379 -13.2393 -13.2311 -13.1051 -12.3229 -12.0221
-12.0218 -12.0125 -12.0038 -11.8408 -11.6097 -11.6087 -11.5923 -10.8611
-10.8599 -10.7761 -10.6363 -10.6320 -10.4875 -10.4809 -10.0403
                                                                             -9.7837
           -9.5649
                      -9.5112 -9.5023
                                           -9.5008
                                                      -9.4465
                                                                 -9.1039
 -9.5773
                                                                             -9.1032
 -8.8811
           -8.8758
                     -8.8223 -8.4690
                                            -8.4325
                                                       -8.4275
                                                                  -8.3047
                                                                             -8.3029
 -8.1655
           -8.1650
                      -8.1234 -8.0298
                                            -8.0229
                                                       -7.8603
                                                                  -7.8588
                                                                             -7.6091
 -7.5761
           -7.5736
                      -7.3359
                                 -7.3271
                                            -7.2697
                                                       -7.2692
                                                                  -7.2059
                                                                             -7.2002
                                                                             -6.7337
 -7.0570
           -7.0566
                      -6.9517
                                 -6.9512
                                            -6.7548
                                                       -6.7536
                                                                  -6.7388
 -6.5204
           -6.5193
                      -6.2982
                                 -6.2967
                                            -6.2297
                                                       -6.2292
                                                                  -5.9568
                                                                             -5.9455
 -5.6561
           -5.4050
                      -5.4041
                                 -5.3520
                                            -4.9098
                                                       -4.9069
                                                                  -4.7288
                                                                             -4.7226
                                                        -4.2621
            -4.5485
                      -4.4245
                                             -4.3090
                                                                  -4.2620
 -4.7213
                                  -4.3096
                                                                             -4.2409
            -3.7160
                      -3.7144
                                  -3.6766
                                             -3.5178
                                                        -3.5139
                                                                  -3.2957
                                                                             -2.7959
 -3.8534
  0.2453
             0.4271
                       0.8566
                                   0.8722
                                             1.0951
                                                        1.0977
                                                                   1.5046
                                                                              2.0406
                        2.4149
                                              2.5376
                                                         2.6478
                                                                   2.6621
  2.2501
             2.2773
                                   2.4373
                                                                              2.6812
                                                        3.1948
                                                                   3.1965
             2.7415
                        2.7853
                                   2.7863
                                              2.8380
  2.6814
                                                                              3.4510
  3.4549
             3.5255
        k = 0.1508 - 0.2612 \ 0.0000 \ (64762 \ PWs)
                                                         bands (ev):
```

```
-21.4774 -21.3812 -20.6659 -20.6644 -20.6279 -20.6223 -20.0994 -20.0990
-19.9273 -19.9264 -19.5686 -19.5670 -19.2368 -19.2329 -18.8539 -18.4283
-18.4267 -18.2667 -18.1330 -18.1328 -17.8652 -17.7536 -17.7519 -17.5941
-17.5917 -17.4779 -16.7931 -16.7905 -16.2914 -16.2874 -15.7774 -15.6672 -15.0655 -14.0775 -14.0754 -13.2010 -13.1926 -13.0793 -12.3260 -12.0396
-12.0394 -12.0067 -11.9980 -11.8157 -11.5931 -11.5921 -11.5842 -10.8610
-10.8599 -10.8098 -10.6491 -10.6449 -10.4469 -10.4402 -10.0696
                                                                          -9.7675
           -9.6010
                     -9.5443 -9.4677
                                          -9.4662 -9.4533 -9.1094
 -9.6132
                                                                          -9.1087
 -8.8802
           -8.8750
                     -8.8289 -8.4461
                                          -8.4171
                                                     -8.4121
                                                               -8.3284
                                                                          -8.3267
 -8.1621
           -8.1616
                     -8.1482
                                -8.0280
                                          -8.0211
                                                     -7.8458
                                                                -7.8442
                                                                          -7.5921
 -7.5828
           -7.5803
                     -7.3726
                               -7.3638
                                          -7.2692
                                                     -7.2687
                                                                -7.1867
                                                                          -7.1809
                                                                          -6.7595
 -7.0632
           -7.0628
                     -6.9325
                                -6.9312
                                          -6.7871
                                                     -6.7858
                                                                -6.7651
                                          -6.2148
                                                                -5.9678
                                                                          -5.9578
 -6.5037
           -6.5026
                     -6.3229
                                -6.3214
                                                     -6.2143
 -5.6233
           -5.4165
                     -5.4157
                                -5.3225
                                           -4.8956
                                                     -4.8927
                                                                -4.7111
                                                                          -4.7098
 -4.7078
           -4.5358
                     -4.4056
                                -4.2900
                                           -4.2895
                                                     -4.2454
                                                                -4.2454
                                                                           -4.2307
 -3.8583
           -3.7270
                     -3.7254
                                -3.6836
                                           -3.5354
                                                     -3.5315
                                                                -3.3141
                                                                          -2.8328
  0.2823
            0.4287
                       0.8806
                                 0.8964
                                            1.0658
                                                      1.0683
                                                                 1.4966
                                                                            2.0327
  2.2485
            2.2693
                       2.4035
                                  2.4260
                                            2.5538
                                                       2.6582
                                                                 2.6587
                                                                            2.6662
  2.6797
            2.7343
                       2.8020
                                  2.8030
                                            2.8301
                                                       3.2124
                                                                 3.2141
                                                                            3,4690
  3.4730
            3.4793
        k = 0.1468 - 0.2543 \ 0.0000 \ (64766 \ PWs)
                                                       bands (ev):
-21.4829 -21.3859 -20.6552 -20.6537 -20.6149 -20.6093 -20.1038 -20.1033 -19.9327 -19.9318 -19.5862 -19.5846 -19.2603 -19.2564 -18.8331 -18.4201 -18.4185 -18.2365 -18.1232 -18.1230 -17.8686 -17.7608 -17.7591 -17.5818 -17.5794 -17.4901 -16.7643 -16.7617 -16.3130 -16.3091 -15.7820 -15.7042 -15.0705 -14.1147 -14.1126 -13.1627 -13.1542 -13.0535 -12.3290 -12.0568 -12.0566 -12.0011 -11.9923 -11.7904 -11.5766 -11.5760 -11.5752 -10.8611 -10.8600 -10.8434 -10.6616 -10.6575 -10.4063 -10.3995 -10.0987 -9.7511
 -9.6491
           -9.6370
                     -9.5772
                               -9.4599
                                          -9.4329
                                                     -9.4315
                                                               -9.1146
                                                                          -9.1139
                                                                          -8.3503
 -8.8794
           -8.8743
                     -8.8353
                                -8.4237
                                           -8.4015
                                                     -8.3966
                                                                -8.3521
                                                                -7.8295
 -8.1731
           -8.1587
                      -8.1583
                                -8.0263
                                           -8.0193
                                                     -7.8310
                                                                           -7.5894
 -7.5868
                                                                -7.1675
           -7.5755
                     -7.4094
                                -7.4006
                                           -7.2686
                                                     -7.2681
                                                                           -7.1617
           -7.0689
                                                                -6.7907
 -7.0692
                     -6.9146
                                -6.9123
                                           -6.8195
                                                     -6.8182
                                                                           -6.7841
 -6.4871
           -6.4860
                      -6.3475
                                -6.3460
                                           -6.2001
                                                     -6.1997
                                                                -5.9792
                                                                           -5.9701
 -5.5901
           -5.4281
                      -5.4273
                                -5.2931
                                           -4.8813
                                                      -4.8784
                                                                -4.6994
                                                                           -4.6981
 -4.6874
           -4.5233
                      -4.3872
                                -4.2710
                                           -4.2705
                                                     -4.2288
                                                                -4.2287
                                                                           -4.2208
 -3.8630
           -3.7382
                      -3.7366
                                -3.6905
                                           -3.5531
                                                      -3.5493
                                                                -3.3329
                                                                           -2.8697
  0.3195
            0.4301
                       0.9047
                                 0.9206
                                            1.0369
                                                       1.0394
                                                                 1.4889
                                                                            2.0250
  2.2469
            2.2615
                       2.3918
                                  2.4143
                                            2.5704
                                                       2.6371
                                                                 2.6375
                                                                            2.6830
  2.6958
            2.7281
                       2.8187
                                  2.8198
                                            2.8223
                                                       3.2303
                                                                 3.2320
                                                                            3.4331
  3.4873
            3.4912
        k = 0.1429 - 0.2474 \ 0.0000 \ (64722 \ PWs)
                                                       bands (ev):
-21.4883 -21.3905 -20.6444 -20.6429 -20.6018 -20.5962 -20.1080 -20.1076
-19.9380 -19.9371 -19.6037 -19.6022 -19.2837 -19.2798 -18.8123 -18.4119
-18.4103 -18.2061 -18.1136 -18.1134 -17.8719 -17.7682 -17.7665 -17.5695
-17.5670 -17.5025 -16.7354 -16.7327 -16.3345 -16.3306 -15.7864 -15.7411
-15.0753 -14.1518 -14.1497 -13.1246 -13.1159 -13.0276 -12.3320 -12.0736
-12.0734 -11.9955 -11.9866 -11.7649 -11.5669 -11.5598 -11.5588 -10.8769
-10.8614 -10.8602 -10.6739 -10.6698 -10.3656 -10.3587 -10.1276
                                -9.4663
 -9.6850
           -9.6731
                                                     -9.3966
                     -9.6101
                                           -9.3981
                                                               -9.1195
                                                                           -9.1188
 -8.8787
                      -8.8415
                                -8.4018
                                                      -8.3809
           -8.8736
                                           -8.3857
                                                                -8.3756
                                                                           -8.3739
 -8.1978
           -8.1557
                      -8.1553
                                -8.0245
                                           -8.0176
                                                      -7.8162
                                                                -7.8146
                                                                           -7.5959
           -7.5592
                      -7.4464
                                -7.4375
                                           -7.2680
                                                      -7.2676
                                                                -7.1485
 -7.5933
                                                                           -7.1425
 -7.0751
           -7.0747
                      -6.8996
                                -6.8954
                                           -6.8521
                                                      -6.8509
                                                                -6.8143
                                                                           -6.8062
                                                                -5.9909
 -6.4705
           -6.4694
                     -6.3720
                                -6.3705
                                           -6.1857
                                                      -6.1853
                                                                           -5.9826
 -5.5564
           -5.4398
                     -5.4390
                                -5.2635
                                           -4.8669
                                                     -4.8640
                                                                -4.6876
                                                                           -4.6864
                                -4.2526
                                           -4.2522
                                                     -4.2120
 -4.6673
           -4.5112
                     -4.3691
                                                                -4.2118
                                                                           -4.2111
                     -3.7480
 -3.8677
          -3.7496
                               -3.6972 -3.5710
                                                     -3.5672
                                                               -3.3520
                                                                          -2.9068
```

```
0.3568
             0.4315
                        0.9289
                                   0.9451
                                               1.0086
                                                          1.0110
                                                                     1.4813
                                                                                2.0175
  2.2453
             2.2540
                        2.3799
                                   2.4024
                                               2.5873
                                                          2.6161
                                                                     2.6165
                                                                                2.7001
  2.7084
             2.7268
                        2.8148
                                   2.8356
                                               2.8367
                                                          3.2483
                                                                     3.2501
                                                                                3.3870
  3.5058
             3.5097
        k = 0.1389 - 0.2406 \ 0.0000 \ (64732 \ PWs)
                                                          bands (ev):
-21.4935 -21.3950 -20.6335 -20.6320 -20.5886 -20.5830 -20.1122 -20.1117
-19.9431 -19.9422 -19.6212 -19.6196 -19.3070 -19.3030 -18.7915 -18.4036
-18.4020 -18.1755 -18.1042 -18.1040 -17.8751 -17.7756 -17.7739 -17.5569 -17.5545 -17.5152 -16.7064 -16.7037 -16.3560 -16.3521 -15.7908 -15.7780 -15.0801 -14.1887 -14.1867 -13.0866 -13.0778 -13.0015 -12.3349 -12.0900 -12.0898 -11.9900 -11.9810 -11.7393 -11.5421 -11.5421 -10.9103
-10.8618 -10.8606 -10.6859 -10.6819 -10.3250 -10.3179 -10.1563
                                                                              -9.7209
                                 -9.4724 -9.3632 -9.3617
 -9.7177
            -9.7092 -9.6430
                                                                   -9.1242
                                                                              -9.1234
 -8.8780
           -8.8731
                      -8.8476 -8.3990
                                             -8.3973
                                                        -8.3804
                                                                   -8.3698
                                                                              -8.3650
                                                                   -7.7996
                                                                              -7.6024
                       -8.1523
                                 -8.0229
                                             -8.0159
 -8.2224
            -8.1527
                                                        -7.8011
                                             -7.2675
                                                                              -7.1236
 -7.5998
            -7.5433
                       -7.4835
                                  -7.4745
                                                        -7.2670
                                                                   -7.1295
                                                                              -6.8216
            -7.0804
                                  -6.8850
                                                                   -6.8321
 -7.0808
                       -6.8915
                                             -6.8845
                                                        -6.8837
                       -6.3965
                                  -6.3949
                                             -6.1716
                                                        -6.1711
                                                                   -6.0029
                                                                               -5.9951
 -6.4540
            -6.4529
 -5.5225
            -5.4516
                       -5.4507
                                  -5.2340
                                             -4.8523
                                                         -4.8495
                                                                    -4.6758
                                                                               -4.6746
                                  -4.2350
                                                                    -4.1952
 -4.6478
            -4.4993
                       -4.3515
                                             -4.2347
                                                         -4.2017
                                                                               -4.1949
                                  -3.7037
                                             -3.5891
                                                        -3.5853
            -3.7612
                       -3.7596
 -3.8722
                                                                    -3.3714
                                                                               -2.9439
                                              0.9808
                                                          0.9832
  0.3942
             0.4329
                        0.9532
                                   0.9695
                                                                     1.4740
                                                                                2.0102
                                               2.5954
                                                                     2.6048
  2.2438
                        2.3678
                                   2.3903
                                                          2.5957
                                                                                2.7060
             2.2466
  2.7201
             2.7380
                        2.8075
                                   2.8526
                                               2.8536
                                                          3.2666
                                                                     3.2683
                                                                                3.3410
  3.5244
             3.5283
        k = 0.1349 - 0.2337 \ 0.0000 \ (64734 \ PWs)
                                                          bands (ev):
-21.4986 -21.3993 -20.6225 -20.6210 -20.5752 -20.5696 -20.1162 -20.1158 -19.9481 -19.9472 -19.6386 -19.6370 -19.3301 -19.3261 -18.7707 -18.3952 -18.3936 -18.1449 -18.0950 -18.0948 -17.8782 -17.7832 -17.7815 -17.5443 -17.5418 -17.5281 -16.6774 -16.6747 -16.3773 -16.3734 -15.8149 -15.7950 -15.0846 -14.2255 -14.2235 -13.0487 -13.0397 -12.9753 -12.3377 -12.1060 -12.1058 -11.9845 -11.9755 -11.7134 -11.5482 -11.5263 -11.5253 -10.9437 -10.8623 -10.8612 -10.6976 -10.6937 -10.2843 -10.2770 -10.1848 -9.7567
 -9.7452
           -9.7008
                      -9.6759
                                 -9.4784 -9.3282
                                                        -9.3267
                                                                   -9.1285
                                                                              -9.1277
                                             -8.4205
                                                                              -8.3489
 -8.8774
            -8.8726
                      -8.8534
                                  -8.4222
                                                        -8.3596
                                                                   -8.3536
 -8.2469
            -8.1499
                      -8.1494
                                  -8.0212
                                             -8.0142
                                                        -7.7859
                                                                   -7.7844
                                                                              -7.6092
           -7.5278
                      -7.5204
 -7.6064
                                  -7.5113
                                             -7.2669
                                                        -7.2665
                                                                   -7.1108
                                                                              -7.1048
 -7.0863
           -7.0859
                       -6.9180
                                  -6.9167
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                                                                   -6.8337
                                                                              -6.8238
                       -6.4208
                                  -6.4192
 -6.4375
           -6.4364
                                             -6.1578
                                                        -6.1573
                                                                   -6.0151
                                                                              -6.0078
 -5.4884
           -5.4634
                       -5.4625
                                                                   -4.6638
                                  -5.2045
                                             -4.8376
                                                        -4.8348
                                                                               -4.6626
 -4.6287
            -4.4878
                       -4.3344
                                  -4.2181
                                             -4.2178
                                                        -4.1925
                                                                   -4.1782
                                                                               -4.1778
           -3.7729
                                  -3.7100
                                                                   -3.3912
 -3.8766
                       -3.7713
                                             -3.6073
                                                        -3.6036
                                                                               -2.9810
                        0.9534
             0.4342
                                                          0.9943
  0.4318
                                   0.9558
                                              0.9777
                                                                     1.4669
                                                                                2.0032
  2.2394
             2.2423
                                   2.3779
                                               2.5752
                                                          2.5755
                                                                     2.6225
                        2.3553
                                                                                2.7010
  2.7378
             2.7547
                        2.8003
                                   2.8696
                                               2.8707
                                                          3.2850
                                                                     3.2867
                                                                                3.2953
  3.5432
             3.5471
        k = 0.1310 - 0.2268 \ 0.0000 \ (64746 \ PWs)
                                                          bands (ev):
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-19.9530 -19.9521 -19.6559 -19.6543 -19.3531 -19.3491 -18.7499 -18.3868
-18.3852 -18.1141 -18.0860 -18.0858 -17.8812 -17.7909 -17.7892 -17.5412
-17.5315 -17.5290 -16.6484 -16.6456 -16.3985 -16.3947 -15.8518 -15.7991
-15.0891 -14.2620 -14.2601 -13.0110 -13.0018 -12.9490 -12.3404 -12.1216
-12.1214 -11.9792 -11.9701 -11.6874 -11.5383 -11.5095 -11.5085 -10.9769
-10.8631 -10.8619 -10.7090 -10.7052 -10.2436 -10.2361 -10.2132
                                                                              -9.7925
 -9.7812 -9.7086 -9.6837 -9.4841 -9.2931 -9.2916 -9.1325
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 -8.8768 -8.8724 -8.8589 -8.4453 -8.4436 -8.3397 -8.3370 -8.3326
```

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                                                                 -7.7691
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            -8.1471
                                                                 -7.0945
 -7.6134
           -7.5568
                      -7.5475
                                 -7.5126
                                           -7.2664
                                                      -7.2659
                                                                            -7.0923
 -7.0892
           -7.0854
                      -6.9511
                                -6.9498
                                           -6.9139
                                                      -6.9092
                                                                 -6.8218
                                                                           -6.8145
 -6.4450
           -6.4435
                      -6.4211
                                 -6.4200
                                           -6.1442
                                                      -6.1438
                                                                 -6.0275
                                                                            -6.0205
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            -5.4744
                      -5.4540
                                 -5.1749
                                            -4.8228
                                                      -4.8199
                                                                 -4.6518
                                                                            -4.6506
 -4.6100
            -4.4766
                      -4.3177
                                 -4.2019
                                            -4.2018
                                                      -4.1836
                                                                 -4.1611
                                                                            -4.1606
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           -3.7849
                      -3.7832
                                 -3.7162
                                           -3.6256
                                                      -3.6219
                                                                 -3.4113
                                                                            -3.0182
                                                       1.0189
  0.4354
            0.4696
                      0.9267
                                 0.9291
                                            1.0021
                                                                  1.4600
                                                                            1.9963
  2.2324
             2.2407
                       2.3427
                                  2.3653
                                             2.5554
                                                       2.5558
                                                                  2.6406
                                                                             2.6949
  2.7561
             2.7725
                       2.7935
                                  2.8867
                                             2.8877
                                                       3.2493
                                                                  3.3037
                                                                             3.3054
  3.5620
             3.5659
        k = 0.1270 - 0.2199 \ 0.0000 \ (64750 \ PWs)
                                                       bands (ev):
-21.5084 -21.4076 -20.6001 -20.5986 -20.5480 -20.5424 -20.1239 -20.1235
-21.5084 -21.4076 -20.6001 -20.5986 -20.5480 -20.5424 -20.1239 -20.1235 -19.9577 -19.9568 -19.6732 -19.6716 -19.3760 -19.3719 -18.7291 -18.3783 -18.3767 -18.0832 -18.0772 -18.0770 -17.8842 -17.7987 -17.7970 -17.5546 -17.5186 -17.5161 -16.6193 -16.6165 -16.4196 -16.4158 -15.8886 -15.8031 -15.0934 -14.2984 -14.2965 -12.9735 -12.9641 -12.9226 -12.3430 -12.1368 -12.1366 -11.9740 -11.9648 -11.6613 -11.5281 -11.4927 -11.4917 -11.0101 -10.8639 -10.8628 -10.7201 -10.7163 -10.2414 -10.2029 -10.1952 -9.8283 -9.8171 -9.7414 -9.6664 -9.4897 -9.2580 -9.2565 -9.1361 -9.1354
                      -8.8639
                                                      -8.3217
                                                                 -8.3190
 -8.8764
           -8.8725
                                 -8.4682
                                           -8.4666
                                                                            -8.3160
                                                                 -7.7536
           -8.1446
                      -8.1441
                                 -8.0181
                                                      -7.7551
 -8.2959
                                           -8.0111
                                                                            -7.6268
                      -7.5814
           -7.5907
                                 -7.4979
                                           -7.2659
 -7.6226
                                                      -7.2654
                                                                 -7.0974
                                                                            -7.0970
 -7.0733
                      -6.9845
                                           -6.9357
                                                      -6.9322
                                                                 -6.8061
                                                                            -6.8004
           -7.0676
                                 -6.9831
                      -6.4047
 -6.4691
           -6.4676
                                 -6.4036
                                            -6.1310
                                                      -6.1306
                                                                 -6.0401
                                                                            -6.0334
 -5.4873
            -5.4864
                      -5.4195
                                 -5.1454
                                            -4.8078
                                                       -4.8050
                                                                 -4.6397
                                                                            -4.6384
 -4.5919
                      -4.3014
            -4.4657
                                 -4.1865
                                            -4.1864
                                                       -4.1749
                                                                 -4.1439
                                                                            -4.1434
            -3.7969
                      -3.7953
 -3.8850
                                 -3.7222
                                            -3.6440
                                                       -3.6404
                                                                 -3.4318
                                                                            -3.0554
  0.4366
             0.5075
                       0.9005
                                  0.9028
                                             1.0267
                                                       1.0437
                                                                  1.4532
                                                                             1.9896
                                  2.3524
  2.2257
             2.2392
                       2.3298
                                             2.5360
                                                        2.5364
                                                                  2.6592
                                                                             2.6887
  2.7747
             2.7860
                       2.7917
                                  2.9038
                                             2.9049
                                                        3.2036
                                                                  3.3225
                                                                             3.3242
  3.5795
             3.5825
        k = 0.1230 - 0.2131 \ 0.0000 \ (64730 \ PWs)
                                                       bands (ev):
-21.5130 -21.4116 -20.5888 -20.5873 -20.5341 -20.5286 -20.1276 -20.1272
-19.9623 -19.9614 -19.6903 -19.6888 -19.3987 -19.3946 -18.7083 -18.3697
-18.3682 -18.0687 -18.0685 -18.0522 -17.8870 -17.8066 -17.8049 -17.5682
-17.5055 -17.5030 -16.5902 -16.5874 -16.4406 -16.4369 -15.9254 -15.8070
-15.0976 -14.3346 -14.3328 -12.9361 -12.9265 -12.8960 -12.3456 -12.1516
-12.1514 -11.9690 -11.9597 -11.6350 -11.5176 -11.4759 -11.4749 -11.0431
-10.8650 -10.8639 -10.7309 -10.7272 -10.2694 -10.1622 -10.1542
                                                                           -9.8639
                     -9.6489
                                -9.4950
                                           -9.2227
                                                      -9.2212
                                                                -9.1395
 -9.8530
           -9.7740
                                                                            -9.1387
           -8.8739
 -8.8760
                     -8.8675
                                -8.4910
                                           -8.4893
                                                      -8.3203
                                                                 -8.3049
                                                                            -8.3009
                                -8.0166
           -8.1421
                     -8.1416
                                           -8.0095
                                                      -7.7395
                                                                 -7.7380
 -8.2985
                                                                            -7.6469
           -7.6135
                      -7.6068
                                -7.4835
                                           -7.2654
                                                      -7.2650
                                                                 -7.1024
 -7.6414
                                                                            -7.1020
                                                      -6.9557
                                                                            -6.7849
 -7.0558
           -7.0502
                     -7.0180
                                -7.0166
                                           -6.9586
                                                                 -6.7895
 -6.4931
           -6.4916
                      -6.3884
                                 -6.3873
                                           -6.1181
                                                      -6.1176
                                                                 -6.0529
                                                                            -6.0463
 -5.4993
           -5.4984
                      -5.3848
                                 -5.1158
                                           -4.7927
                                                       -4.7899
                                                                 -4.6274
                                                                            -4.6262
 -4.5742
           -4.4552
                      -4.2855
                                 -4.1718
                                            -4.1717
                                                       -4.1665
                                                                 -4.1268
                                                                            -4.1262
 -3.8890
            -3.8091
                      -3.8075
                                 -3.7280
                                            -3.6625
                                                       -3.6589
                                                                 -3.4526
                                                                            -3.0927
                                                                             1.9832
  0.4377
            0.5455
                       0.8749
                                  0.8772
                                             1.0513
                                                       1.0685
                                                                  1.4467
  2.2191
             2.2378
                       2.3166
                                  2.3393
                                             2.5172
                                                        2.5176
                                                                  2.6781
                                                                             2.6825
  2.7800
             2.7936
                       2.8099
                                  2.9210
                                             2.9220
                                                        3.1580
                                                                  3.3416
                                                                             3.3433
  3.5798
             3.5802
        k = 0.1190 - 0.2062 \ 0.0000 \ (64710 \ PWs)
                                                        bands (ev):
-21.5175 -21.4155 -20.5773 -20.5758 -20.5202 -20.5147 -20.1312 -20.1308
-19.9667 -19.9658 -19.7075 -19.7059 -19.4213 -19.4172 -18.6875 -18.3611
```

```
-18.3596 -18.0603 -18.0602 -18.0211 -17.8898 -17.8147 -17.8130 -17.5820
-17.4923 -17.4898 -16.5611 -16.5582 -16.4615 -16.4578 -15.9621 -15.8107
-15.1016 -14.3706 -14.3688 -12.8990 -12.8892 -12.8693 -12.3481 -12.1660
-9.8887
           -9.8066 -9.6312 -9.5000 -9.1874 -9.1860 -9.1425
                                                                         -9.1417
                               -8.5135
                                          -8.5119
                                                    -8.3445
 -8.8777
           -8.8754
                     -8.8688
                                                               -8.2881
                                                                         -8.2837
           -8.1397
                     -8.1392
                               -8.0151 -8.0081
                                                    -7.7237
                                                               -7.7222
 -8.2802
                                                                         -7.6797
           -7.6236
                     -7.6196 -7.4695
                                          -7.2649
                                                    -7.2645
                                                               -7.1073
 -7.6729
                                                                         -7.1069
                                                                         -6.7689
 -7.0516
           -7.0503
                     -7.0402
                               -7.0352
                                          -6.9800
                                                    -6.9777
                                                               -6.7729
 -6.5170
           -6.5155
                     -6.3721
                               -6.3710
                                          -6.1055
                                                    -6.1051
                                                               -6.0658
                                                                         -6.0594
 -5.5114
           -5.5105
                     -5.3500
                                -5.0862
                                          -4.7774
                                                     -4.7746
                                                               -4.6151
                                                                         -4.6139
                                          -4.1577
                                                     -4.1576
                                                                          -4.1092
           -4.4449
                     -4.2701
                               -4.1583
                                                               -4.1098
 -4.5570
                                          -3.6811
                                                    -3.6776
 -3.8929
           -3.8215
                     -3.8199
                                -3.7336
                                                               -3.4737
                                                                          -3.1300
                                                                           1.9769
  0.4388
            0.5837
                      0.8499
                                           1.0760
                                                     1.0934
                                                                1.4404
                                 0.8522
  2.2128
            2.2364
                       2.3032
                                 2.3259
                                            2.4989
                                                      2.4993
                                                                2.6765
                                                                           2.6974
  2.7737
            2.8126
                       2.8287
                                 2.9382
                                            2.9392
                                                      3.1125
                                                                3.3608
                                                                           3.3625
  3.5738
            3.5744
        k = 0.1151 - 0.1993 \ 0.0000 \ (64732 \ PWs)
                                                      bands (ev):
-21.5219 -21.4192 -20.5658 -20.5642 -20.5061 -20.5006 -20.1347 -20.1342 -19.9709 -19.9701 -19.7245 -19.7230 -19.4437 -19.4396 -18.6668 -18.3525 -18.3509 -18.0522 -18.0520 -17.9898 -17.8925 -17.8228 -17.8211 -17.5961 -17.4790 -17.4764 -16.5320 -16.5290 -16.4823 -16.4787 -15.9989 -15.8143 -15.1056 -14.4064 -14.4046 -12.8621 -12.8521 -12.8424 -12.3505 -12.1800 -12.1798 -11.9593 -11.9498 -11.5818 -11.4954 -11.4423 -11.4414 -11.1090 -10.8677 -10.8666 -10.7514 -10.7478 -10.3247 -10.0809 -10.0721 -9.9349 -9.9243 -9.8392 -9.6134 -9.5049 -9.1521 -9.1506 -9.1451 -9.1444
                     -8.8691
                               -8.5359
                                          -8.5342
                                                     -8.3688
                                                               -8.2711
 -8.8821
           -8.8751
                                                                         -8.2667
                                                    -7.7165
 -8.2622
           -8.1375
                     -8.1370
                                -8.0137
                                          -8.0066
                                                               -7.7094
                                                                         -7.7076
 -7.7059
                     -7.6272
                                -7.4560
           -7.6303
                                          -7.2645
                                                     -7.2640
                                                               -7.1120
                                                                         -7.1117
                                                               -6.7565
 -7.0854
           -7.0841
                     -7.0333
                                -7.0304
                                          -6.9930
                                                    -6.9897
                                                                          -6.7529
                                -6.3547
 -6.5408
           -6.5393
                     -6.3558
                                          -6.0933
                                                     -6.0928
                                                               -6.0788
                                                                          -6.0725
 -5.5237
           -5.5228
                     -5.3150
                                -5.0567
                                          -4.7620
                                                     -4.7592
                                                               -4.6027
                                                                          -4.6015
 -4.5403
           -4.4350
                     -4.2552
                                -4.1504
                                          -4.1442
                                                     -4.1441
                                                               -4.0929
                                                                          -4.0922
 -3.8967
           -3.8340
                     -3.8324
                                -3.7390
                                          -3.6998
                                                     -3.6963
                                                               -3.4951
                                                                          -3.1674
  0.4398
                      0.8254
                                 0.8277
                                                     1.1182
                                                                1.4343
            0.6220
                                           1.1006
                                                                           1.9708
  2.2067
            2.2349
                       2.2896
                                 2.3122
                                            2.4810
                                                      2.4814
                                                                2.6706
                                                                           2.7170
  2.7676
            2.8318
                       2.8479
                                 2.9553
                                            2.9563
                                                      3.0673
                                                                3.3802
                                                                           3.3819
  3.5678
            3.5685
        k = 0.1111-0.1925 \ 0.0000 \ (64778 \ PWs)
                                                      bands (ev):
-21.5261 -21.4228 -20.5541 -20.5526 -20.4918 -20.4863 -20.1380 -20.1376
-19.9751 -19.9742 -19.7415 -19.7400 -19.4660 -19.4619 -18.6461 -18.3438
-18.3422 -18.0443 -18.0442 -17.9585 -17.8951 -17.8310 -17.8293 -17.6104
-17.4655 -17.4630 -16.5050 -16.5013 -16.5003 -16.4985 -16.0355 -15.8178
-15.1094 -14.4420 -14.4402 -12.8258 -12.8163 -12.8141 -12.3528 -12.1935
-12.1933 -11.9547 -11.9452 -11.5550 -11.4839 -11.4256 -11.4247 -11.1418
-10.8694 -10.8682 -10.7611 -10.7576 -10.3521 -10.0404 -10.0311
                                                                         -9.9701
 -9.9597
           -9.8717
                     -9.5955
                                -9.5094
                                          -9.1475
                                                    -9.1467
                                                               -9.1166
                                                                         -9.1152
                                -8.5580
 -8.8868
           -8.8748
                     -8.8690
                                          -8.5563
                                                     -8.3929
                                                               -8.2541
                                                                          -8.2496
                                                     -7.7543
 -8.2445
           -8.1353
                     -8.1349
                                -8.0123
                                          -8.0052
                                                               -7.7466
                                                                          -7.6917
                                -7.4428
                                          -7.2640
                                                               -7.1194
 -7.6902
           -7.6359
                     -7.6332
                                                     -7.2635
                                                                          -7.1180
 -7.1167
           -7.1163
                     -7.0468
                                -7.0440
                                          -6.9873
                                                     -6.9818
                                                               -6.7404
                                                                          -6.7372
           -6.5630
                     -6.3397
                                -6.3385
                                          -6.0920
                                                     -6.0858
                                                               -6.0814
 -6.5645
                                                                          -6.0809
 -5.5360
           -5.5351
                     -5.2800
                                -5.0271
                                           -4.7465
                                                     -4.7437
                                                               -4.5902
                                                                          -4.5890
           -4.4254
                      -4.2407
                                -4.1428
                                          -4.1312
                                                     -4.1311
                                                               -4.0762
 -4.5241
                                                                          -4.0755
 -3.9004
           -3.8467
                     -3.8451
                                -3.7444
                                          -3.7185
                                                     -3.7151
                                                               -3.5168
                                                                          -3.2048
                     0.8017
  0.4407
            0.6604
                                0.8039
                                          1.1253
                                                     1.1431
                                                               1.4284
                                                                          1.9650
                       2.2757
                                 2.2983
  2.2007
            2.2335
                                           2.4637
                                                      2.4641
                                                               2.6648
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```

```
2.7617
             2.8512
                       2.8673
                                 2.9720
                                            2.9733
                                                      3.0227
                                                                 3.3998
                                                                           3.4015
  3.5619
             3.5626
        k = 0.1071 - 0.1856 \ 0.0000 \ (64730 \ PWs)
                                                      bands (ev):
-21.5301 -21.4263 -20.5423 -20.5408 -20.4774 -20.4720 -20.1412 -20.1408
-19.9791 -19.9782 -19.7584 -19.7569 -19.4882 -19.4840 -18.6253 -18.3350
-18.3334 -18.0367 -18.0365 -17.9270 -17.8976 -17.8393 -17.8376 -17.6249
-17.4519 -17.4493 -16.5238 -16.5200 -16.4736 -16.4706 -16.0721 -15.8212
-15.1130 -14.4773 -14.4756 -12.7918 -12.7859 -12.7783 -12.3550 -12.2066
-12.2065 -11.9504 -11.9407 -11.5281 -11.4720 -11.4089 -11.4080 -11.1745
-10.8712 -10.8701 -10.7703 -10.7669 -10.3793 -10.0055
                                                               -9.9996 -9.9950
                                                               -9.0811
                                                                         -9.0797
 -9.9899
           -9.9041
                     -9.5773
                               -9.5137
                                          -9.1494
                                                    -9.1486
 -8.8914
           -8.8745
                     -8.8689
                                -8.5799
                                          -8.5782
                                                    -8.4170
                                                               -8.2368
                                                                         -8.2324
                                                               -7.7847
           -8.1333
                               -8.0110
                                                     -7.7926
 -8.2274
                     -8.1328
                                          -8.0039
                                                                          -7.6755
                                                     -7.2631
                                                               -7.1535
 -7.6740
           -7.6410
                     -7.6384
                                -7.4301
                                          -7.2636
                                                                          -7.1521
                               -7.0661
                                          -6.9722
                                                     -6.9662
                                                                          -6.7218
 -7.1211
           -7.1208
                     -7.0691
                                                               -6.7247
                     -6.3235
                                -6.3224
                                                               -6.0699
 -6.5881
           -6.5866
                                          -6.1052
                                                     -6.0991
                                                                          -6.0694
                                                     -4.7281
 -5.5483
           -5.5474
                      -5.2448
                                -4.9975
                                          -4.7309
                                                               -4.5776
                                                                          -4.5765
 -4.5085
           -4.4161
                      -4.2267
                                -4.1354
                                           -4.1187
                                                     -4.1186
                                                               -4.0598
                                                                          -4.0591
 -3.9039
           -3.8595
                      -3.8579
                                -3.7498
                                           -3.7371
                                                     -3.7338
                                                                -3.5389
                                                                          -3.2422
  0.4417
            0.6990
                       0.7785
                                 0.7807
                                            1.1500
                                                      1.1680
                                                                1.4227
                                                                           1.9594
                                            2.4469
                                                                           2.7561
  2.1950
            2.2320
                       2.2618
                                 2.2841
                                                      2.4473
                                                                 2.6593
  2.7574
            2.8708
                       2.8869
                                 2.9725
                                            2.9903
                                                      2.9945
                                                                 3.4196
                                                                           3.4213
  3.5563
            3.5570
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-21.5341 -21.4296 -20.5304 -20.5289 -20.4629 -20.4574 -20.1443 -20.1439 -19.9829 -19.9820 -19.7753 -19.7737 -19.5103 -19.5060 -18.6047 -18.3262 -18.3246 -18.0293 -18.0291 -17.9000 -17.8954 -17.8477 -17.8460 -17.6396 -17.4382 -17.4356 -16.5442 -16.5405 -16.4445 -16.4415 -16.1087 -15.8244 -15.1165 -14.5124 -14.5107 -12.7630 -12.7515 -12.7420 -12.3572 -12.2193 -12.2191 -11.9463 -11.9365 -11.5010 -11.4597 -11.3923 -11.3914 -11.2070 -10.8733 -10.8721 -10.7792 -10.7759 -10.4063 -10.0401 -10.0301 -9.9595
           -9.9365
 -9.9489
                     -9.5590
                                -9.5176
                                          -9.1510
                                                    -9.1502
                                                               -9.0456
                                                                         -9.0441
 -8.8959
           -8.8742
                     -8.8687
                                -8.6015
                                          -8.5999
                                                     -8.4410
                                                               -8.2194
                                                                          -8.2151
 -8.2108
           -8.1313
                     -8.1308
                                -8.0097
                                          -8.0026
                                                     -7.8311
                                                               -7.8232
                                                                          -7.6593
 -7.6579
           -7.6456
                     -7.6432
                                -7.4178
                                          -7.2631
                                                     -7.2627
                                                               -7.1877
                                                                          -7.1863
 -7.1255
           -7.1252
                     -7.0931
                                -7.0901
                                          -6.9550
                                                     -6.9489
                                                               -6.7095
                                                                          -6.7068
                                                                          -6.0582
 -6.6116
           -6.6101
                     -6.3074
                                -6.3063
                                          -6.1186
                                                     -6.1126
                                                               -6.0587
 -5.5607
           -5.5598
                     -5.2094
                                -4.9680
                                          -4.7151
                                                     -4.7124
                                                               -4.5650
                                                                          -4.5638
                     -4.2132
                                          -4.1067
                                                     -4.1066
 -4.4933
           -4.4072
                                -4.1283
                                                               -4.0438
                                                                          -4.0430
           -3.8724
                                -3.7581
                     -3.8708
                                          -3.7541
 -3.9073
                                                     -3.7511
                                                               -3.5612
                                                                          -3.2796
  0.4426
            0.7377
                       0.7561
                                 0.7582
                                            1.1747
                                                      1.1929
                                                                 1.4172
                                                                           1.9539
  2.1895
            2.2302
                       2.2478
                                 2.2697
                                            2.4307
                                                      2.4310
                                                                 2.6540
                                                                           2.7506
  2.7781
            2.8905
                                            3.0074
                                                      3.0091
                                                                 3.4396
                       2.9067
                                 2.9301
                                                                           3.4413
  3.5508
            3.5516
        k = 0.0992 - 0.1718 \ 0.0000 \ (64752 \ PWs)
                                                      bands (ev):
-21.5378 -21.4328 -20.5184 -20.5169 -20.4482 -20.4428 -20.1473 -20.1469
-19.9866 -19.9857 -19.7920 -19.7905 -19.5322 -19.5279 -18.5840 -18.3174
-18.3158 -18.0221 -18.0220 -17.9023 -17.8637 -17.8562 -17.8545 -17.6545
-17.4243 -17.4217 -16.5645 -16.5609 -16.4155 -16.4124 -16.1452 -15.8276
-15.1199 -14.5472 -14.5456 -12.7354 -12.7159 -12.7060 -12.3593 -12.2315
-12.2314 -11.9424 -11.9325 -11.4737 -11.4471 -11.3758 -11.3748 -11.2395
-10.8756 -10.8745 -10.7876 -10.7844 -10.4331 -10.0747 -10.0650
                                                                         -9.9688
 -9.9193
           -9.9078
                     -9.5406
                               -9.5212
                                          -9.1522
                                                    -9.1514
                                                               -9.0100
                                                                          -9.0085
 -8.9003
           -8.8740
                     -8.8686
                               -8.6229
                                          -8.6213
                                                     -8.4649
                                                               -8.2020
                                                                          -8.1978
                               -8.0084
                                          -8.0014
                                                     -7.8699
 -8.1946
          -8.1295
                     -8.1290
                                                               -7.8620
                                                                          -7.6513
                    -7.6401 -7.4060 -7.2627
 -7.6492 -7.6415
                                                    -7.2623
                                                               -7.2220
                                                                         -7.2206
```

```
-7.1295
                                         -6.9372
                                                   -6.9310
                                                              -6.6948
                                                                        -6.6923
 -7.1299
                     -7.1176
                               -7.1144
 -6.6349
          -6.6334
                     -6.2914
                               -6.2903
                                         -6.1321
                                                   -6.1261
                                                              -6.0479
                                                                        -6.0474
 -5.5732
          -5.5723
                     -5.1740
                               -4.9384
                                         -4.6992
                                                   -4.6965
                                                              -4.5523
                                                                        -4.5511
           -4.3986
                     -4.2001
                               -4.1214
                                         -4.0952
                                                   -4.0950
                                                              -4.0281
                                                                        -4.0273
 -4.4787
 -3.9106
          -3.8855
                     -3.8838
                                                   -3.7580
                               -3.7757
                                         -3.7721
                                                              -3.5838
                                                                        -3.3171
  0.4434
            0.7342
                     0.7364
                                          1.1994
                                                    1.2177
                                                              1.4119
                                                                        1.9487
                                0.7767
  2.1842
            2.2263
                      2.2357
                                2.2551
                                          2.4149
                                                    2.4152
                                                               2.6488
                                                                         2.7453
  2.7992
            2.8852
                      2.9108
                                2.9267
                                          3.0246
                                                     3.0260
                                                               3.4597
                                                                         3.4614
  3.5455
            3.5463
       k = 0.0952 - 0.1650 \ 0.0000 \ (64778 \ PWs)
                                                     bands (ev):
-21.5414 -21.4359 -20.5063 -20.5048 -20.4333 -20.4279 -20.1502 -20.1498
-19.9902 \ -19.9893 \ -19.8087 \ -19.8072 \ -19.5539 \ -19.5497 \ -18.5634 \ -18.3085
-18.3069 -18.0152 -18.0150 -17.9046 -17.8647 -17.8631 -17.8318 -17.6696 -17.4103 -17.4077 -16.5848 -16.5812 -16.3865 -16.3834 -16.1817 -15.8306 -15.1232 -14.5817 -14.5802 -12.7080 -12.6805 -12.6703 -12.3613 -12.2433 -12.2432 -11.9388 -11.9288 -11.4464 -11.4342 -11.3594 -11.3584 -11.2720 -10.8781 -10.8770 -10.7955 -10.7924 -10.4596 -10.1091 -10.0996 -10.0010
                     -9.5243
                               -9.5220
                                         -9.1530
 -9.8793
           -9.8666
                                                   -9.1522
                                                             -8.9743
                                                                        -8.9728
 -8.9045
           -8.8738
                     -8.8684
                               -8.6440
                                         -8.6424
                                                   -8.4888
                                                              -8.1844
                                                                        -8.1808
                                                   -7.9088
 -8.1784
           -8.1277
                     -8.1272
                               -8.0072
                                         -8.0002
                                                              -7.9008
                                                                        -7.6553
                                                   -7.2619
                               -7.3945
                                         -7.2624
                                                              -7.2564
 -7.6529
           -7.6254
                     -7.6239
                                                                        -7.2551
                     -7.1329
 -7.1433
           -7.1405
                               -7.1322
                                         -6.9193
                                                   -6.9130
                                                              -6.6806
                                                                        -6.6784
                                         -6.1458
 -6.6580
                     -6.2754
                               -6.2743
           -6.6565
                                                   -6.1398
                                                              -6.0374
                                                                        -6.0369
           -5.5848
                               -4.9089
                                         -4.6832
                                                   -4.6805
 -5.5858
                     -5.1385
                                                              -4.5394
                                                                        -4.5383
 -4.4646
           -4.3903
                     -4.1875
                               -4.1148
                                         -4.0841
                                                   -4.0839
                                                              -4.0128
                                                                        -4.0120
                               -3.7945
 -3.9138
           -3.8986
                     -3.8970
                                         -3.7909
                                                    -3.7628
                                                              -3.6068
                                                                        -3.3545
  0.4442
            0.7131
                      0.7152
                                          1.2240
                                0.8156
                                                    1.2425
                                                               1.4068
                                                                         1.9437
  2.1791
            2.2152
                      2.2303
                                2.2404
                                          2.3997
                                                     2.4001
                                                               2.6439
                                                                         2.7402
  2.8206
            2.8404
                      2.9309
                                2.9469
                                          3.0418
                                                     3.0431
                                                               3.4801
                                                                         3.4818
  3.5405
            3.5413
       k = 0.0913 - 0.1581 \ 0.0000 \ (64764 \ PWs)
                                                    bands (ev):
-21.5449 -21.4389 -20.4941 -20.4926 -20.4184 -20.4130 -20.1530 -20.1526
-19.9936 -19.9927 -19.8254 -19.8238 -19.5755 -19.5712 -18.5428 -18.2995
-18.2979 -18.0085 -18.0084 -17.9068 -17.8734 -17.8717 -17.7999 -17.6849
-17.3962 -17.3935 -16.6049 -16.6013 -16.3576 -16.3544 -16.2180 -15.8335
-15.1264 -14.6159 -14.6144 -12.6805 -12.6454 -12.6350 -12.3632 -12.2547
-12.2545 -11.9355 -11.9254 -11.4210 -11.4188 -11.3431 -11.3421 -11.3043
-10.8809 -10.8798 -10.8029 -10.7999 -10.4860 -10.1432 -10.1339 -10.0332
                    -9.5269
                              -9.5033
                                                   -9.1526
                                                             -8.9386
 -9.8397
          -9.8255
                                         -9.1534
                                                                       -8.9371
                              -8.6648
                                                   -8.5126
 -8.9085
          -8.8736
                    -8.8683
                                         -8.6632
                                                             -8.1671
                                                                        -8.1647
                               -8.0061
                                         -7.9990
                                                   -7.9479
 -8.1614
          -8.1260
                    -8.1256
                                                             -7.9398
                                                                        -7.6594
                                                   -7.2897
          -7.6086
                                                             -7.2619
 -7.6570
                    -7.6071
                               -7.3835
                                         -7.2911
                                                                        -7.2614
                    -7.1371
                               -7.1367
                                         -6.9012
                                                   -6.8950
                                                             -6.6818
 -7.1679
          -7.1648
                                                                        -6.6803
          -6.6640
                    -6.2595
                               -6.2584
                                         -6.1595
                                                   -6.1535
                                                              -6.0273
 -6.6664
                                                                        -6.0268
 -5.5984
          -5.5975
                    -5.1029
                               -4.8794
                                         -4.6671
                                                   -4.6644
                                                              -4.5265
                                                                        -4.5254
 -4.4510
          -4.3823
                     -4.1754
                               -4.1085
                                         -4.0735
                                                   -4.0732
                                                              -3.9979
                                                                        -3.9971
 -3.9169
           -3.9119
                     -3.9103
                               -3.8133
                                         -3.8099
                                                   -3.7672
                                                              -3.6300
                                                                        -3.3920
  0.4449
            0.6927
                      0.6948
                                0.8548
                                          1.2486
                                                    1.2673
                                                               1.4020
                                                                         1.9388
  2.1742
            2.2008
                      2.2237
                                2.2299
                                          2.3851
                                                     2.3854
                                                               2.6391
                                                                         2.7354
                                                     3.0601
  2.7957
            2.8423
                      2.9513
                                2.9673
                                          3.0589
                                                               3.5006
                                                                         3.5023
  3.5357
            3.5365
       k = 0.0873 - 0.1512 \ 0.0000 \ (64776 \ PWs)
                                                     bands (ev):
-21.5482 -21.4418 -20.4818 -20.4803 -20.4032 -20.3979 -20.1556 -20.1552
-19.9968 -19.9960 -19.8419 -19.8404 -19.5970 -19.5927 -18.5222 -18.2906
-18.2889 -18.0021 -18.0020 -17.9088 -17.8821 -17.8804 -17.7678 -17.7005
-17.3819 -17.3792 -16.6249 -16.6214 -16.3289 -16.3256 -16.2543 -15.8362
```

```
-15.1294 -14.6498 -14.6484 -12.6530 -12.6107 -12.6000 -12.3650 -12.2656
-12.2654 -11.9325 -11.9223 -11.4073 -11.3912 -11.3365 -11.3269 -11.3260
-10.8839 -10.8828 -10.8099 -10.8069 -10.5121 -10.1770 -10.1679 -10.0653
                                                                           -9.1526
                              -9.5287
                                             -9.4844
                                                            -9.1534
                                                                                          -8.9124 -8.9028
  -9.8006
               -9.7843
                                             -8.6853
                                                                                           -8.1515
  -8.9013
                -8.8734
                              -8.8682
                                                            -8.6837
                                                                            -8.5363
                                                                                                          -8.1480
  -8.1439
                -8.1244
                               -8.1240
                                             -8.0051
                                                            -7.9981
                                                                           -7.9868
                                                                                          -7.9787
                                                                                                          -7.6634
                -7.5917
                              -7.5901
                                             -7.3730
                                                            -7.3258
  -7.6610
                                                                           -7.3244
                                                                                          -7.2615
                                                                                                         -7.2611
                              -7.1408
                                                                           -6.8769
                                                                                           -6.7046
                                                                                                         -6.7031
  -7.1926
                -7.1895
                                             -7.1404
                                                            -6.8832
                -6.6511
                              -6.2436
                                             -6.2425
                                                            -6.1733
  -6.6533
                                                                           -6.1674
                                                                                           -6.0176
                                                                                                         -6.0171
                                                                           -4.6481
  -5.6112
                -5.6102
                               -5.0671
                                             -4.8499
                                                            -4.6509
                                                                                           -4.5135
                                                                                                          -4.5124
  -4.4380
                -4.3747
                               -4.1638
                                             -4.1024
                                                            -4.0633
                                                                            -4.0630
                                                                                           -3.9835
                                                                                                          -3.9827
  -3.9254
                -3.9238
                               -3.9197
                                             -3.8322
                                                            -3.8288
                                                                           -3.7714
                                                                                          -3.6534
                                                                                                          -3.4295
                 0.6730
                                                                                                           1.9342
   0.4457
                                0.6751
                                              0.8941
                                                              1.2731
                                                                             1.2919
                                                                                            1.3973
   2.1696
                  2.1855
                                 2.2089
                                                2.2279
                                                               2.3709
                                                                              2.3713
                                                                                             2.6346
                                                                                                            2.7307
   2.7510
                  2.8644
                                 2.9719
                                                2.9879
                                                               3.0760
                                                                              3.0772
                                                                                             3.5210
                                                                                                            3.5225
   3.5312
                  3.5324
           k = 0.0833 - 0.1443 \ 0.0000 \ (64826 \ PWs)
                                                                              bands (ev):
-21.5514 -21.4445 -20.4693 -20.4678 -20.3880 -20.3826 -20.1582 -20.1577 -20.0000 -19.9991 -19.8584 -19.8568 -19.6184 -19.6140 -18.5016 -18.2815 -18.2799 -17.9960 -17.9958 -17.9108 -17.8909 -17.8892 -17.7356 -17.7162 -17.3675 -17.3648 -16.6448 -16.6413 -16.3006 -16.2975 -16.2896 -15.8389 -15.1322 -14.6834 -14.6819 -12.6253 -12.5764 -12.5656 -12.3668 -12.2760 -12.2759 -11.9299 -11.9195 -11.3934 -11.3686 -11.3634 -11.3109 -11.3099 -10.8872 -10.8861 -10.8162 -10.8134 -10.5380 -10.2104 -10.2015 -10.0973 -9.7623 -9.7431 -9.5296 -9.4654 -9.1531 -9.1522 -8.9161 -8.8733 -8.8681 -8.86670 -8.86655 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7055 -8.7
                                              -8.7055
                                                            -8.7039
                                                                           -8.5599
                               -8.8655
  -8.8681
                -8.8670
                                                                                           -8.1376
                                                                                                         -8.1306
                                                                            -8.0038
                                                                                          -7.9965
                                              -8.0257
                                                             -8.0182
                                                                                                         -7.6672
  -8.1264
                -8.1230
                               -8.1225
  -7.6648
                -7.5745
                               -7.5730
                                              -7.3630
                                                            -7.3604
                                                                            -7.3591
                                                                                           -7.2612
                                                                                                         -7.2607
                -7.2142
  -7.2174
                               -7.1443
                                              -7.1439
                                                            -6.8651
                                                                            -6.8589
                                                                                           -6.7275
                                                                                                         -6.7260
                               -6.2279
                                              -6.2268
  -6.6406
                -6.6386
                                                             -6.1873
                                                                            -6.1814
                                                                                           -6.0083
                                                                                                          -6.0078
                                              -4.8204
  -5.6240
                -5.6230
                               -5.0313
                                                             -4.6345
                                                                            -4.6318
                                                                                           -4.5005
                                                                                                          -4.4994
                                              -4.0967
  -4.4255
                -4.3674
                               -4.1527
                                                             -4.0535
                                                                            -4.0532
                                                                                           -3.9696
                                                                                                          -3.9688
                               -3.9225
  -3.9389
                -3.9373
                                              -3.8512
                                                             -3.8478
                                                                            -3.7753
                                                                                           -3.6772
                                                                                                          -3.4670
   0.4463
                  0.6540
                                 0.6561
                                                0.9335
                                                               1.2975
                                                                              1.3166
                                                                                            1.3928
                                                                                                            1.9298
   2.1651
                  2.1699
                                 2.1933
                                                2.2267
                                                               2.3574
                                                                              2.3578
                                                                                             2.6302
                                                                                                            2.7063
                                 2.9926
                                                                              3.0942
   2.7263
                  2.8868
                                                3.0087
                                                               3.0930
                                                                                             3.5262
                                                                                                            3.5268
   3.5422
                  3.5444
           k = 0.0794 - 0.1375 \ 0.0000 \ (64782 \ PWs)
                                                                              bands (ev):
-21.5544 -21.4471 -20.4568 -20.4553 -20.3726 -20.3672 -20.1606 -20.1601
-20.0029 -20.0021 -19.8748 -19.8732 -19.6396 -19.6352 -18.4812 -18.2724
-18.2708 -17.9901 -17.9899 -17.9127 -17.8997 -17.8980 -17.7321 -17.7033
-17.3530 -17.3503 -16.6646 -16.6611 -16.3271 -16.2716 -16.2682 -15.8414
-15.1350 -14.7165 -14.7151 -12.5976 -12.5425 -12.5315 -12.3685 -12.2860
-12.2859 -11.9276 -11.9172 -11.4006 -11.3791 -11.3355 -11.2950 -11.2940
-10.8908 -10.8897 -10.8220 -10.8192 -10.5638 -10.2434 -10.2348 -10.1293
  -9.7253
                -9.7019
                              -9.5289
                                             -9.4462 -9.1522
                                                                           -9.1514
                                                                                          -8.9196
                                                                                                         -8.8731
  -8.8680
                -8.8311
                              -8.8297
                                             -8.7254
                                                            -8.7238
                                                                           -8.5834
                                                                                           -8.1245
                                                                                                          -8.1216
  -8.1211
                -8.1141
                               -8.1103
                                              -8.0628
                                                            -8.0558
                                                                           -8.0029
                                                                                           -7.9957
                                                                                                          -7.6708
  -7.6684
                -7.5572
                               -7.5557
                                              -7.3955
                                                             -7.3941
                                                                            -7.3532
                                                                                           -7.2608
                                                                                                          -7.2604
                                                             -6.8472
                -7.2388
                                                                            -6.8409
                                                                                           -6.7503
  -7.2421
                               -7.1477
                                              -7.1473
                                                                                                          -6.7488
                               -6.2121
                                              -6.2110
                                                             -6.2013
                                                                            -6.1954
                                                                                           -5.9993
  -6.6284
                -6.6265
                                                                                                          -5.9988
  -5.6369
                -5.6359
                               -4.9955
                                              -4.7910
                                                             -4.6180
                                                                            -4.6153
                                                                                           -4.4874
                                                                                                          -4.4862
  -4.4135
                -4.3604
                               -4.1420
                                              -4.0911
                                                             -4.0441
                                                                            -4.0439
                                                                                           -3.9566
                                                                                                          -3.9559
                                                                            -3.7791
  -3.9521
                -3.9505
                               -3.9252
                                              -3.8700
                                                             -3.8667
                                                                                           -3.7013
                                                                                                          -3.5045
   0.4470
                                              0.9730
                                                             1.3219
                                                                             1.3411
                                                                                            1.3886
                 0.6358
                               0.6379
                                                                                                           1.9256
   2.1539
                                                2.2256
                                                               2.3445
                                                                              2.3448
                                                                                             2.6261
                  2.1608
                                 2.1773
                                                                                                            2.6618
                                                                              3.1112
   2.7220
                  2.9096
                                 3.0136
                                                3.0297
                                                               3.1100
                                                                                             3.5221
                                                                                                            3.5228
   3.5578
                  3.5648
```

```
k = 0.0754 - 0.1306 \ 0.0000 \ (64784 \ PWs)
                                                           bands (ev):
-21.5573 -21.4495 -20.4442 -20.4427 -20.3570 -20.3517 -20.1629 -20.1624
-20.0057 -20.0049 -19.8911 -19.8895 -19.6607 -19.6562 -18.4607 -18.2633
-18.2617 -17.9844 -17.9843 -17.9146 -17.9085 -17.9069 -17.7482 -17.6709 -17.3383 -17.3356 -16.6842 -16.6808 -16.3631 -16.2433 -16.2399 -15.8438 -15.1376 -14.7492 -14.7479 -12.5698 -12.5092 -12.4980 -12.3701 -12.2955 -12.2954 -11.9258 -11.9152 -11.4325 -11.3645 -11.3074 -11.2793 -11.2783
-10.8946 \ -10.8935 \ -10.8271 \ -10.8244 \ -10.5892 \ -10.2761 \ -10.2677 \ -10.1612
 -9.6905
            -9.6607
                       -9.5259
                                  -9.4269
                                              -9.1510
                                                         -9.1501
                                                                     -8.9230
                                                                                -8.8730
                                                          -8.6069
 -8.8679
            -8.7952
                       -8.7938
                                  -8.7449
                                              -8.7434
                                                                     -8.1202
                                                                                -8.1198
 -8.1154
            -8.1118
                       -8.1085
                                   -8.0825
                                              -8.0792
                                                          -8.0019
                                                                     -7.9947
                                                                                -7.6742
                                                                     -7.2666
                                                                                -7.2633
 -7.6718
            -7.5398
                       -7.5382
                                  -7.4305
                                              -7.4290
                                                          -7.3439
                                                                                 -6.7714
 -7.2605
            -7.2601
                       -7.1508
                                  -7.1504
                                              -6.8292
                                                          -6.8230
                                                                     -6.7730
                                                                     -5.9908
 -6.6168
            -6.6150
                       -6.2155
                                   -6.2096
                                              -6.1964
                                                          -6.1953
                                                                                 -5.9903
                                                          -4.5987
 -5.6498
            -5.6488
                       -4.9595
                                   -4.7616
                                              -4.6014
                                                                     -4.4742
                                                                                 -4.4731
                                                                     -3.9666
                                                                                 -3.9651
 -4.4021
            -4.3538
                        -4.1319
                                   -4.0858
                                              -4.0352
                                                          -4.0350
                                              -3.8855
                                                                     -3.7256
                                                                                 -3.5419
 -3.9431
            -3.9422
                       -3.9277
                                   -3.8888
                                                          -3.7827
  0.4476
             0.6184
                         0.6205
                                    1.0127
                                                1.3462
                                                           1.3656
                                                                       1.3845
                                                                                  1.9216
  2.1377
              2.1568
                         2.1610
                                    2.2246
                                                2.3321
                                                           2.3324
                                                                       2.6174
                                                                                  2.6221
  2.7180
              2.9326
                         3.0348
                                    3.0509
                                                3.1269
                                                           3.1281
                                                                       3.5181
                                                                                  3.5188
  3.5556
              3.5854
         k = 0.0714 - 0.1237 \ 0.0000 \ (64788 \ PWs)
                                                           bands (ev):
-21.5601 -21.4519 -20.4314 -20.4299 -20.3413 -20.3360 -20.1650 -20.1646 -20.0084 -20.0076 -19.9073 -19.9057 -19.6816 -19.6771 -18.4403 -18.2542 -18.2526 -17.9791 -17.9789 -17.9178 -17.9164 -17.9154 -17.7645 -17.6384 -17.3235 -17.3208 -16.7038 -16.7004 -16.3992 -16.2153 -16.2118 -15.8460 -15.1400 -14.7815 -14.7802 -12.5418 -12.4764 -12.4650 -12.3716 -12.3046 -12.3045 -11.9244 -11.9137 -11.4643 -11.3496 -11.2792 -11.2638 -11.2628 -10.8987 -10.8976 -10.8316 -10.8290 -10.6145 -10.3082 -10.3001 -10.1930 -0.6503 -0.6105 -0.5100 -9.4074 -9.1493 -9.1484 -8.9262 -8.8729
                                                         -9.1484
                       -9.5190
                                  -9.4074
                                             -9.1493
                                                                     -8.9262
 -9.6593
            -9.6195
                                                                                -8.8729
 -8.8678
                       -8.7626
                                  -8.7592
                                              -8.7577
                                                          -8.6303
                                                                     -8.1494
            -8.7642
                                                                                -8.1414
 -8.1190
            -8.1185
                        -8.1000
                                   -8.0705
                                              -8.0663
                                                          -8.0010
                                                                     -7.9938
                                                                                 -7.6775
            -7.5222
 -7.6751
                       -7.5206
                                   -7.4656
                                              -7.4641
                                                          -7.3351
                                                                     -7.2910
                                                                                 -7.2877
 -7.2602
            -7.2597
                       -7.1538
                                   -7.1535
                                              -6.8115
                                                          -6.8053
                                                                     -6.7954
                                                                                 -6.7938
 -6.6057
            -6.6040
                       -6.2298
                                   -6.2239
                                              -6.1807
                                                          -6.1797
                                                                     -5.9826
                                                                                 -5.9821
                                                                     -4.4609
 -5.6629
            -5.6619
                       -4.9235
                                   -4.7322
                                              -4.5847
                                                          -4.5820
                                                                                 -4.4598
                                   -4.0808
                                              -4.0267
                                                          -4.0265
                                                                     -3.9805
 -4.3913
            -4.3475
                       -4.1222
                                                                                 -3.9790
                       -3.9299
 -3.9310
            -3.9301
                                   -3.9075
                                              -3.9043
                                                          -3.7861
                                                                     -3.7501
                                                                                 -3.5794
  0.4481
             0.6017
                         0.6038
                                    1.0525
                                                1.3704
                                                           1.3807
                                                                       1.3899
                                                                                  1.9178
                                    2.2236
                                                2.3203
                                                           2.3207
  2.1212
              2.1445
                         2.1529
                                                                       2.5731
                                                                                  2.6184
  2.7142
                                                           3.1449
                                                                       3.5143
              2.9560
                         3.0562
                                    3.0722
                                                3.1437
                                                                                  3.5150
  3.5521
              3.6071
         k = 0.0675 - 0.1168 \ 0.0000 \ (64782 \ PWs)
                                                           bands (ev):
-21.5626 -21.4541 -20.4186 -20.4171 -20.3255 -20.3202 -20.1671 -20.1667
-20.0110 -20.0101 -19.9234 -19.9219 -19.7024 -19.6979 -18.4200 -18.2450
-18.2434 \ -17.9740 \ -17.9739 \ -17.9266 \ -17.9250 \ -17.9177 \ -17.7809 \ -17.6058
-17.3085 -17.3058 -16.7232 -16.7198 -16.4351 -16.1875 -16.1839 -15.8482
-15.1424 -14.8132 -14.8120 -12.5138 -12.4441 -12.4327 -12.3730 -12.3132
-12.3131 -11.9236 -11.9127 -11.4960 -11.3343 -11.2509 -11.2484 -11.2474
-10.9031 -10.9020 -10.8354 -10.8328 -10.6395 -10.3398 -10.3319 -10.2248
 -9.6339
            -9.5783
                       -9.5062
                                  -9.3878
                                              -9.1471
                                                         -9.1462
                                                                     -8.9292
                                                                                -8.8729
                                                                     -8.1883
            -8.7829
                        -8.7814
                                   -8.7233
                                              -8.7218
                                                          -8.6536
                                                                                 -8.1801
 -8.8678
                                                                     -7.9929
 -8.1178
            -8.1173
                       -8.0888
                                   -8.0528
                                              -8.0484
                                                          -8.0001
                                                                                 -7.6805
            -7.5044
                       -7.5029
                                  -7.5007
                                              -7.4993
                                                         -7.3268
                                                                     -7.3154
 -7.6781
                                                                                -7.3120
           -7.2594
                       -7.1567
                                                                     -6.7935
 -7.2599
                                  -7.1563
                                              -6.8181
                                                          -6.8166
                                                                                 -6.7872
 -6.5951 -6.5936 -6.2442 -6.2382 -6.1652 -6.1641 -5.9750
                                                                                -5.9745
```

```
-5.6759
          -5.6749
                    -4.8873
                              -4.7029
                                       -4.5679
                                                 -4.5652
                                                           -4.4475
                                                                     -4.4465
                                                           -3.9945
                                                                     -3.9931
 -4.3810
          -4.3415
                    -4.1131
                             -4.0761
                                       -4.0187
                                                 -4.0185
                             -3.9183
                                                 -3.7893
 -3.9326
          -3.9270
                    -3.9234
                                       -3.9177
                                                           -3.7749
                                                                     -3.6168
 0.4487
           0.5859
                    0.5879
                              1.0925
                                                  1.3945
                                                           1.4142
                                                                     1.9142
                                        1.3770
  2.1044
                     2.1493
                                         2.3091
                                                  2.3095
                                                            2.5288
           2.1277
                               2.2227
                                                                      2.6148
  2.7105
           2.9797
                     3.0777
                               3.0938
                                         3.1604
                                                  3.1616
                                                            3.5106
                                                                      3.5114
  3.5486
           3.6285
       k = 0.0635 - 0.1100 \ 0.0000 \ (64768 \ PWs)
                                                  bands (ev):
-21.5651 -21.4562 -20.4056 -20.4041 -20.3095 -20.3042 -20.1690 -20.1686
-20.0134 -20.0125 -19.9395 -19.9379 -19.7230 -19.7185 -18.3997 -18.2358
-18.2342 -17.9692 -17.9690 -17.9357 -17.9340 -17.9192 -17.7976 -17.5730
-17.2935 -17.2907 -16.7425 -16.7391 -16.1501 -16.1505 -15.8502 -15.1446 -14.8444 -14.8433 -12.4856 -12.4125 -12.4009 -12.3744 -12.3213 -12.3212 -11.9232 -11.9123 -11.5277 -11.3188 -11.2333 -11.2323 -11.2225 -10.9078 -10.9067 -10.8384 -10.8360 -10.6643 -10.3709 -10.3633 -10.2564
                   -9.4858 -9.3681 -9.1445
 -9.6159
          -9.5370
                                                 -9.1436
                                                          -8.9320
                                                                    -8.8728
                    -8.7999
                             -8.6873
                                                 -8.6768
                                                           -8.2279
                                                                    -8.2197
 -8.8677
          -8.8013
                                       -8.6858
                                                 -7.9993
          -8.1162
                   -8.0782
                             -8.0342
                                       -8.0298
                                                                    -7.6834
 -8.1167
                                                           -7.9921
          -7.5360
-7.2591
                                                 -7.3395
 -7.6810
                   -7.5346
                             -7.4865
                                       -7.4850
                                                           -7.3361
                                                                    -7.3189
                                                                    -6.7696
                   -7.1594
                                                           -6.7758
 -7.2596
                             -7.1590
                                       -6.8404
                                                 -6.8389
          -6.5837
                    -6.2586
                                       -6.1496
 -6.5852
                                                 -6.1485
                                                           -5.9677
                             -6.2527
                                                                     -5.9671
          -5.6881
                                       -4.5509
 -5.6891
                              -4.6736
                                                 -4.5483
                    -4.8512
                                                           -4.4341
                                                                     -4.4330
 -4.3713
          -4.3358
                    -4.1044
                              -4.0716
                                       -4.0112
                                                 -4.0109
                                                           -4.0087
                                                                     -4.0073
 -3.9451
          -3.9423
                    -3.9341
                                       -3.9068
                                                           -3.7923
                              -3.9076
                                                 -3.8000
                                                                     -3.6541
  0.4491
           0.5709
                     0.5729
                               1.1326
                                        1.3736
                                                  1.4185
                                                            1.4383
                                                                      1.9108
                                                  2.2989
  2.0874
                               2.2219
                                         2.2985
                                                            2.4847
           2.1106
                     2.1459
                                                                      2.6115
  2.7071
           3.0037
                     3.0995
                                                  3.1783
                                                            3.5072
                               3.1156
                                         3.1771
                                                                      3.5080
  3.5453
           3.6251
       k = 0.0595 - 0.1031 \ 0.0000 \ (64751 \ PWs)
                                                  bands (ev):
-21.5674 -21.4581 -20.3926 -20.3911 -20.2934 -20.2881 -20.1709 -20.1704
-20.0156 -20.0148 -19.9555 -19.9539 -19.7435 -19.7390 -18.3794 -18.2265
-18.2249 -17.9647 -17.9645 -17.9448 -17.9431 -17.9207 -17.8144 -17.5402
-17.2783 -17.2755 -16.7617 -16.7583 -16.5069 -16.1331 -16.1294 -15.8521
-15.1466 -14.8749 -14.8738 -12.4573 -12.3816 -12.3756 -12.3698 -12.3289
-12.3288 -11.9235 -11.9124 -11.5592 -11.3029 -11.2184 -11.2174 -11.1939
-10.9128 -10.9117 -10.8407 -10.8383 -10.6889 -10.4014 -10.3940 -10.2880
                                                -9.1406
                                                                    -8.8727
 -9.6048
          -9.4958
                   -9.4583
                             -9.3483
                                      -9.1415
                                                          -8.9347
                                                                    -8.2596
 -8.8677
          -8.8194
                   -8.8179
                             -8.7000
                                       -8.6512
                                                 -8.6497
                                                           -8.2678
                   -8.0682
                                       -8.0109
                                                 -7.9984
                             -8.0152
 -8.1156
          -8.1152
                                                          -7.9912
                                                                    -7.6861
                             -7.4685
                                       -7.4670
                                                 -7.3636
                                                           -7.3602
          -7.5714
                    -7.5699
 -7.6837
                                                                    -7.3115
                                       -6.8626
                                                 -6.8611
          -7.2589
                             -7.1615
                                                           -6.7582
 -7.2594
                   -7.1619
                                                                    -6.7520
 -6.5758
          -6.5744
                   -6.2732
                             -6.2673
                                       -6.1342
                                                 -6.1331
                                                           -5.9607
                                                                     -5.9602
 -5.7024
          -5.7014
                    -4.8149
                             -4.6444
                                       -4.5339
                                                 -4.5313
                                                           -4.4206
                                                                    -4.4196
 -4.3622
          -4.3305
                    -4.0963
                             -4.0674
                                       -4.0232
                                                 -4.0218
                                                           -4.0039
                                                                     -4.0037
          -3.9606
                                                           -3.7952
 -3.9635
                    -3.9364
                             -3.8970
                                       -3.8962
                                                 -3.8254
                                                                     -3.6915
 0.4496
           0.5567
                     0.5587
                              1.1728
                                        1.3704
                                                 1.4423
                                                           1.4623
                                                                      1.9076
  2.0701
           2.0933
                     2.1426
                               2.2212
                                         2.2886
                                                  2.2889
                                                            2.4407
                                                                      2.6083
  2.7039
           3.0280
                     3.1214
                               3.1375
                                        3.1937
                                                  3.1949
                                                            3.5040
                                                                      3.5048
  3.5422
           3.6143
       k = 0.0556 - 0.0962 \ 0.0000 \ (64757 \ PWs)
                                                  bands (ev):
-21.5695 -21.4600 -20.3794 -20.3779 -20.2771 -20.2719 -20.1726 -20.1721
-20.0177 -20.0169 -19.9714 -19.9698 -19.7639 -19.7593 -18.3592 -18.2172
-18.2156 -17.9605 -17.9603 -17.9540 -17.9522 -17.9220 -17.8314 -17.5072
-17.2629 -17.2601 -16.7807 -16.7774 -16.5427 -16.1066 -16.1028 -15.8539
-15.1486 -14.9047 -14.9037 -12.4289 -12.3768 -12.3514 -12.3395 -12.3361
-12.3360 -11.9244 -11.9131 -11.5906 -11.2866 -11.2037 -11.2027 -11.1652
```

```
-10.9181 -10.9170 -10.8422 -10.8398 -10.7132 -10.4313 -10.4241 -10.3195
                                                                 -8.9372
 -9.5987
           -9.4545
                     -9.4257
                                 -9.3283
                                           -9.1380 -9.1370
                                                                            -8.8727
                                            -8.6151
                                                      -8.6137
                                                                            -8.2997
 -8.8676
           -8.8370
                      -8.8356
                                 -8.7230
                                                                  -8.3079
                                            -7.9958
                                                       -7.9916
                                                                 -7.9899
                                                                            -7.6887
                      -8.0588
                                 -7.9984
 -8.1147
            -8.1142
 -7.6863
           -7.6068
                      -7.6054
                                 -7.4503
                                            -7.4488
                                                       -7.3875
                                                                  -7.3840
                                                                            -7.3046
 -7.2591
           -7.2586
                      -7.1642
                                 -7.1639
                                            -6.8847
                                                       -6.8832
                                                                  -6.7407
                                                                            -6.7344
 -6.5669
           -6.5656
                      -6.2879
                                 -6.2820
                                            -6.1188
                                                       -6.1177
                                                                  -5.9543
                                                                            -5.9537
 -5.7157
           -5.7147
                      -4.7786
                                 -4.6152
                                            -4.5168
                                                       -4.5142
                                                                 -4.4071
                                                                            -4.4060
 -4.3536
           -4.3256
                      -4.0887
                                 -4.0635
                                            -4.0378
                                                       -4.0365
                                                                  -3.9973
                                                                            -3.9970
                                                                            -3.7287
 -3.9817
           -3.9789
                      -3.9383
                                 -3.8870
                                            -3.8862
                                                       -3.8510
                                                                  -3.7978
  0.4500
             0.5433
                       0.5453
                                  1.2131
                                             1.3674
                                                       1.4660
                                                                   1.4862
                                                                              1.9046
  2.0525
             2.0757
                       2.1396
                                  2.2204
                                             2.2792
                                                        2.2796
                                                                   2.3969
                                                                              2.6054
  2.7009
             3.0526
                                                                   3.5009
                        3.1435
                                  3.1597
                                             3.2101
                                                        3.2113
                                                                              3.5017
  3.5393
             3,6032
        k = 0.0516 - 0.0894 \ 0.0000 \ (64745 \ PWs)
                                                        bands (ev):
-21.5715 -21.4617 -20.3662 -20.3646 -20.2607 -20.2555 -20.1741 -20.1737 -20.0197 -20.0188 -19.9872 -19.9856 -19.7841 -19.7796 -18.3391 -18.2079 -18.2063 -17.9632 -17.9617 -17.9563 -17.9562 -17.9233 -17.8485 -17.4741 -17.2474 -17.2447 -16.7997 -16.7964 -16.5784 -16.0807 -16.0767 -15.8555 -15.1504 -14.9337 -14.9328 -12.4004 -12.3779 -12.3428 -12.3427 -12.3219 -12.3099 -11.9259 -11.9145 -11.6219 -11.2701 -11.1892 -11.1882 -11.1364 -10.9238 -10.9227 -10.8428 -10.8404 -10.7373 -10.4604 -10.4535 -10.3510 -9.5054 -9.4133 -9.3900 -9.3082 -9.1340 -9.1330 -8.9395 -8.8726
                      -9.3900
                                -9.3082
 -9.5954
           -9.4133
                                           -9.1340
                                                      -9.1330
                                                                 -8.9395
                                                                            -8.8726
 -8.8676
           -8.8543
                      -8.8528
                                 -8.7460
                                            -8.5790
                                                       -8.5776
                                                                 -8.3481
                                                                            -8.3399
            -8.1133
                                            -7.9901
                                                                 -7.9720
 -8.1138
                      -8.0501
                                 -7.9973
                                                       -7.9761
                                                                            -7.6910
                                 -7.4320
 -7.6886
            -7.6423
                      -7.6409
                                            -7.4304
                                                       -7.4113
                                                                  -7.4078
                                                                            -7.2981
 -7.2589
           -7.2584
                      -7.1664
                                 -7.1660
                                            -6.9067
                                                       -6.9051
                                                                  -6.7232
                                                                            -6.7170
 -6.5587
           -6.5575
                                 -6.2968
                                                                  -5.9482
                      -6.3028
                                            -6.1035
                                                       -6.1024
                                                                             -5.9477
 -5.7292
            -5.7281
                      -4.7422
                                 -4.5860
                                            -4.4996
                                                       -4.4970
                                                                  -4.3934
                                                                            -4.3924
 -4.3456
            -4.3209
                      -4.0816
                                 -4.0598
                                            -4.0526
                                                       -4.0514
                                                                  -4.0001
                                                                             -3.9973
            -3.9905
 -3.9907
                      -3.9401
                                 -3.8791
                                            -3.8770
                                                       -3.8754
                                                                  -3.8003
                                                                             -3.7659
             0.5308
  0.4504
                       0.5328
                                  1.2536
                                             1.3646
                                                        1.4896
                                                                   1.5099
                                                                              1.9019
             2.0579
                                             2.2704
                                                        2.2708
                                                                              2.6027
  2.0347
                        2.1368
                                  2.2197
                                                                   2.3532
  2.6981
             3.0775
                        3.1659
                                  3.1820
                                             3.2264
                                                        3.2276
                                                                   3.4981
                                                                              3.4989
  3.5366
             3.5918
        k = 0.0476 - 0.0825 \ 0.0000 \ (64769 \ PWs)
                                                        bands (ev):
-21.5734 -21.4632 -20.3528 -20.3513 -20.2441 -20.2390 -20.1756 -20.1752
-20.0215 -20.0206 -20.0029 -20.0014 -19.8042 -19.7996 -18.3190 -18.1986
-18.1970 -17.9724 -17.9708 -17.9527 -17.9526 -17.9244 -17.8658 -17.4409
-17.2318 -17.2290 -16.8185 -16.8152 -16.6140 -16.0554 -16.0514 -15.8571
-15.1521 -14.9618 -14.9610 -12.3790 -12.3718 -12.3490 -12.3489 -12.2932
-12.2811 -11.9282 -11.9166 -11.6531 -11.2533 -11.1750 -11.1740 -11.1075
-10.9297 -10.9286 -10.8424 -10.8401 -10.7612 -10.4888 -10.4822 -10.3823
 -9.5939
           -9.3720
                      -9.3525
                                -9.2880
                                           -9.1295
                                                      -9.1285
                                                                 -8.9417
                                                                            -8.8726
           -8.8697
                      -8.8676
                                 -8.7689
                                            -8.5429
                                                      -8.5415
                                                                 -8.3884
 -8.8711
                                                                            -8.3801
 -8.1130
           -8.1125
                      -8.0420
                                 -7.9966
                                            -7.9894
                                                       -7.9565
                                                                 -7.9524
                                                                            -7.6932
 -7.6908
           -7.6779
                      -7.6765
                                 -7.4349
                                            -7.4314
                                                       -7.4135
                                                                 -7.4120
                                                                            -7.2921
 -7.2587
            -7.2582
                      -7.1684
                                 -7.1681
                                            -6.9285
                                                       -6.9270
                                                                  -6.7059
                                                                             -6.6996
 -6.5511
           -6.5499
                      -6.3177
                                 -6.3117
                                            -6.0882
                                                       -6.0871
                                                                  -5.9427
                                                                             -5.9421
                                                                  -4.3797
 -5.7426
            -5.7416
                      -4.7058
                                 -4.5569
                                            -4.4823
                                                       -4.4797
                                                                             -4.3788
                                                       -4.0564
                                                                  -4.0178
 -4.3382
            -4.3166
                       -4.0750
                                 -4.0677
                                            -4.0665
                                                                             -4.0152
 -3.9850
            -3.9848
                       -3.9417
                                 -3.9033
                                            -3.8688
                                                       -3.8680
                                                                  -3.8030
                                                                             -3.8025
  0.4508
             0.5192
                       0.5212
                                  1.2941
                                             1.3620
                                                        1.5131
                                                                   1.5334
                                                                              1.8993
  2.0166
             2.0398
                        2.1342
                                  2.2191
                                             2.2622
                                                        2.2627
                                                                   2.3096
                                                                              2.6001
  2.6955
                        3.1884
                                             3.2426
                                                        3.2438
                                                                   3.4955
             3.1027
                                  3.2046
                                                                              3.4963
  3.5341
             3.5803
        k = 0.0437 - 0.0756 \ 0.0000 \ (64777 \ PWs)
                                                        bands (ev):
```

```
-21.5751 -21.4647 -20.3393 -20.3378 -20.2274 -20.2223 -20.1770 -20.1765
-20.0231 -20.0223 -20.0185 -20.0170 -19.8242 -19.8195 -18.2990 -18.1892
-18.1876 -17.9817 -17.9801 -17.9493 -17.9492 -17.9255 -17.8833 -17.4076 -17.2161 -17.2133 -16.8372 -16.8339 -16.6495 -16.0310 -16.0269 -15.8585
-15.1536 -14.9889 -14.9881 -12.3799 -12.3547 -12.3546 -12.3431 -12.2654
-12.2532 -11.9312 -11.9195 -11.6842 -11.2361 -11.1611 -11.1601 -11.0785 -10.9360 -10.9349 -10.8412 -10.8389 -10.7848 -10.5164 -10.5100 -10.4136
           -9.3308
                     -9.3138
                                 -9.2676 -9.1245
                                                       -9.1235
                                                                  -8.9437
 -9.5933
                                                                             -8.8875
                      -8.8676
                                                                  -8.4288
 -8.8861
           -8.8726
                                 -8.7917
                                            -8.5068
                                                       -8.5053
                                                                             -8.4205
 -8.1123
           -8.1118
                      -8.0346
                                 -7.9960
                                            -7.9888
                                                       -7.9367
                                                                  -7.9326
                                                                             -7.7135
                                                                             -7.2865
 -7.7121
           -7.6952
                      -7.6928
                                 -7.4584
                                            -7.4549
                                                       -7.3949
                                                                  -7.3933
                                                                             -6.6824
 -7.2585
           -7.2580
                      -7.1703
                                 -7.1699
                                            -6.9503
                                                       -6.9487
                                                                  -6.6886
                                                                             -5.9370
 -6.5440
           -6.5430
                      -6.3327
                                 -6.3267
                                            -6.0731
                                                       -6.0720
                                                                  -5.9375
 -5.7562
           -5.7552
                      -4.6693
                                 -4.5278
                                            -4.4649
                                                       -4.4623
                                                                  -4.3660
                                                                             -4.3650
 -4.3314
            -4.3127
                      -4.0829
                                 -4.0819
                                            -4.0689
                                                       -4.0533
                                                                  -4.0354
                                                                             -4.0329
                                                                             -3.8047
 -3.9797
           -3.9794
                      -3.9432
                                 -3.9298
                                            -3.8609
                                                       -3.8601
                                                                  -3.8394
  0.4511
             0.5085
                        0.5105
                                   1.3348
                                             1.3596
                                                        1.5363
                                                                   1.5568
                                                                              1.8969
  1.9983
             2.0214
                        2.1318
                                   2.2186
                                              2.2540
                                                        2.2552
                                                                   2.2668
                                                                              2.5978
             3.1283
  2.6932
                        3.2111
                                   3.2273
                                              3.2587
                                                         3.2598
                                                                   3.4931
                                                                              3.4940
  3.5317
             3.5685
        k = 0.0397 - 0.0687 \ 0.0000 \ (64791 \ PWs)
                                                         bands (ev):
-21.5766 -21.4660 -20.3258 -20.3242 -20.2106 -20.2055 -20.1782 -20.1778 -20.0341 -20.0326 -20.0247 -20.0238 -19.8440 -19.8393 -18.2791 -18.1799 -18.1782 -17.9910 -17.9894 -17.9462 -17.9461 -17.9265 -17.9009 -17.3742 -17.2002 -17.1974 -16.8557 -16.8525 -16.6850 -16.0075 -16.0033 -15.8598 -15.1550 -15.0148 -15.0140 -12.3808 -12.3599 -12.3598 -12.3143 -12.2386 -12.2262 -11.9350 -11.9232 -11.7152 -11.2186 -11.1474 -11.1464 -11.0493 -10.9426 -10.9415 -10.8389 -10.8366 -10.8081 -10.5431 -10.5370 -10.4448
 -9.5932
           -9.2895
                      -9.2744
                                 -9.2471
                                           -9.1191
                                                       -9.1181
                                                                  -8.9455
                                                                            -8.9034
 -8.9020
                                            -8.4706
                      -8.8675
                                 -8.8143
                                                       -8.4693
                                                                  -8.4692
           -8.8725
                                                                             -8.4610
                      -8.0278
                                 -7.9955
                                            -7.9883
                                                       -7.9167
                                                                  -7.9126
                                                                             -7.7492
 -8.1116
            -8.1111
                      -7.6947
                                            -7.4782
 -7.7477
            -7.6971
                                 -7.4818
                                                       -7.3761
                                                                  -7.3746
                                                                             -7.2815
 -7.2583
            -7.2578
                      -7.1720
                                 -7.1717
                                            -6.9719
                                                       -6.9703
                                                                  -6.6714
                                                                             -6.6652
                                            -6.0579
 -6.5376
            -6.5366
                      -6.3478
                                 -6.3418
                                                       -6.0568
                                                                  -5.9328
                                                                             -5.9322
                                 -4.4988
                                            -4.4474
                                                       -4.4448
                                                                             -4.3512
 -5.7698
            -5.7688
                      -4.6328
                                                                  -4.3522
                                 -4.0975
                                            -4.0634
                                                       -4.0527
 -4.3252
            -4.3091
                      -4.0985
                                                                  -4.0505
                                                                             -4.0504
 -3.9748
            -3.9745
                      -3.9567
                                 -3.9446
                                            -3.8771
                                                       -3.8531
                                                                  -3.8520
                                                                             -3.8066
  0.4514
             0.4986
                        0.5006
                                   1.3574
                                             1.3757
                                                        1.5595
                                                                   1.5801
                                                                              1.8948
  1.9797
             2.0028
                        2.1296
                                   2.2180
                                              2.2220
                                                         2.2483
                                                                   2.2485
                                                                               2.5957
                                                                   3.4909
                                              3.2746
                                                         3.2758
  2.6910
             3.1541
                        3.2339
                                   3.2502
                                                                               3.4918
  3.5296
             3.5565
        k = 0.0357 - 0.0619 \ 0.0000 \ (64779 \ PWs)
                                                        bands (ev):
-21.5780 -21.4672 -20.3121 -20.3106 -20.1936 -20.1885 -20.1793 -20.1789
-20.0496 -20.0480 -20.0260 -20.0252 -19.8637 -19.8590 -18.2592 -18.1705
-18.1688 -18.0003 -17.9987 -17.9434 -17.9433 -17.9274 -17.9186 -17.3407
-17.1843 -17.1814 -16.8742 -16.8709 -16.7203 -15.9852 -15.9808 -15.8610
-15.1563 -15.0393 -15.0386 -12.3816 -12.3646 -12.3646 -12.2854 -12.2126
-12.2002 -11.9397 -11.9278 -11.7461 -11.2008 -11.1341 -11.1331 -11.0201
-10.9496 -10.9485 -10.8356 -10.8332 -10.8312 -10.5689 -10.5631 -10.4759
 -9.5935
            -9.2483
                      -9.2346
                                 -9.2265
                                            -9.1131
                                                       -9.1121
                                                                  -8.9472
                                                                             -8.9189
 -8.9175
            -8.8725
                      -8.8675
                                 -8.8369
                                            -8.5099
                                                       -8.5015
                                                                  -8.4345
                                                                             -8.4330
            -8.1105
                      -8.0216
                                 -7.9950
                                            -7.9878
                                                       -7.8966
                                                                  -7.8925
                                                                             -7.7848
 -8.1110
 -7.7834
            -7.6987
                      -7.6963
                                 -7.5050
                                            -7.5013
                                                       -7.3572
                                                                  -7.3557
                                                                             -7.2770
                                            -6.9933
 -7.2581
           -7.2577
                                 -7.1732
                                                       -6.9918
                                                                  -6.6543
                                                                             -6.6481
                      -7.1736
 -6.5317
           -6.5308
                      -6.3630
                                 -6.3570
                                            -6.0429
                                                       -6.0418
                                                                  -5.9285
                                                                             -5.9280
                                            -4.4298
                      -4.5962
                                 -4.4698
                                                       -4.4273
 -5.7835
           -5.7825
                                                                  -4.3383
                                                                             -4.3374
                      -4.1144
                                -4.1134
                                                                  -4.0584
 -4.3195
           -4.3058
                                            -4.0696
                                                       -4.0677
                                                                             -4.0478
```

```
-3.9841
          -3.9703
                    -3.9701
                              -3.9458
                                        -3.9133
                                                  -3.8464
                                                            -3.8455
                                                                      -3.8084
                               1.3554
  0.4516
           0.4897
                     0.4917
                                        1.4166
                                                  1.5824
                                                            1.6031
                                                                      1.8928
                                                             2.2422
  1.9609
           1.9839
                     2.1277
                               2.1790
                                         2.2175
                                                   2.2420
                                                                       2.5937
                                                   3.2915
  2.6890
           3.1801
                                         3.2903
                                                             3.4889
                     3.2570
                               3.2733
                                                                       3.4898
  3.5277
           3.5442
       k = 0.0317 - 0.0550 \ 0.0000 \ (64763 \ PWs)
                                                   bands (ev):
-21.5793 \ -21.4683 \ -20.2983 \ -20.2968 \ -20.1803 \ -20.1799 \ -20.1765 \ -20.1714
-20.0649 -20.0634 -20.0273 -20.0264 -19.8832 -19.8785 -18.2395 -18.1610
-18.1594 -18.0097 -18.0081 -17.9411 -17.9408 -17.9363 -17.9281 -17.3071 -17.1681 -17.1652 -16.8925 -16.8893 -16.7556 -15.9642 -15.9597 -15.8620 -15.1574 -15.0624 -15.0617 -12.3823 -12.3689 -12.3688 -12.2564 -12.1877 -12.1752 -11.9454 -11.9333 -11.7769 -11.1827 -11.1210 -11.1200 -10.9907
-10.9569 -10.9558 -10.8540 -10.8311 -10.8288 -10.5938 -10.5883 -10.5069
                                       -9.1067
 -9.5939
          -9.2071 -9.2058 -9.1944
                                                 -9.1056 -8.9486
                                                                     -8.9339
                   -8.8675 -8.8594
-8.0161 -7.9946
                                       -8.5505
                                                           -8.3983
                                                                     -8.3968
 -8.9326
          -8.8725
                                                 -8.5421
                                                                     -7.8204
 -8.1105
          -8.1100
                                       -7.9874
                                                 -7.8764
                                                           -7.8724
                             -7.5280
                                                                     -7.2728
 -7.8190
          -7.7002 -7.6978
                                       -7.5244
                                                 -7.3381
                                                           -7.3366
          -7.2575
                                                           -6.6373
                                                                      -6.6311
 -7.2580
                    -7.1749
                             -7.1746
                                       -7.0147
                                                  -7.0131
 -6.5264
          -6.5256
                    -6.3783
                              -6.3723
                                        -6.0279
                                                  -6.0268
                                                            -5.9246
                                                                      -5.9241
 -5.7973
          -5.7963
                    -4.5597
                              -4.4409
                                        -4.4122
                                                  -4.4097
                                                            -4.3244
                                                                      -4.3235
                                        -4.0863
                                                            -4.0539
 -4.3145
          -4.3028
                    -4.1306
                              -4.1297
                                                  -4.0846
                                                                      -4.0455
 -4.0120
                              -3.9493
          -3.9663
                    -3.9662
                                        -3.9469
                                                  -3.8403
                                                            -3.8394
                                                                      -3.8099
  0.4519
           0.4816
                     0.4836
                               1.3536
                                         1.4576
                                                   1.6052
                                                             1.6260
                                                                       1.8911
  1.9418
                     2.1259
                                                   2.2364
                                                             2.2366
           1.9648
                               2.1359
                                         2.2171
                                                                       2.5920
  2.6873
            3.2064
                     3.2803
                               3.2965
                                         3.3060
                                                   3.3071
                                                             3.4871
                                                                       3.4880
  3.5259
           3.5318
       k = 0.0278 - 0.0481 \ 0.0000 \ (64757 \ PWs)
                                                   bands (ev):
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-12.1513 -11.9520 -11.9398 -11.8076 -11.1643 -11.1082 -11.1072 -10.9645
-10.9635 -10.9612 -10.8766 -10.8256 -10.8231 -10.6177 -10.6124 -10.5378
                                                                     -8.9485
 -9.5944
          -9.1849
                    -9.1658
                             -9.1540
                                       -9.0997
                                                 -9.0986
                                                           -8.9499
                    -8.8725
 -8.9471
          -8.8818
                             -8.8675
                                       -8.5912
                                                 -8.5827
                                                           -8.3621
                                                                     -8.3607
                             -7.9942
 -8.1100
          -8.1095
                    -8.0112
                                       -7.9870
                                                 -7.8605
                                                           -7.8600
                                                                     -7.8503
          -7.7015
                                                                     -7.2692
 -7.8481
                    -7.6991
                             -7.5509
                                       -7.5472
                                                 -7.3190
                                                           -7.3174
                                                 -7.0343
                             -7.1758
                                       -7.0359
                                                           -6.6204
 -7.2579
          -7.2574
                    -7.1762
                                                                      -6.6142
                                       -6.0129
                    -6.3938
                             -6.3878
 -6.5218
          -6.5210
                                                 -6.0118
                                                           -5.9212
                                                                      -5.9207
          -5.8102
                    -4.5231
                              -4.4121
                                       -4.3945
                                                 -4.3920
                                                           -4.3110
 -5.8112
                                                                      -4.3098
          -4.3001
 -4.3091
                    -4.1471
                              -4.1462
                                        -4.1026
                                                  -4.1011
                                                           -4.0499
                                                                      -4.0435
          -3.9851
                                                           -3.8340
 -4.0404
                    -3.9628
                              -3.9625
                                       -3.9479
                                                 -3.8350
                                                                     -3.8113
                     0.4765
                                        1.4987
           0.4745
                                                  1.6279
                                                            1.6487
 0.4521
                              1.3521
                                                                       1.8895
  1.9225
           1.9454
                     2.0930
                               2.1243
                                         2.2168
                                                   2.2314
                                                             2.2317
                                                                       2.5905
  2.6857
           3.2329
                     3.3037
                               3.3199
                                         3.3214
                                                   3.3226
                                                             3.4855
                                                                       3.4865
  3.5192
           3.5204
       k = 0.0238 - 0.0412 \ 0.0000 \ (64741 \ PWs)
                                                   bands (ev):
-21.5813 -21.4701 -20.2705 -20.2690 -20.1820 -20.1816 -20.1418 -20.1368
-20.0954 -20.0939 -20.0293 -20.0285 -19.9218 -19.9171 -18.2002 -18.1421
-18.1405 -18.0285 -18.0269 -17.9728 -17.9367 -17.9365 -17.9293 -17.2396
-17.1355 -17.1325 -16.9287 -16.9256 -16.8259 -15.9270 -15.9223 -15.8637
-15.1593 -15.1029 -15.1021 -12.3835 -12.3759 -12.3758 -12.1981 -12.1410
-12.1284 -11.9596 -11.9473 -11.8382 -11.1456 -11.0957 -11.0947 -10.9725
```

```
-8.9510
           -8.9042
                     -8.8725
                               -8.8675
                                          -8.6320
                                                    -8.6234
                                                              -8.3260
                                                                        -8.3245
                     -8.0070
                               -7.9939
                                                    -7.8932
 -8.1096
           -8.1091
                                         -7.9866
                                                              -7.8917
                                                                        -7.8343
                     -7.7003
                                                    -7.2996
                                                                        -7.2661
 -7.8302
           -7.7027
                               -7.5737
                                         -7.5699
                                                              -7.2981
 -7.2578
                     -7.1772
           -7.2573
                               -7.1769
                                         -7.0570
                                                    -7.0554
                                                              -6.6036
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           -6.5171
                     -6.4093
                               -6.4033
                                          -5.9980
                                                    -5.9970
                                                              -5.9183
                                                                        -5.9178
 -5.8251
           -5.8241
                     -4.4865
                               -4.3833
                                          -4.3767
                                                    -4.3742
                                                              -4.3064
                                                                        -4.2980
 -4.2960
           -4.2953
                     -4.1640
                               -4.1629
                                          -4.1186
                                                    -4.1174
                                                              -4.0697
                                                                         -4.0465
                                         -3.9487
 -4.0417
           -4.0200
                     -3.9597
                               -3.9594
                                                    -3.8303
                                                              -3.8294
                                                                        -3.8125
  0.4522
            0.4684
                     0.4704
                                1.3507
                                          1.5398
                                                    1.6504
                                                               1.6712
                                                                         1.8882
  1.9030
            1.9258
                      2.0502
                                 2.1230
                                           2.2164
                                                     2.2271
                                                               2.2274
                                                                          2.5892
  2.6844
            3.2597
                      3.3273
                                 3.3367
                                           3.3379
                                                     3.3435
                                                               3.4841
                                                                          3.4851
  3.5064
            3.5077
        k = 0.0198 - 0.0344 \ 0.0000 \ (64721 \ PWs)
                                                     bands (ev):
-21.5821 -21.4708 -20.2564 -20.2549 -20.1826 -20.1822 -20.1243 -20.1193
-20.1105 -20.1090 -20.0301 -20.0293 -19.9409 -19.9361 -18.1807 -18.1327 -18.1311 -18.0379 -18.0363 -17.9911 -17.9351 -17.9349 -17.9298 -17.2056 -17.1190 -17.1160 -16.9466 -16.9435 -16.8608 -15.9113 -15.9065 -15.8644 -15.1600 -15.1199 -15.1191 -12.3839 -12.3786 -12.3785 -12.1688 -12.1193 -12.1068 -11.9682 -11.9558 -11.8686 -11.1267 -11.0836 -11.0826 -10.9809 -10.9798 -10.9210 -10.9020 -10.8110 -10.8083 -10.6621 -10.6574 -10.5994
                     -9.0842
                               -9.0835
 -9.5954
           -9.1429
                                         -9.0831
                                                   -9.0729
                                                              -8.9761
                                                                        -8.9748
                               -8.8675
                                                    -8.6642
                                                              -8.2898
 -8.9520
           -8.9264
                     -8.8725
                                         -8.6728
                                                                        -8.2883
                     -8.0034
                                         -7.9864
                                                              -7.9274
 -8.1092
           -8.1088
                               -7.9936
                                                    -7.9289
                                                                        -7.8136
                                         -7.5925
 -7.8096
           -7.7037
                     -7.7012
                               -7.5962
                                                    -7.2802
                                                              -7.2786
                                                                        -7.2634
                     -7.1781
                                                    -7.0764
 -7.2577
           -7.2572
                               -7.1777
                                          -7.0779
                                                              -6.5868
                                                                        -6.5807
           -6.5137
                     -6.4249
                               -6.4189
                                                              -5.9158
 -6.5144
                                         -5.9832
                                                    -5.9822
                                                                        -5.9153
           -5.8381
                     -4.4500
                               -4.3589
                                          -4.3569
 -5.8391
                                                    -4.3540
                                                              -4.3031
                                                                         -4.2959
 -4.2819
           -4.2812
                               -4.1799
                     -4.1811
                                          -4.1344
                                                    -4.1333
                                                               -4.1000
                                                                         -4.0540
 -4.0436
           -4.0402
                     -3.9572
                               -3.9569
                                          -3.9494
                                                    -3.8263
                                                               -3.8254
                                                                         -3.8135
  0.4524
            0.4632
                      0.4652
                                1.3496
                                           1.5809
                                                     1.6727
                                                               1.6935
                                                                          1.8832
  1.8871
            1.9060
                      2.0076
                                 2.1218
                                           2.2161
                                                     2.2235
                                                               2.2238
                                                                          2.5880
            3.2868
                      3.3510
                                 3.3519
                                                     3.3672
                                                               3.4828
  2.6832
                                           3.3531
                                                                          3.4839
  3.4935
            3.4947
        k = 0.0159 - 0.0275 \ 0.0000 \ (64687 \ PWs)
                                                     bands (ev):
-21.5828 -21.4714 -20.2423 -20.2408 -20.1832 -20.1827 -20.1255 -20.1240
-20.1066 -20.1016 -20.0308 -20.0299 -19.9599 -19.9551 -18.1612 -18.1232
-18.1216 -18.0474 -18.0457 -18.0095 -17.9339 -17.9335 -17.9301 -17.1716
-17.1023 -17.0993 -16.9644 -16.9614 -16.8957 -15.8980 -15.8931 -15.8649
-15.1606 -15.1343 -15.1335 -12.3844 -12.3809 -12.3807 -12.1395 -12.0988
-12.0863 -11.9780 -11.9654 -11.8989 -11.1074 -11.0718 -11.0708 -10.9895
-10.9885 -10.9428 -10.8722 -10.8018 -10.7990 -10.6826 -10.6781 -10.6301
 -9.5958
                                                              -8.9892
          -9.1217
                    -9.0757
                               -9.0746
                                         -9.0423
                                                   -9.0322
                                                                        -8.9879
          -8.9485
                    -8.8725 -8.8675
                                         -8.7137
                                                    -8.7049
                                                              -8.2536
 -8.9527
                                                                        -8.2521
          -8.1085
 -8.1090
                    -8.0004
                               -7.9934
                                         -7.9861
                                                   -7.9648
                                                              -7.9633
                                                                        -7.7927
                     -7.7020
 -7.7887
           -7.7044
                               -7.6187
                                         -7.6149
                                                    -7.2612
                                                              -7.2605
                                                                        -7.2590
 -7.2576
           -7.2571
                     -7.1788
                               -7.1785
                                         -7.0987
                                                    -7.0972
                                                              -6.5702
                                                                        -6.5641
 -6.5116
           -6.5110
                     -6.4406
                               -6.4346
                                         -5.9685
                                                    -5.9674
                                                              -5.9138
                                                                        -5.9132
 -5.8532
           -5.8522
                     -4.4135
                               -4.3411
                                          -4.3388
                                                    -4.3255
                                                              -4.3005
                                                                        -4.2942
 -4.2677
           -4.2670
                     -4.1984
                               -4.1971
                                          -4.1499
                                                    -4.1490
                                                              -4.1315
                                                                         -4.0870
                                                    -3.8231
                                          -3.9500
 -4.0412
           -4.0390
                     -3.9551
                               -3.9547
                                                               -3.8221
                                                                         -3.8143
  0.4524
            0.4589
                      0.4609
                                1.3487
                                           1.6219
                                                     1.6948
                                                               1.7155
                                                                          1.8632
  1.8860
            1.8862
                      1.9652
                                 2.1209
                                           2.2159
                                                     2.2206
                                                               2.2208
                                                                          2.5871
                                                               3.4792
  2.6823
            3.3141
                      3.3668
                                 3.3681
                                           3.3749
                                                     3.3911
                                                                          3.4802
  3.4833
            3.4839
        k = 0.0119 - 0.0206 \ 0.0000 \ (64669 \ PWs)
                                                     bands (ev):
-21.5833 -21.4718 -20.2280 -20.2265 -20.1836 -20.1831 -20.1404 -20.1389
```

```
-20.0888 -20.0838 -20.0313 -20.0304 -19.9787 -19.9739 -18.1419 -18.1137
-18.1121 -18.0568 -18.0552 -18.0281 -17.9330 -17.9325 -17.9303 -17.1375
-17.0855 -17.0825 -16.9821 -16.9791 -16.9305 -15.8873 -15.8823 -15.8653
-10.9975 -10.9644 -10.8423 -10.7914 -10.7884 -10.7019 -10.6977 -10.6606
          -9.1004
                     -9.0667
                               -9.0655
                                         -9.0018
                                                    -9.0012 -9.0005
 -9.5962
                                                                         -8.9917
 -8.9705
           -8.9531
                     -8.8725
                               -8.8675
                                          -8.7545
                                                    -8.7457
                                                               -8.2174
                                                                         -8.2160
 -8.1087
           -8.1083
                     -8.0008 -7.9993 -7.9981
                                                    -7.9932
                                                               -7.9859
                                                                         -7.7715
                                                                         -7.2570
 -7.7676
           -7.7050
                     -7.7026 -7.6410
                                          -7.6371
                                                    -7.2596
                                                               -7.2575
 -7.2408
           -7.2393
                     -7.1794
                               -7.1790
                                          -7.1194
                                                    -7.1179
                                                               -6.5537
                                                                         -6.5476
 -6.5094
           -6.5088
                     -6.4565
                               -6.4504
                                          -5.9539
                                                    -5.9528
                                                               -5.9121
                                                                         -5.9116
 -5.8674
           -5.8663
                     -4.3771
                               -4.3233
                                          -4.3211
                                                    -4.2984
                                                               -4.2968
                                                                         -4.2926
                                                               -4.1627
 -4.2534
           -4.2528
                     -4.2159
                                -4.2145
                                          -4.1663
                                                    -4.1647
                                                                          -4.1189
                                                                         -3.8148
 -4.0393
           -4.0380
                     -3.9534
                               -3.9531
                                          -3.9504
                                                    -3.8206
                                                               -3.8196
  0.4524
            0.4556
                      0.4576
                                 1.3479
                                           1.6626
                                                      1.7170
                                                                1.7373
                                                                           1.8432
  1.8658
            1.8854
                       1.9232
                                 2.1202
                                           2.2157
                                                      2.2183
                                                                2.2186
                                                                           2.5864
  2.6816
            3.3416
                       3.3816
                                 3.3829
                                           3.3988
                                                      3.4148
                                                                3.4664
                                                                           3.4676
  3.4814
            3.4828
        k = 0.0079 - 0.0137 \ 0.0000 \ (64667 \ PWs)
                                                      bands (ev):
-21.5837 -21.4721 -20.2137 -20.2122 -20.1839 -20.1834 -20.1553 -20.1537 -20.0708 -20.0659 -20.0316 -20.0308 -19.9973 -19.9925 -18.1227 -18.1043 -18.1026 -18.0663 -18.0647 -18.0467 -17.9324 -17.9317 -17.9303 -17.1033 -17.0686 -17.0656 -16.9997 -16.9966 -16.9652 -15.8794 -15.8743 -15.8656 -15.1615 -15.1544 -15.1534 -12.3852 -12.3839 -12.3834 -12.0809 -12.0612 -12.0490 -12.0008 -11.9881 -11.9590 -11.0679 -11.0491 -11.0481 -11.0080 -11.0070 -10.9856 -10.8123 -10.7797 -10.7765 -10.7199 -10.7161 -10.6911 -9.5965 -9.0790 -9.0572 -9.0560 -9.0139 -9.0126 -8.9924 -8.9605
 -8.9562
           -8.9479
                     -8.8725
                               -8.8675
                                          -8.7954
                                                    -8.7864
                                                               -8.1813
                                                                         -8.1798
                                          -7.9965
                                                     -7.9931
                               -8.0353
                                                               -7.9858
 -8.1086
           -8.1081
                     -8.0368
                                                                         -7.7502
           -7.7055
                                          -7.6592
                                                    -7.2584
                                                               -7.2574
 -7.7463
                     -7.7031
                               -7.6631
                                                                         -7.2569
 -7.2209
           -7.2194
                     -7.1798
                               -7.1794
                                          -7.1400
                                                    -7.1384
                                                               -6.5373
                                                                         -6.5313
 -6.5078
           -6.5073
                     -6.4724
                               -6.4663
                                          -5.9393
                                                     -5.9383
                                                               -5.9110
                                                                         -5.9105
           -5.8805
 -5.8816
                     -4.3410
                                -4.3058
                                          -4.3037
                                                     -4.2964
                                                               -4.2917
                                                                          -4.2678
 -4.2391
           -4.2387
                     -4.2332
                                -4.2319
                                          -4.1983
                                                     -4.1800
                                                               -4.1794
                                                                         -4.1498
 -4.0380
           -4.0373
                     -3.9524
                                -3.9519
                                          -3.9506
                                                     -3.8188
                                                               -3.8178
                                                                          -3.8152
  0.4520
            0.4534
                       0.4554
                                 1.3474
                                           1.7020
                                                      1.7395
                                                                1.7586
                                                                           1.8232
  1.8455
            1.8818
                       1.8849
                                 2.1196
                                           2.2155
                                                      2.2167
                                                                2.2170
                                                                           2.5859
                                                      3.4383
  2.6810
            3.3693
                       3.3963
                                 3.3975
                                           3.4226
                                                                3.4528
                                                                           3.4540
  3.4805
            3.4823
        k = 0.0040 - 0.0069 \ 0.0000 \ (64673 \ PWs)
                                                      bands (ev):
-21.5839 -21.4723 -20.1992 -20.1978 -20.1840 -20.1836 -20.1700 -20.1684
-20.0527 -20.0479 -20.0318 -20.0310 -20.0158 -20.0110 -18.1036 -18.0948
-18.0932 -18.0758 -18.0741 -18.0655 -17.9322 -17.9313 -17.9302 -17.0690
-17.0516 -17.0486 -17.0171 -17.0141 -16.9998 -15.8746 -15.8695 -15.8658
-15.1617 -15.1596 -15.1585 -12.3855 -12.3846 -12.3840 -12.0528 -12.0436
-12.0325 -12.0137 -12.0010 -11.9883 -11.0478 -11.0383 -11.0373 -11.0177
-11.0167 -11.0066 -10.7824 -10.7668 -10.7633 -10.7367 -10.7332 -10.7213
                     -9.0471
                                                    -9.0242
 -9.5966
           -9.0576
                               -9.0459
                                          -9.0255
                                                               -9.0142
                                                                         -8.9547
                     -8.8725
                                -8.8676
                                          -8.8363
                                                               -8.1452
           -8.9095
                                                     -8.8270
 -8.9191
                                                                         -8.1437
           -8.1080
                     -8.0729
                                -8.0714
                                          -7.9955
                                                     -7.9930
                                                               -7.9857
                                                                         -7.7288
 -8.1085
 -7.7250
           -7.7057
                      -7.7033
                                -7.6849
                                          -7.6811
                                                     -7.2578
                                                               -7.2572
                                                                         -7.2569
 -7.2009
           -7.1994
                     -7.1801
                                -7.1797
                                          -7.1604
                                                     -7.1588
                                                               -6.5210
                                                                         -6.5152
 -6.5068
           -6.5063
                     -6.4883
                                -6.4822
                                          -5.9249
                                                     -5.9238
                                                               -5.9103
                                                                         -5.9098
                                -4.2968
 -5.8958
           -5.8947
                     -4.3056
                                          -4.2920
                                                     -4.2870
                                                               -4.2841
                                                                          -4.2513
 -4.2500
           -4.2386
                     -4.2328
                               -4.2242
                                          -4.2237
                                                     -4.1949
                                                               -4.1944
                                                                         -4.1799
                                          -3.9506
                               -3.9512
                                                    -3.8178
 -4.0372
           -4.0369
                     -3.9518
                                                               -3.8168
                                                                         -3.8153
                     0.4543
  0.4513
           0.4525
                                1.3471
                                          1.7369
                                                     1.7633
                                                               1.7791
                                                                          1.8048
```

```
1.8254
               1.8421
                          1.8846
                                                                     2.2161
                                                                                2.5856
                                     2.1193
                                               2.2153
                                                          2.2157
    2.6807
               3.3973
                          3.4107
                                     3.4119
                                               3.4389
                                                          3.4401
                                                                     3.4458
                                                                                3.4535
    3.4605
               3.4788
          k = 0.0000 \ 0.0000 \ 0.0000 \ (64705 \ PWs)
                                                          bands (ev):
  -21.5840 -21.4724 -20.1857 -20.1849 -20.1840 -20.1836 -20.1832 -20.1819
  -20.0352 -20.0347 -20.0334 -20.0300 -20.0288 -20.0285 -18.0865 -18.0859
  -18.0845 -18.0840 -18.0832 -18.0827 -17.9322 -17.9311 -17.9302 -17.0361 -17.0351 -17.0344 -17.0340 -17.0314 -17.0296 -15.8730 -15.8679 -15.8658 -15.1619 -15.1613 -15.1602 -12.3856 -12.3849 -12.3841 -12.0358 -12.0288
  -12.0221 -12.0198 -12.0136 -12.0096 -11.0283 -11.0280 -11.0280 -11.0273
  -11.0268 -11.0258 -10.7556 -10.7539 -10.7514 -10.7505 -10.7485 -10.7465

      -9.0371
      -9.0368
      -9.0362
      -9.0356
      -9.0351
      -9.0349
      -8.9546

      -8.8762
      -8.8721
      -8.8706
      -8.8704
      -8.8608
      -8.1098
      -8.1092

      -8.1082
      -8.1072
      -8.1068
      -7.9952
      -7.9930
      -7.9857
      -7.7098

      -7.7045
      -7.7034
      -7.7030
      -7.7007
      -7.2577
      -7.2572
      -7.2568

      -7.1811
      -7.1806
      -7.1796
      -7.1795
      -7.1775
      -6.5071
      -6.5066

   -9.5967
   -8.8820
   -8.1084
   -7.7079
   -7.1816
                                                                   -5.9100
                                                                              -5.9095
             -6.5046
                        -6.4979
                                              -5.9118
                                                         -5.9113
   -6.5052
                                   -6.4975
             -5.9072
                                   -4.2920
                                                         -4.2720
   -5.9091
                        -4.2968
                                              -4.2721
                                                                    -4.2699
                                                                               -4.2665
   -4.2660
             -4.2630
                        -4.2105
                                   -4.2102
                                              -4.2099
                                                         -4.2092
                                                                    -4.2086
                                                                               -4.2084
                                                                    -3.8164
   -4.0370
              -4.0367
                        -3.9517
                                   -3.9509
                                              -3.9506
                                                         -3.8175
                                                                               -3.8153
                         0.4540
    0.4509
               0.4522
                                    1.3470
                                               1.7545
                                                          1.7796
                                                                     1.7962
                                                                                1.7973
                          1.8845
    1.8078
               1.8166
                                     2.1192
                                               2.2151
                                                          2.2154
                                                                     2.2159
                                                                                2.5855
    2.6806
                          3.4245
                                    3.4257
                                               3.4259
                                                          3.4264
               3.4241
                                                                     3.4264
                                                                                3.4620
    3.4700
               3.4745
----- SPIN DOWN -----
          k = 0.0000 \ 0.0000 \ 0.0000 \ (64705 \ PWs)
                                                          bands (ev):
  -18.0844 -18.0839 -18.0831 -18.0826 -17.9320 -17.9310 -17.9300 -17.0345
  -17.0334 -17.0327 -17.0324 -17.0298 -17.0280 -15.8710 -15.8660 -15.8639
  -15.1608 -15.1602 -15.1591 -12.3857 -12.3849 -12.3841 -12.0343 -12.0272
  -12.0206 -12.0182 -12.0121 -12.0081 -11.0282 -11.0280 -11.0280 -11.0272
  -11.0267 -11.0258 -10.7549 -10.7532 -10.7507 -10.7498 -10.7478 -10.7458
   -9.5922
             -9.0371 -9.0368 -9.0362
                                             -9.0356
                                                        -9.0351
                                                                   -9.0349
                                                                              -8.9546
   -8.8808
             -8.8750
                        -8.8710
                                  -8.8695
                                             -8.8693
                                                         -8.8597
                                                                   -8.1098
                                                                              -8.1092
   -8.1084
             -8.1082
                        -8.1071
                                   -8.1068
                                             -7.9946
                                                        -7.9923
                                                                   -7.9850
                                                                              -7.7052
                        -7.6988
                                   -7.6984
   -7.7032
             -7.6998
                                              -7.6960
                                                         -7.2577
                                                                   -7.2571
                                                                              -7.2568
                                   -7.1795
                                              -7.1794
                                                         -7.1774
   -7.1815
             -7.1810
                        -7.1805
                                                                   -6.5065
                                                                              -6.5060
             -6.5040
                        -6.4972
                                   -6.4969
                                             -5.9118
                                                         -5.9113
                                                                   -5.9100
   -6.5046
                                                                              -5.9094
             -5.9072
   -5.9090
                        -4.2960
                                   -4.2912
                                             -4.2679
                                                         -4.2678
                                                                   -4.2657
                                                                               -4.2626
             -4.2592
                        -4.2095
                                  -4.2091
                                              -4.2087
                                                         -4.2079
                                                                   -4.2074
   -4.2620
                                                                              -4.2071
                                              -3.9503
   -4.0369
             -4.0367
                        -3.9515 -3.9507
                                                         -3.8122
                                                                   -3.8111
                                                                              -3.8100
                                              1.7604
    0.4557
                         0.4590
                                                         1.7855
               0.4571
                                    1.3474
                                                                     1.8020
                                                                                1.8031
    1.8137
               1.8224
                          1.8847
                                     2.1193
                                               2.2149
                                                          2.2152
                                                                     2.2157
                                                                                2.5857
    2.6807
               3.4240
                          3.4244
                                     3.4255
                                               3.4257
                                                          3.4262
                                                                     3.4262
                                                                                3.4624
    3.4704
               3.4749
          k = 0.0000 - 0.0079 \ 0.0000 \ (64671 \ PWs)
                                                          bands (ev):
  -21.5822 -21.4722 -20.2007 -20.1927 -20.1917 -20.1758 -20.1749 -20.1669
  -20.0517 -20.0408 -20.0399 -20.0204 -20.0191 -20.0081 -18.1014 -18.1002
  -18.0848 -18.0839 -18.0685 -18.0674 -17.9321 -17.9311 -17.9301 -17.0629
  -17.0598 -17.0323 -17.0319 -17.0034 -17.0000 -15.8715 -15.8681 -15.8644
  -15.1602 -15.1588 -15.1576 -12.3855 -12.3847 -12.3839 -12.0524 -12.0439
  -12.0211 -12.0202 -11.9952 -11.9901 -11.0454 -11.0448 -11.0279 -11.0273
  -11.0099 -11.0092 -10.7780 -10.7748 -10.7503 -10.7490 -10.7254 -10.7220
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           -9.0548
                     -9.0543
                                -9.0360
                                          -9.0353
                                                    -9.0174
                                                               -9.0169
                                                                         -8.9546
 -8.9184
           -8.8969
                     -8.8926
                               -8.8504
                                          -8.8451
                                                    -8.8216
                                                               -8.1498
                                                                         -8.1292
                               -8.0666
 -8.1289
           -8.0876
                     -8.0873
                                          -7.9948
                                                    -7.9922
                                                               -7.9853
                                                                         -7.7256
                     -7.6889
                                                               -7.2571
           -7.7111
                               -7.6866
                                          -7.6746
                                                    -7.2578
 -7.7141
                                                                         -7.2569
 -7.2032
           -7.1920
                     -7.1910
                               -7.1686
                                          -7.1678
                                                    -7.1565
                                                               -6.5227
                                                                         -6.5154
 -6.5073
           -6.4969
                     -6.4884
                               -6.4851
                                          -5.9264
                                                    -5.9188
                                                               -5.9178
                                                                         -5.9021
 -5.9009
           -5.8931
                     -4.2994
                               -4.2952
                                          -4.2931
                                                    -4.2899
                                                               -4.2646
                                                                         -4.2636
 -4.2363
           -4.2339
                     -4.2335
                               -4.2315
                                          -4.2085
                                                     -4.2079
                                                               -4.1830
                                                                         -4.1820
           -4.0369
                                                                         -3.8102
 -4.0371
                     -3.9516
                               -3.9509
                                          -3.9504
                                                    -3.8124
                                                               -3.8114
  0.4559
            0.4575
                      0.4593
                                1.3475
                                           1.7418
                                                     1.7684
                                                               1.7924
                                                                          1.8035
  1.8335
            1.8471
                      1.8848
                                 2.1194
                                           2.2151
                                                      2.2155
                                                                2.2159
                                                                           2.5858
  2.6808
            3.4009
                       3.4010
                                 3.4248
                                           3.4255
                                                      3.4439
                                                                3.4497
                                                                           3.4500
  3.4658
            3.4737
        k = 0.0000 - 0.0158 \ 0.0000 \ (64661 \ PWs)
                                                      bands (ev):
-21.5820 -21.4721 -20.2173 -20.2009 -20.1999 -20.1673 -20.1663 -20.1500
-20.0722 -20.0511 -20.0505 -20.0093 -20.0084 -19.9871 -18.1179 -18.1167
-18.0847 -18.0839 -18.0523 -18.0512 -17.9325 -17.9313 -17.9303 -17.0925
-17.0893 -17.0321 -17.0317 -16.9735 -16.9701 -15.8746 -15.8729 -15.8660
-15.1583 -15.1568 -15.1509 -12.3850 -12.3843 -12.3832 -12.0776 -12.0696
-12.0230 -12.0228 -11.9714 -11.9653 -11.0630 -11.0624 -11.0288 -11.0281
-10.9920 -10.9913 -10.8033 -10.8001 -10.7479 -10.7464 -10.6986 -10.6953
           -9.0731
                                                              -8.9978
 -9.5920
                     -9.0726
                               -9.0350
                                         -9.0343
                                                    -8.9983
                                                                        -8.9655
                                                    -8.7751
                                                               -8.1913
 -8.9540
                               -8.8268
                                          -8.8215
           -8.9206
                     -8.9160
                                                                         -8.1501
 -8.1497
           -8.0669
                     -8.0666
                               -8.0251
                                          -7.9955
                                                    -7.9920
                                                               -7.9860
                                                                         -7.7501
                                                    -7.2582
 -7.7263
           -7.7235
                     -7.6762
                               -7.6737
                                          -7.6496
                                                               -7.2575
                                                                         -7.2569
                                                    -7.1330
 -7.2263
           -7.2034
                     -7.2024
                               -7.1568
                                          -7.1559
                                                               -6.5411
                                                                         -6.5254
                     -6.4798
                               -6.4665
                                          -5.9429
                                                               -5.9265
 -6.5172
           -6.4883
                                                     -5.9275
                                                                         -5.8943
                     -4.3288
                               -4.3239
                                          -4.2963
                                                     -4.2917
 -5.8931
           -5.8764
                                                               -4.2651
                                                                         -4.2635
 -4.2591
           -4.2582
                     -4.2094
                                -4.2078
                                          -4.2057
                                                     -4.2016
                                                               -4.1570
                                                                         -4.1555
 -4.0378
           -4.0373
                     -3.9524
                                -3.9512
                                          -3.9505
                                                     -3.8135
                                                               -3.8119
                                                                          -3.8105
  0.4564
            0.4584
                      0.4608
                                 1.3478
                                           1.7095
                                                      1.7337
                                                                1.7917
                                                                           1.8030
                                                      2.2160
  1.8655
            1.8825
                       1.8852
                                 2.1197
                                           2.2154
                                                                2.2171
                                                                           2.5861
                                 3.4190
                                           3.4244
                                                      3.4250
  2.6811
            3.3766
                       3.3767
                                                                3.4531
                                                                           3.4579
  3.4744
            3.4748
        k = 0.0000 - 0.0237 \ 0.0000 \ (64643 \ PWs)
                                                      bands (ev):
-21.5816 -21.4717 -20.2338 -20.2090 -20.2080 -20.1586 -20.1577 -20.1330
-20.0928 -20.0613 -20.0607 -19.9984 -19.9975 -19.9658 -18.1344 -18.1332
-18.0847 -18.0838 -18.0361 -18.0350 -17.9333 -17.9315 -17.9305 -17.1220
-17.1188 -17.0318 -17.0314 -16.9435 -16.9401 -15.8851 -15.8754 -15.8685
-15.1552 -15.1537 -15.1399 -12.3843 -12.3837 -12.3818 -12.1039 -12.0960
-12.0273 -12.0267 -11.9469 -11.9405 -11.0806 -11.0799 -11.0301 -11.0295
-10.9741 -10.9734 -10.8282 -10.8249 -10.7438 -10.7421 -10.6713 -10.6680
 -9.5917
           -9.0912
                    -9.0907
                               -9.0334
                                         -9.0327
                                                    -9.0123
                                                              -8.9790
                                                                         -8.9786
 -8.9548
          -8.9436
                     -8.9392
                               -8.8033
                                          -8.7980
                                                    -8.7282
                                                               -8.2329
                                                                         -8.1709
           -8.0462
 -8.1706
                     -8.0460
                               -7.9966
                                          -7.9917
                                                    -7.9871
                                                               -7.9836
                                                                         -7.7746
 -7.7384
           -7.7356
                     -7.6633
                               -7.6608
                                          -7.6243
                                                    -7.2590
                                                               -7.2583
                                                                         -7.2566
 -7.2492
           -7.2146
                     -7.2136
                               -7.1448
                                          -7.1439
                                                    -7.1095
                                                               -6.5595
                                                                         -6.5357
 -6.5276
           -6.4801
                     -6.4716
                                -6.4478
                                          -5.9593
                                                     -5.9366
                                                               -5.9356
                                                                         -5.8868
 -5.8857
           -5.8597
                     -4.3598
                                -4.3548
                                          -4.2975
                                                     -4.2930
                                                               -4.2842
                                                                          -4.2840
 -4.2639
           -4.2633
                     -4.2087
                                -4.2076
                                          -4.1765
                                                     -4.1733
                                                               -4.1304
                                                                          -4.1284
           -4.0380
                                          -3.9507
                                                               -3.8123
 -4.0391
                      -3.9539
                                -3.9515
                                                     -3.8159
                                                                          -3.8109
                                                                1.7908
  0.4571
            0.4594
                      0.4638
                                 1.3483
                                           1.6747
                                                      1.6977
                                                                          1.8022
                                                      2.2167
                                                                2.2191
  1.8857
            1.9002
                       1.9186
                                 2.1202
                                           2.2161
                                                                           2.5866
                       3.3525
                                 3.3925
                                           3.4235
                                                      3.4241
                                                                3.4399
  2.6816
            3.3523
                                                                           3.4432
  3.4990
            3.4992
        k = 0.0000 - 0.0316 \ 0.0000 \ (64699 \ PWs)
                                                      bands (ev):
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-20.1134 -20.0714 -20.0708 -19.9873 -19.9865 -19.9443 -18.1510 -18.1498
-18.0845 -18.0837 -18.0201 -18.0189 -17.9347 -17.9317 -17.9308 -17.1514 -17.1482 -17.0313 -17.0309 -16.9133 -16.9099 -15.8993 -15.8789 -15.8719 -15.1509 -15.1495 -15.1249 -12.3835 -12.3829 -12.3797 -12.1308 -12.1230
-12.0332 -12.0322 -11.9225 -11.9159 -11.0981 -11.0974 -11.0321 -11.0314
-10.9561 -10.9554 -10.8526 -10.8492 -10.7382 -10.7362 -10.6435 -10.6402
                      -9.1086 -9.0594 -9.0311 -9.0305
 -9.5913
           -9.1090
                                                                   -8.9687
                                                                              -8.9640
           -8.9591
                      -8.9515
                                 -8.7798
                                            -8.7744
                                                        -8.6812
                                                                   -8.2745
 -8.9595
                                                                              -8.1919
                                                                              -7.7990
 -8.1915
            -8.0257
                      -8.0254
                                 -7.9982
                                            -7.9912
                                                       -7.9886
                                                                   -7.9421
 -7.7503
            -7.7475
                      -7.6502
                                 -7.6477
                                             -7.5988
                                                        -7.2720
                                                                   -7.2602
                                                                              -7.2595
 -7.2561
           -7.2257
                      -7.2247
                                  -7.1326
                                            -7.1317
                                                        -7.0858
                                                                   -6.5778
                                                                              -6.5465
                      -6.4639
                                                                              -5.8797
 -6.5385
            -6.4724
                                 -6.4289
                                             -5.9757
                                                        -5.9460
                                                                   -5.9450
 -5.8786
            -5.8430
                      -4.3911
                                 -4.3859
                                             -4.3092
                                                        -4.3090
                                                                   -4.2990
                                                                              -4.2945
                                                                              -4.1004
 -4.2638
            -4.2630
                      -4.2084
                                  -4.2074
                                             -4.1479
                                                        -4.1454
                                                                   -4.1031
 -4.0410
            -4.0390
                      -3.9562
                                 -3.9518
                                             -3.9510
                                                        -3.8194
                                                                   -3.8128
                                                                              -3.8113
  0.4582
             0.4605
                        0.4681
                                   1.3490
                                              1.6392
                                                        1.6615
                                                                    1.7897
                                                                               1.8010
  1.8864
             1.9357
                        1.9549
                                   2.1209
                                              2.2169
                                                         2.2175
                                                                    2.2221
                                                                               2.5873
  2.6824
             3.3282
                        3.3284
                                   3.3655
                                              3.4221
                                                         3.4227
                                                                    3.4268
                                                                                3.4291
  3.5191
             3.5236
        k = 0.0000 - 0.0395 \ 0.0000 \ (64739 \ PWs)
                                                         bands (ev):
-21.5804 -21.4707 -20.2667 -20.2249 -20.2239 -20.1410 -20.1400 -20.1338 -20.0988 -20.0813 -20.0807 -19.9761 -19.9753 -19.9227 -18.1677 -18.1665 -18.0844 -18.0835 -18.0041 -18.0029 -17.9365 -17.9319 -17.9310 -17.1806 -17.1775 -17.0307 -17.0303 -16.8831 -16.8797 -15.9168 -15.8832 -15.8763 -15.1454 -15.1440 -15.1064 -12.3825 -12.3819 -12.3768 -12.1580 -12.1503 -12.0406 -12.0393 -11.8982 -11.8917 -11.1155 -11.1148 -11.0346 -11.0339 -10.9381 -10.9374 -10.8765 -10.8731 -10.7309 -10.7286 -10.6152 -10.6120 -0.5008 -0.1366 -0.1363 -0.1366 -0.1363 -0.0383 -0.0376 -8.9010 -8.9077
 -9.5908
            -9.1266
                      -9.1262
                                 -9.1066
                                            -9.0283
                                                       -9.0276
                                                                   -8.9919
                                                                              -8.9872
 -8.9515
            -8.9398
                      -8.9393
                                  -8.7563
                                             -8.7509
                                                        -8.6343
                                                                   -8.3160
                                                                              -8.2128
                       -8.0049
                                  -8.0002
                                             -7.9910
                                                        -7.9902
                                                                   -7.9008
 -8.2125
            -8.0052
                                                                              -7.8231
 -7.7620
            -7.7592
                                  -7.6344
                                             -7.5732
                                                        -7.2947
                       -7.6370
                                                                   -7.2617
                                                                              -7.2609
            -7.2366
                                             -7.1194
 -7.2555
                      -7.2357
                                  -7.1203
                                                        -7.0620
                                                                   -6.5960
                                                                              -6.5578
 -6.5498
            -6.4651
                       -6.4565
                                  -6.4101
                                             -5.9920
                                                        -5.9558
                                                                   -5.9547
                                                                              -5.8729
 -5.8717
                       -4.4224
                                  -4.4172
                                             -4.3341
                                                        -4.3338
                                                                   -4.3013
            -5.8262
                                                                              -4.2965
 -4.2635
            -4.2627
                       -4.2081
                                  -4.2071
                                             -4.1202
                                                        -4.1183
                                                                   -4.0749
                                                                              -4.0717
 -4.0433
            -4.0402
                       -3.9592
                                  -3.9521
                                             -3.9513
                                                        -3.8240
                                                                   -3.8134
                                                                              -3.8119
  0.4595
             0.4619
                        0.4738
                                   1.3500
                                              1.6034
                                                         1.6252
                                                                    1.7882
                                                                               1.7995
                                                         2.2187
  1.8873
             1.9716
                        1.9912
                                   2.1219
                                              2.2180
                                                                    2.2260
                                                                               2.5883
  2.6833
             3.3042
                        3.3044
                                   3.3382
                                              3.4128
                                                         3.4148
                                                                    3.4213
                                                                               3.4219
  3.5208
             3.5483
        k = 0.0000 - 0.0475 \ 0.0000 \ (64747 \ PWs)
                                                         bands (ev):
-21.5796 -21.4700 -20.2830 -20.2327 -20.2317 -20.1541 -20.1320 -20.1310
-20.0911 -20.0905 -20.0815 -19.9647 -19.9639 -19.9008 -18.1844 -18.1832
-18.0842 -18.0833 -17.9882 -17.9870 -17.9388 -17.9321 -17.9312 -17.2098
-17.2067 -17.0299 -17.0295 -16.8528 -16.8493 -15.9372 -15.8884 -15.8816
-15.1388 -15.1375 -15.0849 -12.3813 -12.3807 -12.3734 -12.1857 -12.1780
-12.0496 -12.0479 -11.8742 -11.8677 -11.1328 -11.1322 -11.0376 -11.0369
-10.9200 -10.9193 -10.8998 -10.8964 -10.7221 -10.7196 -10.5864 -10.5832
                                                        -9.0241
 -9.5902
                                            -9.0248
            -9.1538
                      -9.1440
                                 -9.1436
                                                                   -9.0153
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 -8.9507
                       -8.9193
                                  -8.7328
                                             -8.7273
                                                        -8.5873
            -8.9198
                                                                   -8.3576
                                                                              -8.2338
 -8.2335
            -8.0027
                       -7.9932
                                  -7.9896
                                             -7.9847
                                                        -7.9844
                                                                   -7.8610
                                                                              -7.8456
            -7.7707
                                             -7.5474
                                                        -7.3173
                                                                   -7.2635
 -7.7736
                       -7.6236
                                  -7.6210
                                                                              -7.2627
 -7.2548
            -7.2474
                       -7.2465
                                  -7.1078
                                             -7.1069
                                                        -7.0380
                                                                   -6.6142
                                                                              -6.5695
 -6.5615
            -6.4583
                      -6.4497
                                  -6.3911
                                             -6.0082
                                                        -5.9659
                                                                   -5.9648
                                                                              -5.8664
 -5.8652
           -5.8093
                      -4.4538
                                 -4.4485
                                             -4.3589
                                                        -4.3585
                                                                   -4.3042
                                                                              -4.2988
                                  -4.2068
                                            -4.0933
                                                        -4.0920
 -4.2631
           -4.2622
                      -4.2077
                                                                   -4.0462
                                                                              -4.0459
                                                        -3.8296
 -4.0421 -4.0417
                      -3.9629
                                 -3.9525 -3.9517
                                                                   -3.8140
                                                                              -3.8125
```

```
0.4612
                 0.4636
                                0.4808
                                                             1.5674
                                                                            1.5889
                                                                                          1.7863
                                                                                                         1.7976
                                               1.3511
   1.8884
                 2.0076
                                2.0277
                                               2.1230
                                                             2.2194
                                                                            2.2201
                                                                                          2.2306
                                                                                                         2.5894
   2.6844
                 3.2803
                                3.2805
                                               3.3110
                                                             3.3997
                                                                            3.4015
                                                                                          3.4193
                                                                                                         3.4200
   3.5222
                 3.5703
           k = 0.0000 - 0.0554 \ 0.0000 \ (64767 \ PWs)
                                                                            bands (ev):
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-20.1007 -20.1001 -20.0642 -19.9533 -19.9525 -19.8789 -18.2012 -18.2000
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-10.9227 \ -10.9192 \ -10.9018 \ -10.9012 \ -10.7119 \ -10.7090 \ -10.5573 \ -10.5541
                             -9.1611 -9.1607
                                                           -9.0388
  -9.5895
               -9.2010
                                                                         -9.0342
                                                                                        -9.0206 -9.0200
 -8.9497
               -8.8996
                             -8.8991 -8.7094
                                                           -8.7039
                                                                          -8.5405
                                                                                        -8.3991
                                                                                                       -8.2549
               -8.0056 -7.9961 -7.9886
-7.7821 -7.6100 -7.6074
                                                                                        -7.8721
                                                           -7.9643
                                                                          -7.9640
                                                                                                       -7.8170
 -8.2545
 -7.7850
                                                           -7.5215
                                                                          -7.3397
                                                                                        -7.2656
                                                                                                       -7.2649
               -7.2571
                             -7.2539
                                                                                                       -6.5816
 -7.2581
                                            -7.0952
                                                           -7.0943
                                                                          -7.0140
                                                                                        -6.6322
               -6.4519
                              -6.4432
                                                           -6.0244
                                                                          -5.9763
                                                                                         -5.9753
                                                                                                       -5.8601
 -6.5738
                                            -6.3721
  -5.8590
               -5.7924
                              -4.4852
                                             -4.4798
                                                           -4.3837
                                                                          -4.3833
                                                                                         -4.3078
                                                                                                       -4.3013
  -4.2626
               -4.2617
                              -4.2073
                                             -4.2064
                                                           -4.0674
                                                                          -4.0665
                                                                                         -4.0497
                                                                                                        -4.0434
  -4.0162
               -4.0119
                              -3.9672
                                             -3.9529
                                                           -3.9521
                                                                          -3.8362
                                                                                         -3.8148
                                                                                                       -3.8133
                                                                                          1.7842
                                                                                                         1.7954
   0.4631
                 0.4655
                                0.4890
                                              1.3524
                                                             1.5313
                                                                           1.5525
                                               2.1243
                                                             2.2211
                                                                            2.2217
   1.8897
                 2.0438
                                2.0641
                                                                                          2.2362
                                                                                                         2.5907
   2.6858
                  3.2564
                                3.2567
                                               3.2838
                                                                            3.3883
                                                                                          3.4172
                                                             3.3867
                                                                                                         3.4178
   3.5236
                 3.5860
           k = 0.0000 - 0.0633 \ 0.0000 \ (64767 \ PWs)
                                                                            bands (ev):
-21.5776 -21.4683 -20.3153 -20.2480 -20.2470 -20.1943 -20.1137 -20.1127
-20.1101 -20.1096 -20.0468 -19.9416 -19.9408 -19.8567 -18.2180 -18.2168
-15.1224 -15.1212 -15.0341 -12.3782 -12.3776 -12.3645 -12.2420 -12.2344
-12.0717 -12.0695 -11.8271 -11.8206 -11.1672 -11.1665 -11.0452 -11.0446
-10.9450 -10.9415 -10.8837 -10.8830 -10.7003 -10.6971 -10.5277 -10.5245
 -9.5889
               -9.2481
                             -9.1779
                                            -9.1775
                                                          -9.0624
                                                                         -9.0577
                                                                                        -9.0159
                                                                                                      -9.0152
 -8.9484
               -8.8792
                             -8.8787
                                            -8.6860
                                                           -8.6804
                                                                          -8.4937
                                                                                        -8.4406
                                                                                                       -8.2759
                                                                         -7.9437
  -8.2756
               -8.0090
                             -7.9995
                                            -7.9875
                                                           -7.9440
                                                                                        -7.8957
                                                                                                       -7.7962
                                                           -7.4954
                                                                                                       -7.2680
 -7.7933
               -7.7759
                             -7.5963
                                            -7.5936
                                                                         -7.3620
                                                                                        -7.2686
                                                           -7.0815
                                                                                                       -6.5942
 -7.2676
               -7.2673
                             -7.2529
                                            -7.0824
                                                                          -6.9898
                                                                                        -6.6502
               -6.4459
                             -6.4372
                                                           -6.0405
 -6.5864
                                            -6.3530
                                                                          -5.9871
                                                                                        -5.9860
                                                                                                       -5.8543
                                                                          -4.4081
               -5.7755
                              -4.5165
                                             -4.5111
                                                           -4.4085
 -5.8531
                                                                                        -4.3120
                                                                                                       -4.3041
                              -4.2069
               -4.2611
                                            -4.2059
                                                           -4.0536
                                                                          -4.0455
                                                                                        -4.0421
 -4.2620
                                                                                                       -4.0416
               -3.9812
                              -3.9721
                                                           -3.9527
  -3.9860
                                            -3.9534
                                                                          -3.8437
                                                                                        -3.8157
                                                                                                       -3.8142
                                                                           1.5162
  0.4654
                 0.4678
                                0.4984
                                             1.3540
                                                             1.4952
                                                                                          1.7817
                                                                                                         1.7929
   1.8913
                 2.0799
                                               2.1259
                                                             2.2230
                                                                            2.2236
                                                                                          2.2426
                                2.1005
                                                                                                         2.5922
                                                                                                         3.4154
   2.6873
                 3.2327
                                3.2330
                                               3.2568
                                                             3.3739
                                                                            3.3754
                                                                                          3.4148
   3.5252
                 3.6021
           k = 0.0000 - 0.0712 \ 0.0000 \ (64767 \ PWs)
                                                                            bands (ev):
-21.5763 -21.4672 -20.3314 -20.2554 -20.2544 -20.2142 -20.1195 -20.1189
-20.1043 -20.1034 -20.0293 -19.9299 -19.9291 -19.8345 -18.2349 -18.2337
-18.0835 -18.0826 -17.9485 -17.9411 -17.9398 -17.9329 -17.9321 -17.2966
-17.2936 -17.0268 -17.0264 -16.7612 -16.7576 -16.0115 -15.9087 -15.9022
-15.1127 -15.1116 -15.0057 -12.3763 -12.3757 -12.3592 -12.2708 -12.2631
-12.0847 -12.0823 -11.8039 -11.7974 -11.1842 -11.1836 -11.0498 -11.0492
-10.9668 -10.9633 -10.8654 -10.8648 -10.6873 -10.6839 -10.4977 -10.4945
  -9.5882 -9.2950 -9.1945 -9.1941 -9.0859 -9.0812 -9.0105 -9.0099
 -8.9470 -8.8586 -8.8581 -8.6626 -8.6570 -8.4821 -8.4469 -8.2970
```

```
-8.2967
           -8.0128
                      -8.0033
                                -7.9863
                                           -7.9238
                                                     -7.9235
                                                                -7.9192
                                                                          -7.8073
                     -7.5824
 -7.8043
           -7.7345
                                -7.5797
                                           -7.4692
                                                     -7.3842
                                                                -7.2789
                                                                          -7.2780
                     -7.2517
 -7.2708
           -7.2701
                                -7.0695
                                           -7.0686
                                                     -6.9655
                                                                -6.6681
                                                                          -6.6072
                                                                          -5.8487
 -6.5995
           -6.4403
                      -6.4316
                                -6.3338
                                           -6.0566
                                                     -5.9981
                                                                -5.9970
 -5.8476
           -5.7584
                      -4.5479
                                -4.5424
                                           -4.4333
                                                     -4.4328
                                                                -4.3168
                                                                          -4.3071
 -4.2614
           -4.2604
                      -4.2063
                                -4.2054
                                           -4.0580
                                                     -4.0478
                                                                -4.0174
                                                                          -4.0172
 -3.9780
           -3.9555
                      -3.9542
                                -3.9528
                                           -3.9497
                                                     -3.8522
                                                                -3.8167
                                                                           -3.8152
                                                                1.7789
  0.4679
            0.4703
                       0.5091
                                 1.3557
                                            1.4591
                                                      1.4799
                                                                           1.7900
  1.8930
            2.1161
                       2.1276
                                 2.1369
                                            2.2251
                                                      2.2258
                                                                 2.2498
                                                                            2.5939
  2.6891
            3.2092
                       3.2094
                                 3.2298
                                            3.3612
                                                       3.3627
                                                                 3.4120
                                                                            3.4126
  3.5270
            3.6181
        k = 0.0000 - 0.0791 \ 0.0000 \ (64785 \ PWs)
                                                       bands (ev):
-21.5749 -21.4660 -20.3473 -20.2628 -20.2618 -20.2339 -20.1287 -20.1281
-20.0949 -20.0940 -20.0117 -19.9180 -19.9172 -19.8121 -18.2518 -18.2506 -18.0832 -18.0823 -17.9524 -17.9336 -17.9325 -17.9254 -17.9243 -17.3253 -17.3223 -17.0255 -17.0251 -16.7304 -16.7268 -16.0396 -15.9169 -15.9105 -15.1021 -15.1011 -14.9756 -12.3742 -12.3736 -12.3532 -12.2998 -12.2921 -12.0990 -12.0963 -11.7810 -11.7745 -11.2012 -11.2005 -11.0549 -11.0543 -10.9881 -10.9846 -10.8471 -10.8465 -10.6731 -10.6694 -10.4673 -10.4641 -9.5878 -9.3417 -9.2109 -9.2105 -9.1094 -9.1046 -9.0046 -9.0039
                                -9.2105
                                          -9.1094
                                                     -9.1046
 -9.5878
           -9.3417
                      -9.2109
                                                               -9.0046
                                                                          -9.0039
 -8.9454
           -8.8377
                                -8.6393
                                           -8.6336
                                                     -8.5236
                                                                -8.4003
                      -8.8372
                                                                          -8.3181
                     -8.0076
                                -7.9849
                                           -7.9428
                                                     -7.9037
                                                                -7.9034
 -8.3178
           -8.0170
                                                                          -7.8181
                                           -7.4428
                     -7.5683
                                -7.5656
                                                     -7.4062
                                                                -7.2891
                                                                          -7.2881
 -7.8150
           -7.6932
 -7.2739
           -7.2731
                     -7.2504
                                -7.0565
                                           -7.0555
                                                     -6.9411
                                                                -6.6859
                                                                          -6.6206
                      -6.4264
                                -6.3146
 -6.6130
           -6.4352
                                           -6.0726
                                                     -6.0095
                                                                -6.0084
                                                                          -5.8434
                      -4.5792
 -5.8423
           -5.7414
                                -4.5737
                                           -4.4581
                                                     -4.4576
                                                                -4.3223
                                                                           -4.3104
                      -4.2057
                                -4.2048
 -4.2606
           -4.2597
                                           -4.0630
                                                     -4.0503
                                                                -3.9933
                                                                           -3.9932
 -3.9842
           -3.9548
                      -3.9540
                                -3.9237
                                           -3.9185
                                                      -3.8617
                                                                -3.8178
                                                                           -3.8164
  0.4707
            0.4731
                       0.5210
                                 1.3577
                                            1.4230
                                                                            1.7868
                                                      1.4437
                                                                 1.7758
  1.8949
            2.1296
                       2.1523
                                 2.1733
                                            2.2275
                                                       2.2282
                                                                 2.2579
                                                                            2.5958
  2.6910
             3.1857
                       3.1860
                                 3.2030
                                            3.3488
                                                       3.3502
                                                                 3.4090
                                                                            3.4096
  3.5289
            3.6345
        k = 0.0000 - 0.0870 \ 0.0000 \ (64797 \ PWs)
                                                      bands (ev):
-21.5734 -21.4647 -20.3631 -20.2700 -20.2690 -20.2535 -20.1377 -20.1371
-20.0854 -20.0844 -19.9941 -19.9060 -19.9051 -19.7896 -18.2688 -18.2676
-18.0828 -18.0819 -17.9568 -17.9339 -17.9328 -17.9101 -17.9089 -17.3539
-17.3509 -17.0241 -17.0236 -16.6996 -16.6960 -16.0688 -15.9257 -15.9194
-15.0906 -15.0897 -14.9440 -12.3719 -12.3713 -12.3466 -12.3292 -12.3215
-12.1144 -12.1115 -11.7584 -11.7519 -11.2180 -11.2173 -11.0605 -11.0598
-11.0089 -11.0053 -10.8288 -10.8281 -10.6577 -10.6537 -10.4364 -10.4333
                     -9.2270
                               -9.2266
                                          -9.1329
                                                     -9.1280
                                                               -8.9981
 -9.5876
           -9.3880
                                                                          -8.9974
 -8.9436
           -8.8167
                     -8.8161
                                -8.6160
                                          -8.6103
                                                     -8.5651
                                                                -8.3537
                                                                          -8.3393
 -8.3389
           -8.0217
                     -8.0123
                                -7.9833
                                          -7.9661
                                                     -7.8838
                                                                -7.8835
                                                                          -7.8287
                                                                -7.2991
 -7.8255
           -7.6519
                     -7.5541
                                -7.5513
                                          -7.4281
                                                     -7.4163
                                                                          -7.2981
 -7.2773
           -7.2766
                     -7.2489
                                -7.0432
                                          -7.0423
                                                     -6.9166
                                                                -6.7037
                                                                          -6.6345
 -6.6270
           -6.4305
                     -6.4217
                                -6.2954
                                          -6.0885
                                                     -6.0212
                                                                -6.0201
                                                                          -5.8385
 -5.8374
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                     -4.6105
                                -4.6049
                                           -4.4829
                                                     -4.4823
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                                                                          -4.3140
 -4.2598
           -4.2588
                      -4.2051
                                -4.2041
                                           -4.0686
                                                      -4.0531
                                                                -3.9912
                                                                           -3.9696
 -3.9694
           -3.9555
                      -3.9547
                                 -3.8924
                                           -3.8868
                                                      -3.8718
                                                                -3.8191
                                                                           -3.8176
  0.4739
            0.4762
                       0.5340
                                 1.3599
                                            1.3870
                                                      1.4075
                                                                 1.7723
                                                                            1.7833
                                            2.2302
                                                       2.2311
  1.8971
            2.1318
                       2.1884
                                 2.2094
                                                                 2.2668
                                                                            2.5979
  2.6932
             3.1624
                       3.1627
                                 3.1764
                                            3.3365
                                                       3.3379
                                                                 3.4057
                                                                            3.4063
  3.5311
            3.6510
        k = 0.0000 - 0.0949 \ 0.0000 \ (64793 \ PWs)
                                                       bands (ev):
-21.5717 -21.4633 -20.3789 -20.2771 -20.2762 -20.2730 -20.1466 -20.1460
-20.0757 -20.0748 -19.9763 -19.8938 -19.8930 -19.7669 -18.2857 -18.2846
```

```
-18.0824 -18.0816 -17.9616 -17.9343 -17.9333 -17.8948 -17.8936 -17.3824
-17.3794 -17.0225 -17.0220 -16.6687 -16.6650 -16.0991 -15.9351 -15.9289
-15.0784 -15.0774 -14.9113 -12.3694 -12.3688 -12.3589 -12.3512 -12.3393
-12.1308 -12.1277 -11.7360 -11.7296 -11.2347 -11.2340 -11.0665 -11.0659
-11.0292 -11.0256 -10.8104 -10.8098 -10.6412 -10.6370 -10.4053 -10.4021
 -9.5883
           -9.4334 -9.2428 -9.2424 -9.1563 -9.1512 -8.9910
                                                                           -8.9903
           -8.7954
                     -8.7948 -8.6065
                                           -8.5928
                                                      -8.5870
 -8.9416
                                                                -8.3604
                                                                           -8.3601
 -8.3072
           -8.0269
                      -8.0174
                                -7.9892
                                           -7.9816
                                                      -7.8644
                                                                -7.8640
                                                                           -7.8386
           -7.6107
                     -7.5397
                                -7.5369
                                           -7.4499
                                                      -7.3897
                                                                -7.3090
                                                                           -7.3080
 -7.8354
                                                                           -6.6487
 -7.2810
           -7.2803
                     -7.2473
                                -7.0299
                                           -7.0289
                                                      -6.8919
                                                                 -6.7213
 -6.6414
           -6.4262
                     -6.4174
                                -6.2760
                                           -6.1044
                                                      -6.0332
                                                                 -6.0321
                                                                           -5.8339
           -5.7072
                                                                           -4.3180
 -5.8327
                      -4.6417
                                 -4.6361
                                           -4.5077
                                                      -4.5071
                                                                 -4.3352
 -4.2589
                      -4.2044
                                -4.2034
                                           -4.0746
                                                      -4.0562
                                                                 -3.9987
                                                                            -3.9564
           -4.2579
                                           -3.8601
 -3.9555
           -3.9462
                     -3.9460
                                -3.8838
                                                      -3.8550
                                                                 -3.8204
                                                                           -3.8189
  0.4773
             0.4796
                      0.5483
                                            1.3622
                                                       1.3713
                                                                  1.7685
                                                                            1.7795
                                 1.3509
  1.8994
             2.1342
                       2.2236
                                  2.2327
                                             2.2341
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                                                                             2,6003
  2.6955
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                                  3.1500
                                             3.3244
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             3.6678
        k = 0.0000 - 0.1028 \ 0.0000 \ (64787 \ PWs)
                                                       bands (ev):
-21.5698 -21.4617 -20.3945 -20.2923 -20.2841 -20.2832 -20.1553 -20.1548 -20.0660 -20.0650 -19.9585 -19.8815 -19.8806 -19.7441 -18.3028 -18.3016 -18.0820 -18.0812 -17.9669 -17.9347 -17.9337 -17.8797 -17.8785 -17.4107 -17.4078 -17.0208 -17.0203 -16.6377 -16.6340 -16.1302 -15.9449 -15.9389 -15.0653 -15.0645 -14.8774 -12.3889 -12.3813 -12.3666 -12.3660 -12.3315 -12.1483 -12.1450 -11.7138 -11.7074 -11.2513 -11.2506 -11.0731 -11.0725 -11.0489 -11.0453 -10.7920 -10.7913 -10.6236 -10.6192 -10.3737 -10.3705 -9.5908 -9.4768 -9.2584 -9.2580 -9.1798 -9.1744 -8.9833 -8.9827 -8.83815 -8.87730 -8.87734 -8.6470 -8.5606 -8.5638 -8.3816 -8.3813
 -8.9395
           -8.7739
                      -8.7734
                                -8.6479
                                           -8.5696
                                                      -8.5638
                                                                 -8.3816
                                                                           -8.3813
                                           -7.9797
 -8.2608
           -8.0325
                      -8.0231
                                -8.0121
                                                      -7.8530
                                                                 -7.8504
                                                                           -7.8405
                                -7.5223
 -7.8393
           -7.5694
                      -7.5251
                                           -7.4715
                                                      -7.3630
                                                                 -7.3187
                                                                            -7.3177
           -7.2844
                      -7.2456
                                -7.0164
 -7.2851
                                           -7.0154
                                                      -6.8672
                                                                 -6.7388
                                                                           -6.6635
                      -6.4135
                                -6.2567
 -6.6562
           -6.4223
                                           -6.1201
                                                      -6.0455
                                                                 -6.0445
                                                                            -5.8296
                      -4.6729
                                 -4.6672
                                           -4.5324
                                                      -4.5319
 -5.8284
           -5.6901
                                                                 -4.3426
                                                                            -4.3222
 -4.2579
            -4.2569
                      -4.2036
                                 -4.2027
                                            -4.0811
                                                      -4.0596
                                                                 -4.0069
                                                                            -3.9572
 -3.9564
                      -3.9230
                                 -3.8957
                                           -3.8288
                                                      -3.8244
                                                                 -3.8211
           -3.9232
                                                                            -3.8194
  0.4810
            0.4833
                       0.5637
                                  1.3149
                                            1.3351
                                                       1.3648
                                                                  1.7644
                                                                             1.7753
  1.9020
             2.1367
                       2.2356
                                  2.2364
                                             2.2611
                                                       2.2828
                                                                  2.2876
                                                                             2.6028
  2.6981
             3.1162
                       3.1165
                                  3.1237
                                             3.3126
                                                       3.3140
                                                                  3.3981
                                                                             3.3987
  3.5359
             3,6683
        k = 0.0000 - 0.1107 \ 0.0000 \ (64765 \ PWs)
                                                       bands (ev):
-21.5679 -21.4600 -20.4101 -20.3115 -20.2910 -20.2901 -20.1639 -20.1634
-20.0562 -20.0552 -19.9406 -19.8690 -19.8681 -19.7211 -18.3198 -18.3187
-18.0816 -18.0807 -17.9725 -17.9352 -17.9342 -17.8647 -17.8634 -17.4390
-17.4361 -17.0189 -17.0184 -16.6065 -16.6028 -16.1620 -15.9553 -15.9493
-15.0516 -15.0508 -14.8427 -12.4193 -12.4116 -12.3637 -12.3631 -12.3230
-12.1667 -12.1632 -11.6919 -11.6856 -11.2678 -11.2671 -11.0801 -11.0795
-11.0682 -11.0646 -10.7735 -10.7729 -10.6051 -10.6005 -10.3418 -10.3386
 -9.5983
           -9.5152
                      -9.2737
                                -9.2733
                                           -9.2033
                                                      -9.1975
                                                                -8.9751
                                                                           -8.9745
                      -8.7517
                                                      -8.5406
 -8.9371
           -8.7522
                                 -8.6893
                                           -8.5465
                                                                 -8.4028
                                                                           -8.4025
                                 -8.0287
                                           -7.9777
                                                      -7.8611
                                                                 -7.8575
 -8.2146
           -8.0390
                      -8.0348
                                                                           -7.8228
           -7.5282
                      -7.5104
                                 -7.5076
                                           -7.4930
                                                      -7.3361
                                                                 -7.3282
 -7.8224
                                                                            -7.3273
 -7.2895
           -7.2887
                      -7.2438
                                 -7.0027
                                           -7.0017
                                                      -6.8423
                                                                 -6.7563
                                                                            -6.6786
 -6.6715
           -6.4189
                      -6.4100
                                 -6.2372
                                            -6.1358
                                                      -6.0582
                                                                 -6.0572
                                                                            -5.8255
 -5.8244
           -5.6728
                      -4.7039
                                 -4.6982
                                            -4.5572
                                                      -4.5566
                                                                 -4.3505
                                                                            -4.3268
 -4.2569
           -4.2558
                      -4.2027
                                 -4.2018
                                           -4.0882
                                                      -4.0632
                                                                 -4.0158
                                                                            -3.9581
 -3.9573
           -3.9094
                      -3.9003
                                -3.8995
                                           -3.8237
                                                      -3.8222
                                                                 -3.7962
                                                                            -3.7906
                                           1.2990
                                                      1.3676
  0.4850
            0.4873
                      0.5802
                                 1.2790
                                                                 1.7600
                                                                            1.7708
                       2.2392
                                  2.2398
                                            2.2938
  1.9047
            2.1395
                                                       2.3021
                                                                 2.3193
                                                                            2.6055
```

```
2.7009
            3.0934
                     3.0937
                               3.0976
                                                   3.3023
                                                            3.3938
                                                                      3.3944
                                         3.3009
  3.5386
            3.6420
       k = 0.0000 - 0.1186 \ 0.0000 \ (64769 \ PWs)
                                                  bands (ev):
-21.5657 -21.4582 -20.4256 -20.3306 -20.2978 -20.2968 -20.1724 -20.1719
-20.0462 -20.0452 -19.9227 -19.8564 -19.8555 -19.6980 -18.3369 -18.3358
-18.0811 -18.0802 -17.9785 -17.9358 -17.9348 -17.8497 -17.8485 -17.4671
-17.4642 -17.0169 -17.0164 -16.5753 -16.5715 -16.1943 -15.9660 -15.9602 -15.0372 -15.0364 -14.8073 -12.4499 -12.4423 -12.3605 -12.3599 -12.3139 -12.1859 -12.1823 -11.6702 -11.6639 -11.2841 -11.2834 -11.0876 -11.0870
-11.0869 -11.0833 -10.7550 -10.7544 -10.5857 -10.5809 -10.3096 -10.3063
                             -9.2883
 -9.6175
          -9.5418
                    -9.2887
                                       -9.2268
                                                 -9.2205
                                                           -8.9664
                                                                     -8.9658
                    -8.7303
 -8.9346
          -8.7308
                             -8.7297
                                       -8.5234
                                                 -8.5175
                                                           -8.4240
                                                                     -8.4237
                                                           -7.8669
                                                                     -7.8034
 -8.1685
          -8.0580
                    -8.0447
                              -8.0354
                                       -7.9755
                                                 -7.8708
                                                 -7.3376
 -7.8031
          -7.5144
                    -7.4956
                             -7.4926
                                       -7.4871
                                                           -7.3367
                                                                     -7.3091
          -7.2934
                    -7.2417
                             -6.9889
                                       -6.9879
                                                 -6.8174
                                                           -6.7737
                                                                     -6.6942
 -7.2942
          -6.4158
                    -6.4069
                              -6.2178
                                                           -6.0702
                                                                     -5.8218
 -6.6873
                                       -6.1515
                                                 -6.0712
                                        -4.5820
 -5.8207
          -5.6556
                    -4.7350
                              -4.7292
                                                 -4.5814
                                                           -4.3590
                                                                     -4.3317
                              -4.2009
 -4.2557
          -4.2547
                    -4.2018
                                        -4.0958
                                                 -4.0671
                                                           -4.0252
                                                                     -3.9591
 -3.9583
          -3.9229
                    -3.8778
                              -3.8772
                                        -3.8253
                                                 -3.8239
                                                           -3.7642
                                                                     -3.7586
                                                  1.3706
  0.4893
           0.4916
                     0.5978
                               1.2431
                                         1.2630
                                                            1.7553
                                                                      1.7660
                     2.2428
                               2.2434
                                         2.3096
                                                   2.3346
  1.9077
           2.1425
                                                            2.3556
                                                                      2.6084
  2.7039
            3.0707
                     3.0710
                               3.0716
                                         3.2895
                                                   3.2909
                                                            3.3892
                                                                      3.3898
  3.5415
           3.6159
       k = 0.0000 - 0.1265 \ 0.0000 \ (64777 \ PWs)
                                                   bands (ev):
-18.0806 -18.0797 -17.9850 -17.9363 -17.9354 -17.8350 -17.8338 -17.4951
-17.4923 -17.0148 -17.0142 -16.5440 -16.5402 -16.2272 -15.9772 -15.9715 -15.0223 -15.0214 -14.7711 -12.4809 -12.4732 -12.3571 -12.3565 -12.3043 -12.2059 -12.2022 -11.6487 -11.6424 -11.3003 -11.2996 -11.1053 -11.1016
-11.0954 -11.0948 -10.7365 -10.7359 -10.5655 -10.5605 -10.2770 -10.2737
          -9.5537
 -9.6514
                    -9.3035
                             -9.3032
                                       -9.2502
                                                 -9.2433
                                                           -8.9572
                                                                     -8.9565
                    -8.7082
                             -8.7077
 -8.9320
          -8.7720
                                       -8.5004
                                                 -8.4945
                                                           -8.4453
                                                                     -8.4449
 -8.1227
          -8.0804
                    -8.0516
                              -8.0422
                                       -7.9732
                                                 -7.8806
                                                           -7.8762
                                                                     -7.7838
                              -7.4776
                                                                     -7.2992
 -7.7836
          -7.5356
                    -7.4806
                                       -7.4460
                                                 -7.3468
                                                           -7.3459
                                       -6.9740
 -7.2984
          -7.2819
                    -7.2396
                              -6.9749
                                                 -6.7923
                                                           -6.7909
                                                                     -6.7101
                    -6.4043
                                                 -6.0845
 -6.7034
          -6.4132
                              -6.1982
                                       -6.1671
                                                           -6.0835
                                                                     -5.8183
                    -4.7659
                              -4.7601
 -5.8172
          -5.6383
                                       -4.6068
                                                 -4.6062
                                                           -4.3681
                                                                     -4.3369
                    -4.2009
                              -4.1999
                                                 -4.0713
 -4.2545
          -4.2535
                                       -4.1039
                                                           -4.0353
                                                                     -3.9602
 -3.9593
                                       -3.8271
                    -3.8555
                              -3.8549
          -3.9376
                                                 -3.8256
                                                           -3.7320
                                                                     -3.7264
 0.4938
           0.4961
                     0.6165
                               1.2072
                                         1.2271
                                                  1.3738
                                                            1.7502
                                                                      1.7609
  1.9108
           2.1457
                     2.2467
                               2.2473
                                         2.3228
                                                   2.3705
                                                            2.3919
                                                                      2.6115
  2.7070
           3.0459
                               3.0484
                                         3.2782
                                                   3.2796
                                                            3.3844
                     3.0481
                                                                      3.3850
  3.5446
           3.5900
       k = 0.0000 - 0.1345 \ 0.0000 \ (64765 \ PWs)
                                                  bands (ev):
-21.5610 -21.4541 -20.4562 -20.3682 -20.3110 -20.3101 -20.1889 -20.1884
-20.0260 -20.0250 -19.8866 -19.8308 -19.8299 -19.6515 -18.3712 -18.3700
-18.0801 -18.0792 -17.9918 -17.9369 -17.9360 -17.8203 -17.8191 -17.5230
-17.5202 -17.0125 -17.0119 -16.5126 -16.5088 -16.2604 -15.9886 -15.9830
-15.0067 -15.0058 -14.7343 -12.5121 -12.5045 -12.3535 -12.3529 -12.2940
-12.2267 -12.2229 -11.6274 -11.6211 -11.3164 -11.3157 -11.1231 -11.1194
-11.1037 -11.1031 -10.7179 -10.7173 -10.5446 -10.5394 -10.2441 -10.2408
 -9.6931
         -9.5578
                   -9.3181
                             -9.3177
                                       -9.2736
                                                 -9.2659
                                                           -8.9474
                                                                    -8.9468
 -8.9291
         -8.8132
                    -8.6859
                             -8.6854
                                       -8.4776
                                                 -8.4716
                                                           -8.4665
                                                                     -8.4661
                   -8.0589
                             -8.0495
                                                 -7.8903
                                                           -7.8852
                                                                     -7.7644
 -8.1026 -8.0773
                                       -7.9708
 -7.7641 -7.5567 -7.4654 -7.4623 -7.4050
                                                 -7.3559
                                                           -7.3550
                                                                     -7.3045
```

```
-7.3037
           -7.2547
                     -7.2373
                               -6.9608
                                         -6.9599
                                                   -6.8080
                                                              -6.7672
                                                                        -6.7264
 -6.7200
           -6.4110
                     -6.4020
                               -6.1825
                                         -6.1787
                                                   -6.0981
                                                              -6.0971
                                                                        -5.8152
                     -4.7968
                                         -4.6316
 -5.8141
          -5.6211
                               -4.7909
                                                   -4.6310
                                                             -4.3778
                                                                        -4.3425
           -4.2522
                                                   -4.0757
                                                                        -3.9613
 -4.2532
                     -4.1998
                               -4.1989
                                         -4.1126
                                                              -4.0461
 -3.9605
                               -3.8331
                                         -3.8287
                                                              -3.6999
           -3.9532
                     -3.8336
                                                   -3.8273
                                                                        -3.6941
  0.4987
            0.5009
                      0.6363
                               1.1715
                                          1.1912
                                                    1.3772
                                                              1.7449
                                                                        1.7555
  1.9142
            2.1491
                      2.2508
                                2.2514
                                          2.3366
                                                    2.4065
                                                               2.4282
                                                                         2.6149
  2.7104
            3.0203
                      3.0257
                                3.0261
                                          3.2672
                                                     3.2686
                                                               3.3792
                                                                         3.3798
  3.5477
            3.5645
       k = 0.0000 - 0.1424 \ 0.0000 \ (64757 \ PWs)
                                                     bands (ev):
-21.5585 -21.4519 -20.4714 -20.3869 -20.3175 -20.3165 -20.1969 -20.1964
-20.0157 -20.0147 -19.8684 -19.8177 -19.8168 -19.6280 -18.3883 -18.3872
-18.0795 -18.0786 -17.9991 -17.9376 -17.9366 -17.8058 -17.8046 -17.5508 -17.5480 -17.0101 -17.0095 -16.4811 -16.4772 -16.2939 -16.0004 -15.9949 -14.9906 -14.9897 -14.6969 -12.5436 -12.5360 -12.3497 -12.3491 -12.2831 -12.2481 -12.2442 -11.6063 -11.6001 -11.3323 -11.3316 -11.1404 -11.1367 -11.1124 -11.1118 -10.6993 -10.6987 -10.5229 -10.5175 -10.2109 -10.2076
          -9.5589
                     -9.3323
                                         -9.2971
 -9.7378
                               -9.3320
                                                   -9.2883
                                                             -8.9372
                                                                        -8.9365
 -8.9261
           -8.8544
                     -8.6635
                               -8.6629
                                         -8.4877
                                                   -8.4874
                                                             -8.4548
                                                                        -8.4488
 -8.1247
           -8.0668
                     -8.0575
                               -8.0321
                                         -7.9682
                                                   -7.8998
                                                             -7.8934
                                                                        -7.7450
                                         -7.3648
                                                   -7.3641
           -7.5776
 -7.7447
                     -7.4501
                               -7.4469
                                                             -7.3638
                                                                        -7.3101
                                                             -6.7456
 -7.3094
           -7.2349
                                                   -6.8250
                     -7.2274
                               -6.9466
                                         -6.9456
                                                                        -6.7400
                               -6.1979
 -6.7366
                     -6.4002
           -6.4091
                                         -6.1591
                                                   -6.1121
                                                             -6.1110
                                                                        -5.8123
                                                              -4.3881
 -5.8112
           -5.6038
                     -4.8276
                               -4.8216
                                         -4.6564
                                                   -4.6558
                                                                        -4.3483
 -4.2518
           -4.2508
                     -4.1987
                               -4.1978
                                         -4.1217
                                                    -4.0803
                                                              -4.0574
                                                                        -3.9695
 -3.9625
                               -3.8298
           -3.9617
                     -3.8311
                                         -3.8112
                                                   -3.8107
                                                              -3.6676
                                                                        -3.6618
  0.5038
            0.5060
                      0.6571
                                1.1358
                                          1.1554
                                                    1.3808
                                                               1.7392
                                                                         1.7497
  1.9178
                      2.2551
                                2.2557
                                          2.3510
                                                     2.4426
                                                               2.4644
                                                                         2.6184
            2.1527
  2.7140
            2.9949
                      3.0036
                                3.0040
                                          3.2563
                                                     3.2577
                                                               3.3738
                                                                         3.3744
  3.5382
            3.5519
       k = 0.0000 - 0.1503 \ 0.0000 \ (64779 \ PWs)
                                                    bands (ev):
-21.5558 -21.4496 -20.4864 -20.4054 -20.3238 -20.3229 -20.2048 -20.2043
-20.0053 -20.0044 -19.8502 -19.8046 -19.8037 -19.6043 -18.4055 -18.4044
-18.0789 -18.0780 -18.0067 -17.9383 -17.9373 -17.7915 -17.7903 -17.5784
-17.5757 -17.0076 -17.0070 -16.4496 -16.4456 -16.3278 -16.0124 -16.0071
-14.9740 -14.9731 -14.6591 -12.5753 -12.5678 -12.3456 -12.3450 -12.2717
-12.2702 -12.2661 -11.5854 -11.5792 -11.3481 -11.3474 -11.1572 -11.1536
-11.1215 -11.1209 -10.6807 -10.6801 -10.5006 -10.4950 -10.1775 -10.1741
          -9.5588
                                                   -9.3104
                                         -9.3205
                                                                       -8.9258
 -9.7839
                    -9.3464
                              -9.3460
                                                             -8.9264
                              -8.6403
                                         -8.5090
                                                   -8.5086
 -8.9230
          -8.8956
                    -8.6408
                                                             -8.4321
                                                                        -8.4261
                               -7.9890
                                         -7.9654
                                                   -7.9092
                    -8.0656
                                                             -7.9000
 -8.1464
          -8.0750
                                                                        -7.7257
                                                   -7.3726
                                                             -7.3232
 -7.7255
          -7.5984
                    -7.4346
                               -7.4314
                                         -7.3736
                                                                        -7.3160
          -7.2324
                    -7.2000
                               -6.9322
                                         -6.9312
                                                   -6.8420
                                                             -6.7607
 -7.3152
                                                                        -6.7545
                                                             -6.1253
          -6.4076
                    -6.3987
                               -6.2133
                                         -6.1395
                                                   -6.1263
 -6.7161
                                                                        -5.8097
 -5.8086
          -5.5864
                     -4.8583
                               -4.8523
                                         -4.6812
                                                   -4.6806
                                                             -4.3990
                                                                        -4.3545
 -4.2503
           -4.2493
                     -4.1976
                               -4.1967
                                         -4.1313
                                                   -4.0853
                                                              -4.0694
                                                                        -3.9865
 -3.9637
           -3.9629
                     -3.8332
                               -3.8318
                                         -3.7896
                                                   -3.7890
                                                              -3.6354
                                                                        -3.6296
  0.5092
            0.5114
                      0.6789
                                1.1001
                                          1.1197
                                                    1.3846
                                                               1.7333
                                                                         1.7437
  1.9216
            2.1566
                      2.2597
                                2.2603
                                          2.3662
                                                     2.4787
                                                               2.5007
                                                                         2.6221
                                2.9820
                                          3.2457
  2.7178
            2.9697
                      2.9817
                                                     3.2471
                                                               3.3680
                                                                         3.3687
  3.5131
            3.5554
       k = 0.0000 - 0.1582 \ 0.0000 \ (64771 \ PWs)
                                                     bands (ev):
-21.5529 -21.4472 -20.5014 -20.4237 -20.3300 -20.3291 -20.2126 -20.2121
-19.9949 -19.9939 -19.8319 -19.7913 -19.7904 -19.5805 -18.4227 -18.4216
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-12.2886 -12.2597 -11.5646 -11.5584 -11.3638 -11.3631 -11.1736 -11.1699
-11.1310 -11.1304 -10.6620 -10.6614 -10.4777 -10.4720 -10.1437 -10.1403
                                           -9.3439
           -9.5581
                                -9.3597
                     -9.3601
                                                      -9.3321
                                                                -8.9367
                                                                           -8.9196
 -9.8305
 -8.9152
           -8.9146
                      -8.6180
                                -8.6174
                                           -8.5302
                                                      -8.5299
                                                                 -8.4096
                                                                           -8.4035
 -8.1679
           -8.0835
                      -8.0742
                                -7.9626 -7.9522
                                                      -7.9184
                                                                -7.9000
                                                                           -7.7066
 -7.7063
           -7.6191
                     -7.4190
                                -7.4157
                                           -7.3821
                                                      -7.3812
                                                                -7.3223
                                                                           -7.3216
           -7.2297
                                -6.9178
                                                                 -6.7782
 -7.2823
                      -7.1726
                                           -6.9167
                                                      -6.8587
                                                                           -6.7723
 -6.6907
           -6.4066
                     -6.3976
                                -6.2285
                                           -6.1409
                                                      -6.1398
                                                                 -6.1198
                                                                           -5.8075
                                 -4.8828
                                           -4.7060
                                                                 -4.4104
 -5.8063
           -5.5691
                      -4.8889
                                                      -4.7054
                                                                           -4.3609
 -4.2488
           -4.2478
                      -4.1964
                                 -4.1954
                                           -4.1414
                                                      -4.0904
                                                                 -4.0820
                                                                           -4.0042
 -3.9651
           -3.9643
                      -3.8354
                                 -3.8341
                                           -3.7682
                                                      -3.7676
                                                                 -3.6032
                                                                           -3.5973
                                            1.0840
  0.5149
            0.5171
                       0.7018
                                  1.0646
                                                       1.3887
                                                                  1.7270
                                                                             1.7373
                                             2.3822
                       2.2645
                                                       2.5147
                                                                  2.5369
  1.9255
             2.1606
                                  2.2651
                                                                             2.6260
  2.7218
                                  2.9603
             2.9447
                       2.9599
                                             3.2352
                                                       3.2366
                                                                  3.3620
                                                                             3.3627
  3.4879
             3.5593
        k = 0.0000 - 0.1661 \ 0.0000 \ (64779 \ PWs)
                                                       bands (ev):
-21.5499 -21.4446 -20.5163 -20.4419 -20.3362 -20.3352 -20.2202 -20.2197 -19.9843 -19.9833 -19.8135 -19.7778 -19.7769 -19.5566 -18.4399 -18.4388 -18.0776 -18.0767 -18.0230 -17.9397 -17.9388 -17.7632 -17.7620 -17.6334 -17.6307 -17.0021 -17.0014 -16.3967 -16.3856 -16.3821 -16.0372 -16.0320 -14.9395 -14.9384 -14.5822 -12.6396 -12.6321 -12.3369 -12.3363 -12.3159 -12.3117 -12.2471 -11.5440 -11.5378 -11.3793 -11.3786 -11.1895 -11.1859 -11.1408 -11.1402 -10.6433 -10.6427 -10.4542 -10.4484 -10.1097 -10.1063 -9.8776 -9.5575 -9.3736 -9.3732 -9.3672 -9.3533 -8.9778 -8.9161
                      -9.3736
                                -9.3732
                                           -9.3672
                                                      -9.3533
           -9.5575
                                                                -8.9778
 -9.8776
                                                                          -8.9161
                      -8.5950
                                -8.5944
           -8.9030
                                           -8.5515
                                                      -8.5512
 -8.9036
                                                                 -8.3873
                                                                           -8.3811
                                           -7.9377
                                                      -7.9274
           -8.0925
                      -8.0832
                                 -7.9595
                                                                 -7.8777
 -8.1891
                                                                           -7.6875
           -7.6396
                      -7.4035
                                 -7.4001
                                           -7.3904
                                                      -7.3893
                                                                 -7.3288
                                                                           -7.3281
 -7.6873
 -7.2415
           -7.2269
                      -7.1451
                                -6.9033
                                           -6.9020
                                                      -6.8752
                                                                 -6.7960
                                                                           -6.7905
                      -6.3969
                                 -6.2437
 -6.6652
           -6.4059
                                           -6.1557
                                                      -6.1547
                                                                 -6.1001
                                                                            -5.8055
                      -4.9194
 -5.8043
           -5.5517
                                 -4.9133
                                           -4.7308
                                                      -4.7301
                                                                 -4.4224
                                                                           -4.3677
                                 -4.1942
                                                      -4.0959
 -4.2472
           -4.2462
                      -4.1951
                                            -4.1521
                                                                 -4.0952
                                                                            -4.0226
 -3.9665
           -3.9656
                                                                 -3.5709
                      -3.8377
                                 -3.8364
                                           -3.7469
                                                      -3.7463
                                                                            -3.5651
  0.5208
            0.5230
                       0.7256
                                  1.0292
                                             1.0485
                                                       1.3929
                                                                  1.7205
                                                                             1.7307
  1.9297
                                             2.3989
             2.1648
                                  2.2701
                                                       2.5508
                                                                  2.5731
                       2.2695
                                                                             2.6302
  2.7261
             2.9199
                       2.9384
                                  2.9387
                                             3.2250
                                                       3.2263
                                                                  3.3557
                                                                             3.3564
  3.4629
             3.5633
        k = 0.0000 - 0.1740 \ 0.0000 \ (64783 \ PWs)
                                                       bands (ev):
-21.5467 -21.4419 -20.5310 -20.4600 -20.3421 -20.3412 -20.2276 -20.2271
-19.9736 -19.9726 -19.7951 -19.7642 -19.7633 -19.5326 -18.4572 -18.4560
-18.0769 -18.0760 -18.0317 -17.9405 -17.9396 -17.7493 -17.7481 -17.6607
-17.6580 -16.9991 -16.9984 -16.4306 -16.3542 -16.3503 -16.0498 -16.0447
-14.9216 -14.9205 -14.5431 -12.6721 -12.6646 -12.3395 -12.3352 -12.3323
-12.3317 -12.2339 -11.5235 -11.5174 -11.3946 -11.3939 -11.2050 -11.2013
-11.1510 -11.1504 -10.6246 -10.6240 -10.4303 -10.4243 -10.0755 -10.0720
 -9.9248
           -9.5571
                      -9.3906
                                -9.3868
                                           -9.3865
                                                     -9.3738
                                                                -9.0188
                                                                           -8.9124
 -8.8916
           -8.8910
                      -8.5730
                                 -8.5725
                                           -8.5715
                                                      -8.5710
                                                                 -8.3655
                                                                           -8.3589
 -8.2096
           -8.1020
                      -8.0926
                                 -7.9564
                                           -7.9404
                                                      -7.9362
                                                                 -7.8381
                                                                           -7.6686
 -7.6684
           -7.6600
                      -7.3994
                                 -7.3984
                                           -7.3869
                                                      -7.3833
                                                                 -7.3357
                                                                            -7.3350
 -7.2239
           -7.2008
                      -7.1176
                                 -6.8938
                                           -6.8872
                                                      -6.8864
                                                                 -6.8142
                                                                           -6.8091
                      -6.3966
                                 -6.2587
                                                      -6.1699
                                                                 -6.0804
 -6.6395
           -6.4056
                                            -6.1709
                                                                            -5.8037
 -5.8026
           -5.5343
                      -4.9499
                                 -4.9436
                                            -4.7556
                                                      -4.7549
                                                                 -4.4349
                                                                            -4.3748
 -4.2455
           -4.2445
                      -4.1938
                                 -4.1928
                                            -4.1632
                                                      -4.1090
                                                                 -4.1016
                                                                            -4.0416
 -3.9679
           -3.9671
                      -3.8402
                                 -3.8388
                                            -3.7259
                                                      -3.7253
                                                                 -3.5387
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            0.5292
                       0.7503
                                 0.9938
  0.5271
                                            1.0131
                                                       1.3973
                                                                  1.7137
                                                                             1.7238
  1.9341
             2.1693
                       2.2747
                                  2.2754
                                             2.4163
                                                       2.5868
                                                                  2.6093
                                                                             2.6345
  2.7305
             2.8952
                       2.9170
                                  2.9174
                                             3.2149
                                                       3.2163
                                                                  3.3492
                                                                             3.3498
  3.4381
             3.5676
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-19.9628 -19.9618 -19.7766 -19.7505 -19.7495 -19.5084 -18.4744 -18.4733
-18.0762 -18.0753 -18.0407 -17.9413 -17.9404 -17.7356 -17.7344 -17.6879
-17.6852 -16.9960 -16.9953 -16.4651 -16.3223 -16.3184 -16.0626 -16.0576 -14.9033 -14.9021 -14.5038 -12.7049 -12.6974 -12.3636 -12.3592 -12.3274
-12.3268 -12.2202 -11.5032 -11.4971 -11.4098 -11.4090 -11.2200 -11.2164
-11.1615 \ -11.1609 \ -10.6059 \ -10.6053 \ -10.4059 \ -10.3998 \ -10.0410 \ -10.0374
 -9.9722
           -9.5572
                     -9.4139
                                -9.3998
                                           -9.3994
                                                      -9.3934
                                                                 -9.0597
                                                                           -8.9085
 -8.8792
           -8.8785
                      -8.5940
                                -8.5937
                                           -8.5484
                                                      -8.5478
                                                                 -8.3445
                                                                            -8.3369
 -8.2291
           -8.1118
                      -8.1025
                                 -7.9534
                                           -7.9467
                                                      -7.9448
                                                                 -7.7946
                                                                           -7.6802
                                                                           -7.3421
 -7.6498
           -7.6496
                      -7.4073
                                -7.4063
                                           -7.3711
                                                      -7.3673
                                                                 -7.3428
                                                                 -6.8327
                                                                            -6.8280
 -7.2209
           -7.1602
                      -7.0903
                                -6.9088
                                           -6.8729
                                                      -6.8722
 -6.6137
           -6.4057
                      -6.3967
                                 -6.2737
                                           -6.1864
                                                      -6.1854
                                                                 -6.0607
                                                                            -5.8022
 -5.8011
           -5.5168
                      -4.9802
                                 -4.9739
                                            -4.7804
                                                      -4.7797
                                                                 -4.4480
                                                                            -4.3823
 -4.2438
            -4.2428
                      -4.1924
                                 -4.1914
                                            -4.1749
                                                      -4.1235
                                                                 -4.1075
                                                                            -4.0612
                      -3.8427
                                            -3.7052
                                                      -3.7045
                                                                 -3.5066
                                                                            -3.5007
 -3.9694
           -3.9686
                                 -3.8414
  0.5336
             0.5357
                       0.7760
                                  0.9586
                                             0.9778
                                                       1.4020
                                                                  1.7065
                                                                             1.7165
  1.9387
             2.1739
                       2.2802
                                  2.2809
                                             2.4344
                                                        2.6228
                                                                  2.6390
                                                                             2.6454
  2.7351
             2.8708
                        2.8959
                                  2.8963
                                             3.2051
                                                        3.2064
                                                                  3.3423
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             3.5721
        k = 0.0000 - 0.1898 \ 0.0000 \ (64787 \ PWs)
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           -9.5583
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                                -9.4125
                                           -9.4121
                                                      -9.4117
-10.0027
                                                                 -9.1006
                                                                           -8.9045
                                 -8.6149
                                           -8.5249
                                                      -8.5243
                                                                 -8.3257
 -8.8663
           -8.8657
                      -8.6153
                                                                            -8.3151
 -8.2463
            -8.1221
                      -8.1127
                                 -7.9552
                                            -7.9536
                                                      -7.9486
                                                                 -7.7502
                                                                            -7.7003
           -7.6310
                      -7.4152
                                -7.4143
                                           -7.3549
                                                      -7.3509
                                                                 -7.3503
                                                                            -7.3496
 -7.6312
           -7.1197
                      -7.0632
                                 -6.9250
                                           -6.8579
                                                      -6.8571
                                                                 -6.8513
                                                                            -6.8470
 -7.2176
 -6.5878
           -6.4061
                      -6.3971
                                 -6.2886
                                           -6.2022
                                                      -6.2011
                                                                 -6.0409
                                                                            -5.8010
           -5.4994
                                                      -4.8044
                                                                 -4.4617
 -5.7999
                      -5.0105
                                 -5.0040
                                            -4.8051
                                                                            -4.3900
                                                      -4.1387
 -4.2419
           -4.2410
                      -4.1909
                                 -4.1899
                                            -4.1870
                                                                 -4.1137
                                                                            -4.0812
 -3.9710
                                 -3.8440
           -3.9702
                      -3.8453
                                            -3.6846
                                                      -3.6840
                                                                 -3.4745
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  0.5403
            0.5424
                       0.8025
                                  0.9235
                                             0.9426
                                                       1.4068
                                                                  1.6991
                                                                             1.7090
  1.9435
             2.1788
                       2.2860
                                  2.2866
                                             2.4531
                                                        2.6437
                                                                  2.6587
                                                                             2.6814
  2.7399
                                                        3.1968
                                                                  3.3353
             2.8465
                       2.8750
                                  2.8754
                                             3.1954
                                                                             3.3359
  3.3890
             3.5768
        k = 0.0000 - 0.1977 \ 0.0000 \ (64775 \ PWs)
                                                       bands (ev):
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-19.9409 -19.9400 -19.7394 -19.7226 -19.7216 -19.4596 -18.5089 -18.5077
-18.0747 -18.0738 -18.0599 -17.9431 -17.9421 -17.7419 -17.7393 -17.7087
-17.7075 -16.9895 -16.9887 -16.5343 -16.2583 -16.2543 -16.0885 -16.0837
-14.8656 -14.8643 -14.4242 -12.7709 -12.7635 -12.4128 -12.4083 -12.3170
-12.3164 -12.1911 -11.4629 -11.4569 -11.4395 -11.4388 -11.2488 -11.2452
-11.1834 -11.1828 -10.5683 -10.5677 -10.3559 -10.3496 -10.0673
                                                                           -9.9714
           -9.5610
                      -9.4604
                                -9.4282
                                           -9.4249
                                                      -9.4246
                                                                 -9.1415
 -9.9677
                                                                            -8.9003
           -8.8525
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                                 -8.6362
                                           -8.5012
                                                      -8.5006
                                                                 -8.3136
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 -8.8531
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                      -8.1234
                                 -7.9626
                                           -7.9618
                                                      -7.9454
                                                                 -7.7203
           -8.1328
                                                                            -7.7053
 -7.6127
           -7.6125
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                                -7.4221
                                           -7.3581
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                                                                 -7.3387
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 -7.2142
           -7.0792
                      -7.0368
                                -6.9412
                                           -6.8705
                                                      -6.8658
                                                                 -6.8426
                                                                            -6.8418
 -6.5619
           -6.4069 -6.3979
                                -6.3034
                                           -6.2182 -6.2172
                                                                 -6.0211
                                                                           -5.8000
```

```
-5.7989
          -5.4819
                    -5.0406
                             -5.0340
                                       -4.8298
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 -4.2401
          -4.2391
                   -4.1996
                             -4.1894
                                       -4.1884
                                                 -4.1546
                                                          -4.1201
                                                                    -4.1017
 -3.9726
          -3.9718
                    -3.8480
                             -3.8468
                                       -3.6643
                                                -3.6637
                                                          -3.4424
                                                                    -3.4364
                              0.8885
                                       0.9075
                                                 1.4118
 0.5473
           0.5494
                     0.8300
                                                           1.6915
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  1.9485
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                              2.2926
                                                  2.6486
           2.1838
                                        2.4727
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                                        3.1860
                                                  3.1873
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                                                                     3.3285
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           3.5817
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-19.9298 -19.9289 -19.7208 -19.7084 -19.7075 -19.4350 -18.5261 -18.5250
-18.0739 \ -18.0731 \ -18.0699 \ -17.9440 \ -17.9430 \ -17.7687 \ -17.7661 \ -17.6955
-17.6943 -16.9860 -16.9851 -16.5691 -16.2262 -16.2221 -16.1016 -16.0969 -14.8463 -14.8449 -14.3839 -12.8043 -12.7969 -12.4379 -12.4334 -12.3115 -12.3109 -12.1757 -11.4542 -11.4535 -11.4430 -11.4370 -11.2626 -11.2589
-11.1948 -11.1942 -10.5495 -10.5489 -10.3303 -10.3239 -10.1149
                                                                    -9.9363
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 -9.9326
          -9.5658
                   -9.4837
                             -9.4423
                                      -9.4371
                                                -9.4367
                                                          -9.1822
                                                -8.4767
                                      -8.4773
                                                          -8.3161
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          -8.8389
                   -8.6578
                             -8.6575
                   -8.1345
                             -7.9705
                                       -7.9699
                                                -7.9417
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                                                                    -7.6604
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          -8.1438
                                                -7.3654
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          -7.5941
                    -7.4307
                             -7.4297
                                       -7.3661
                                                          -7.3223
                                                                    -7.3177
                                                          -6.8273
                                                                    -6.8264
 -7.2107
          -7.0388
                    -7.0118
                             -6.9572
                                       -6.8901
                                                -6.8833
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                             -6.3182
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                                       -6.2346
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                             -4.1878
                                       -4.1868
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                                                                    -4.1226
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                     0.8536
                              0.8584
                                        0.8726
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                                                           1.6835
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                              2.2987
                                        2.4928
                                                  2.6537
                                                           2.7304
                                                                     2.7502
           2.1891
  2.7534
           2.7987
                              2.8345
                                                  3.1781
                                                           3.3203
                     2.8341
                                        3.1767
                                                                     3.3209
  3.3406
           3.5865
       k = 0.0000 - 0.2135 \ 0.0000 \ (64777 \ PWs)
                                                  bands (ev):
-21.5288 -21.4265 -20.6033 -20.5482 -20.3704 -20.3695 -20.2627 -20.2623
-19.9187 -19.9177 -19.7020 -19.6941 -19.6932 -19.4103 -18.5433 -18.5422
-18.0805 -18.0730 -18.0721 -17.9449 -17.9439 -17.7954 -17.7928 -17.6825
-17.6812 -16.9823 -16.9815 -16.6038 -16.1940 -16.1899 -16.1148 -16.1102
-14.8266 -14.8252 -14.3435 -12.8378 -12.8304 -12.4634 -12.4588 -12.3058
-12.3052 -12.1598 -11.4686 -11.4679 -11.4231 -11.4171 -11.2759 -11.2723
-11.2064 -11.2058 -10.5306 -10.5300 -10.3045 -10.2979 -10.1626
                                                                   -9.9010
                                      -9.4490
                             -9.4533
 -9.8972
          -9.5734
                   -9.5069
                                                -9.4486
                                                         -9.2229
                                                                    -8.8913
                             -8.6787
 -8.8256
          -8.8249
                   -8.6791
                                       -8.4533
                                                -8.4527
                                                          -8.3300
                                                                    -8.2501
                                                -7.9378
                                       -7.9777
 -8.2370
          -8.1553
                   -8.1460
                             -7.9784
                                                          -7.7597
                                                                    -7.6155
          -7.5759
                   -7.4382
                             -7.4372
                                       -7.3745
 -7.5762
                                                -7.3738
                                                          -7.3058
                                                                    -7.3008
                                      -6.9105
          -6.9985
                             -6.9730
                                                -6.8971
 -7.2071
                   -6.9904
                                                          -6.8117
                                                                    -6.8108
          -6.4095
                   -6.4005
                                      -6.2512
                                                -6.2502
                                                          -5.9816
 -6.5096
                             -6.3328
                                                                    -5.7989
 -5.7977
          -5.4469
                   -5.1006
                             -5.0937
                                       -4.8792
                                                -4.8785
                                                          -4.5060
                                                                    -4.4149
          -4.2351
                   -4.2263
                             -4.1888
                                       -4.1861
                                                -4.1852
                                                          -4.1437
 -4.2361
                                                                    -4.1337
 -3.9760
          -3.9752
                   -3.8538
                             -3.8525
                                       -3.6245
                                                -3.6239
                                                          -3.3785
                                                                    -3.3725
           0.5641
                     0.8190
                              0.8378
                                        0.8874
                                                  1.4225
                                                           1.6753
 0.5621
                                                                     1.6848
  1.9591
           2.1946
                     2.3045
                              2.3051
                                        2.5137
                                                  2.6590
                                                           2.7556
                                                                     2.7658
  2.7754
           2.7890
                     2.8144
                              2.8145
                                        3.1677
                                                  3.1690
                                                           3.3124
                                                                     3.3130
  3.3167
           3.5768
       k = 0.0000 - 0.2214 \ 0.0000 \ (64787 \ PWs)
                                                  bands (ev):
-21.5247 -21.4231 -20.6175 -20.5654 -20.3757 -20.3748 -20.2693 -20.2689
-19.9074 -19.9064 -19.6833 -19.6797 -19.6787 -19.3855 -18.5606 -18.5594
-18.0913 -18.0721 -18.0712 -17.9459 -17.9449 -17.8220 -17.8194 -17.6696
-17.6684 -16.9785 -16.9777 -16.6386 -16.1618 -16.1576 -16.1279 -16.1235
-14.8067 -14.8051 -14.3028 -12.8714 -12.8642 -12.4891 -12.4845 -12.2999
-12.2993 -12.1433 -11.4828 -11.4821 -11.4034 -11.3974 -11.2888 -11.2852
```

```
-11.2184 -11.2178 -10.5117 -10.5111 -10.2783 -10.2717 -10.2103
                                                                            -9.8656
 -9.8617
           -9.5841
                     -9.5300
                                -9.4610
                                           -9.4606 -9.4603
                                                                 -9.2635
                                                                            -8.8866
 -8.8113
           -8.8107
                      -8.7004
                                 -8.7000
                                            -8.4291
                                                      -8.4285
                                                                  -8.3477
                                                                            -8.2284
                                            -7.9854
                                                       -7.9337
           -8.1672
                      -8.1579
                                 -7.9862
                                                                  -7.7792
                                                                            -7.5706
 -8.2178
 -7.5582
           -7.5579
                      -7.4455
                                 -7.4446
                                            -7.3832
                                                       -7.3824
                                                                 -7.2892
                                                                            -7.2838
 -7.2033
           -6.9886
                      -6.9783
                                 -6.9584
                                            -6.9314
                                                       -6.9016
                                                                 -6.7960
                                                                            -6.7951
 -6.4834
           -6.4113
                      -6.4024
                                 -6.3474
                                            -6.2681
                                                       -6.2671
                                                                  -5.9618
                                                                            -5.7986
 -5.7975
           -5.4294
                      -5.1305
                                 -5.1233
                                            -4.9039
                                                       -4.9032
                                                                 -4.5218
                                                                            -4.4238
 -4.2404
           -4.2340
                      -4.2330
                                 -4.2071
                                            -4.1844
                                                       -4.1835
                                                                 -4.1649
                                                                            -4.1409
 -3.9778
           -3.9770
                      -3.8568
                                 -3.8555
                                            -3.6050
                                                       -3.6043
                                                                  -3.3467
                                                                            -3.3407
  0.5699
            0.5719
                       0.7845
                                  0.8032
                                            0.9173
                                                       1.4282
                                                                   1.6668
                                                                              1.6763
  1.9647
             2.2002
                       2.3111
                                  2.3117
                                             2.5351
                                                        2.6645
                                                                   2.7513
                                                                              2.7614
  2.7926
             2.7934
                                                                   3.2930
                        2.8040
                                  2.8260
                                             3.1588
                                                        3.1601
                                                                              3.3043
  3.3049
             3.5528
        k = 0.0000 - 0.2294 \ 0.0000 \ (64785 \ PWs)
                                                        bands (ev):
-21.5205 -21.4195 -20.6315 -20.5824 -20.3809 -20.3800 -20.2757 -20.2753 -19.8960 -19.8950 -19.6651 -19.6644 -19.6641 -19.3605 -18.5778 -18.5767 -18.1023 -18.0712 -18.0703 -17.9469 -17.9459 -17.8484 -17.8459 -17.6570 -17.6558 -16.9746 -16.9737 -16.6734 -16.1418 -16.1371 -16.1290 -16.1249 -14.7864 -14.7848 -14.2619 -12.9053 -12.8980 -12.5151 -12.5105 -12.2937 -12.2932 -12.1263 -11.4969 -11.4961 -11.3838 -11.3777 -11.3014 -11.2978 -11.2305 -11.2299 -10.4928 -10.4922 -10.2580 -10.2518 -10.2452 -9.8300 -9.8360 -9.5077 -9.5531 -9.4730 -9.4717 -9.4655 -9.3041 -8.8817
                      -9.5531
           -9.5977
                                -9.4720
                                           -9.4717
                                                       -9.4655
                                                                 -9.3041
                                                                            -8.8817
 -9.8260
           -8.7961
 -8.7967
                      -8.7216
                                 -8.7212
                                            -8.4048
                                                       -8.4042
                                                                 -8.3667
                                                                            -8.2069
                                                                  -7.7986
                                 -7.9938
                                            -7.9930
                                                       -7.9295
 -8.1974
            -8.1793
                      -8.1701
                                                                            -7.5403
           -7.5259
                      -7.4527
 -7.5401
                                 -7.4517
                                            -7.3921
                                                       -7.3914
                                                                  -7.2726
                                                                            -7.2666
                                            -6.9183
                                                       -6.8912
 -7.1994
           -7.0041
                      -6.9815
                                 -6.9528
                                                                  -6.7802
                                                                            -6.7793
                                            -6.2854
 -6.4571
           -6.4134
                      -6.4045
                                 -6.3618
                                                       -6.2843
                                                                  -5.9420
                                                                            -5.7986
 -5.7975
            -5.4119
                      -5.1602
                                 -5.1528
                                            -4.9285
                                                       -4.9278
                                                                  -4.5382
                                                                            -4.4330
 -4.2549
            -4.2318
                      -4.2309
                                 -4.2265
                                            -4.1861
                                                       -4.1826
                                                                  -4.1817
                                                                             -4.1482
 -3.9797
            -3.9789
                      -3.8598
                                 -3.8586
                                            -3.5857
                                                       -3.5851
                                                                  -3.3150
                                                                            -3.3089
  0.5779
             0.5798
                                             0.9480
                       0.7501
                                  0.7688
                                                        1.4341
                                                                   1.6581
                                                                              1.6674
  1.9705
             2.2061
                                             2.5573
                        2.3179
                                  2.3185
                                                        2.6700
                                                                   2.7283
                                                                              2.7672
  2.7741
             2.7744
                        2.8384
                                             3.1501
                                                        3.1515
                                                                   3.2694
                                  2.8616
                                                                              3.2960
  3.2966
             3.5287
        k = 0.0000 - 0.2373 \ 0.0000 \ (64789 \ PWs)
                                                        bands (ev):
-21.5162 -21.4158 -20.6455 -20.5994 -20.3860 -20.3850 -20.2820 -20.2816
-19.8845 -19.8835 -19.6504 -19.6494 -19.6455 -19.3353 -18.5950 -18.5939
-18.1137 -18.0703 -18.0694 -17.9479 -17.9470 -17.8747 -17.8722 -17.6445
-17.6433 -16.9706 -16.9697 -16.7081 -16.1548 -16.1503 -16.0969 -16.0926
-14.7659 -14.7643 -14.2207 -12.9392 -12.9320 -12.5413 -12.5367 -12.2874
-12.2868 -12.1088 -11.5107 -11.5100 -11.3643 -11.3582 -11.3134 -11.3099
-11.2429 -11.2423 -10.4739 -10.4733 -10.3056 -10.2252 -10.2185
                                                                            -9.7942
 -9.7902
           -9.6137
                      -9.5762
                                -9.4831
                                           -9.4828
                                                      -9.4674
                                                                 -9.3445
                                                                            -8.8766
           -8.7812
                      -8.7428
                                 -8.7425
                                            -8.3862
                                                      -8.3804
                                                                 -8.3797
 -8.7818
                                                                            -8.1927
 -8.1856
           -8.1826
                      -8.1759
                                 -8.0013
                                            -8.0004
                                                       -7.9251
                                                                 -7.8178
                                                                            -7.5227
                                                                            -7.2493
 -7.5224
           -7.4813
                      -7.4597
                                 -7.4587
                                            -7.4013
                                                       -7.4006
                                                                  -7.2560
 -7.1954
           -7.0192
                      -6.9953
                                 -6.9747
                                            -6.8783
                                                       -6.8702
                                                                  -6.7643
                                                                            -6.7633
 -6.4306
           -6.4159
                      -6.4070
                                 -6.3762
                                            -6.3029
                                                       -6.3018
                                                                  -5.9223
                                                                             -5.7989
                                                                  -4.5552
 -5.7977
            -5.3944
                      -5.1899
                                 -5.1822
                                            -4.9531
                                                       -4.9524
                                                                             -4.4425
                                            -4.2072
                                                                  -4.1799
 -4.2700
            -4.2471
                      -4.2296
                                 -4.2287
                                                       -4.1808
                                                                             -4.1559
 -3.9816
            -3.9808
                      -3.8630
                                 -3.8618
                                            -3.5667
                                                       -3.5661
                                                                  -3.2834
                                                                             -3.2773
  0.5862
            0.5881
                       0.7159
                                  0.7345
                                             0.9795
                                                        1.4401
                                                                   1.6491
                                                                              1.6583
                                                                   2.7058
  1.9765
             2.2122
                        2.3249
                                  2.3256
                                             2.5800
                                                        2.6753
                                                                              2.7548
                        2.8740
                                             3.1417
  2.7552
             2.7732
                                  2.8974
                                                        3.1430
                                                                   3.2461
                                                                              3.2874
  3.2880
             3.5048
        k = 0.0000 - 0.2452 \ 0.0000 \ (64781 \ PWs)
                                                        bands (ev):
```

```
-21.5117 -21.4120 -20.6593 -20.6162 -20.3910 -20.3900 -20.2882 -20.2878
-19.8729 -19.8719 -19.6355 -19.6345 -19.6266 -19.3101 -18.6122 -18.6111
-14.7452 -14.7434 -14.1794 -12.9734 -12.9662 -12.5677 -12.5631 -12.2809
-12.2803 -12.0908 -11.5243 -11.5236 -11.3451 -11.3391 -11.3248 -11.3213
-11.2555 -11.2549 -10.4549 -10.4543 -10.3533 -10.1984 -10.1915
                                                                        -9.7583
          -9.6315
                    -9.5992 -9.4940
                                         -9.4937
                                                   -9.4672
                                                             -9.3849
 -9.7542
                                                                        -8.8714
           -8.7660
 -8.7667
                     -8.7640
                               -8.7637
                                         -8.4058
                                                   -8.3558
                                                              -8.3552
                                                                        -8.2054
           -8.1637
 -8.1961
                     -8.1553
                               -8.0087
                                         -8.0076
                                                   -7.9206
                                                              -7.8369
                                                                        -7.5052
 -7.5050
           -7.4666
                     -7.4658
                               -7.4364
                                         -7.4108
                                                    -7.4101
                                                              -7.2395
                                                                        -7.2318
                                                                        -6.7472
 -7.1912
           -7.0340
                     -7.0138
                               -6.9970
                                         -6.8449
                                                    -6.8384
                                                              -6.7482
                                                                        -5.7993
 -6.4187
           -6.4098
                     -6.4041
                               -6.3905
                                         -6.3207
                                                    -6.3196
                                                              -5.9025
 -5.7981
           -5.3769
                     -5.2194
                               -5.2114
                                         -4.9777
                                                    -4.9770
                                                              -4.5726
                                                                        -4.4523
 -4.2855
           -4.2687
                     -4.2283
                               -4.2272
                                         -4.2262
                                                    -4.1789
                                                              -4.1780
                                                                        -4.1638
                                                              -3.2520
                                                                        -3.2458
 -3.9835
           -3.9827
                     -3.8663
                               -3.8651
                                         -3.5481
                                                    -3.5474
  0.5947
            0.5965
                      0.6819
                                0.7004
                                           1.0116
                                                     1.4464
                                                               1.6399
                                                                         1.6489
  1.9827
            2.2185
                      2.3322
                                 2.3328
                                           2.6034
                                                     2.6762
                                                               2.6882
                                                                          2.7358
  2.7362
            2.7795
                      2.9096
                                 2.9331
                                           3.1334
                                                     3.1347
                                                               3.2230
                                                                          3.2786
  3.2792
            3.4812
        k = 0.0000 - 0.2531 \ 0.0000 \ (64787 \ PWs)
                                                     bands (ev):
-21.5071 -21.4080 -20.6730 -20.6328 -20.3958 -20.3949 -20.2942 -20.2938 -19.8612 -19.8602 -19.6205 -19.6195 -19.6076 -19.2847 -18.6294 -18.6283 -18.1375 -18.0684 -18.0675 -17.9501 -17.9491 -17.9270 -17.9246 -17.6203 -17.6190 -16.9621 -16.9611 -16.7777 -16.1814 -16.1772 -16.0320 -16.0276 -14.7242 -14.7224 -14.1379 -13.0076 -13.0005 -12.5943 -12.5896 -12.2742 -12.2736 -12.0723 -11.5377 -11.5370 -11.3379 -11.3341 -11.3239 -11.3183 -11.2683 -11.2677 -10.4359 -10.4354 -10.4010 -10.1713 -10.1644 -9.7222
                               -9.5046
                                         -9.5043
                                                   -9.4656
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 -9.7181
          -9.6505
                     -9.6222
                                                                        -8.8660
                     -8.7512
                               -8.7506
                                         -8.4254
                                                              -8.3304
 -8.7853
           -8.7849
                                                    -8.3311
                                                                        -8.2188
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                               -8.0158
                                         -8.0147
                                                    -7.9159
                                                              -7.8558
 -8.2095
           -8.1425
                                                                        -7.4880
                     -7.4724
                               -7.4206
                                         -7.4198
                                                    -7.3921
 -7.4877
           -7.4733
                                                              -7.2233
                                                                        -7.2141
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           -7.0483
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                               -7.0197
                                          -6.8177
                                                    -6.7987
                                                              -6.7319
                                                                        -6.7309
 -6.4217
           -6.4129
                     -6.4047
                               -6.3775
                                         -6.3388
                                                    -6.3377
                                                              -5.8828
                                                                        -5.8000
 -5.7988
           -5.3594
                     -5.2488
                               -5.2404
                                          -5.0022
                                                    -5.0015
                                                              -4.5906
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 -4.3015
           -4.2914
                     -4.2489
                               -4.2249
                                          -4.2240
                                                    -4.1770
                                                              -4.1760
                                                                        -4.1719
 -3.9856
           -3.9848
                     -3.8696
                               -3.8684
                                          -3.5297
                                                    -3.5290
                                                              -3.2206
                                                                        -3.2145
  0.6034
            0.6052
                      0.6482
                                0.6666
                                           1.0445
                                                     1.4529
                                                               1.6304
                                                                          1.6393
  1.9891
            2.2250
                      2.3396
                                 2.3402
                                           2.6273
                                                     2.6579
                                                               2.6902
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            2.7860
                      2.9452
                                 2.9689
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                                                                          3,2696
  3.2702
            3.4577
        k = 0.0000 - 0.2610 \ 0.0000 \ (64787 \ PWs)
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-19.8494 -19.8484 -19.6054 -19.6044 -19.5885 -19.2591 -18.6466 -18.6455
-18.1498 -18.0674 -18.0665 -17.9530 -17.9512 -17.9506 -17.9502 -17.6084
-17.6072 -16.9576 -16.9566 -16.8123 -16.1947 -16.1906 -15.9994 -15.9950
-14.7029 -14.7010 -14.0962 -13.0419 -13.0349 -12.6211 -12.6164 -12.2673
-12.2667 -12.0533 -11.5509 -11.5501 -11.3483 -11.3447 -11.3053 -11.2994
-11.2813 -11.2807 -10.4487 -10.4169 -10.4164 -10.1441 -10.1371
                                                                        -9.6861
 -9.6819
           -9.6704
                     -9.6452
                               -9.5149
                                         -9.5146
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                                                              -9.4628
                                                                        -8.8604
 -8.8065
           -8.8061
                     -8.7355
                               -8.7348
                                          -8.4450
                                                    -8.3063
                                                              -8.3056
                                                                        -8.2326
 -8.2233
                                          -8.0217
                                                    -7.9111
                                                              -7.8746
           -8.1214
                     -8.1134
                               -8.0228
                                                                        -7.4799
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 -7.4790
           -7.4709
                     -7.4706
                               -7.4306
                                                    -7.3477
                                                              -7.2075
                                                                        -7.1963
                                                    -6.7590
 -7.1825
           -7.0618
                     -7.0561
                               -7.0428
                                         -6.7896
                                                              -6.7155
                                                                        -6.7145
 -6.4251
          -6.4188
                     -6.4163
                               -6.3571
                                         -6.3561
                                                    -6.3509
                                                              -5.8632
                                                                        -5.8008
                               -5.2693
                                         -5.0267
                                                    -5.0260
                                                              -4.6091
 -5.7996
          -5.3419
                     -5.2781
                                                                        -4.4727
                              -4.2225
                                         -4.2216
 -4.3179
          -4.3150
                    -4.2696
                                                   -4.1802
                                                              -4.1749
                                                                        -4.1740
```

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-3.9876
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                            -3.8719
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 0.6117
          0.6132
                    0.6162
                             0.6330
                                      1.0781
                                              1.4595
                                                        1.6207
                                                                 1.6295
          2.2317
  1.9957
                    2.3472
                             2.3479
                                      2.6354
                                               2.6523
                                                        2.6962
                                                                 2.6986
  2.6990
           2.7926
                    2.9808
                             3.0045
                                      3.1175
                                               3.1188
                                                        3.1773
                                                                 3.2603
  3.2610
           3.4344
       k = 0.0000 - 0.2689 \ 0.0000 \ (64781 \ PWs)
                                               bands (ev):
-21.4974 -21.3998 -20.7002 -20.6657 -20.4052 -20.4042 -20.3058 -20.3054
-19.8375 -19.8365 -19.5901 -19.5891 -19.5695 -19.2335 -18.6638 -18.6627
-18.1624 -18.0663 -18.0654 -17.9788 -17.9764 -17.9523 -17.9514 -17.5968
-17.5956 -16.9530 -16.9520 -16.8470 -16.2081 -16.2040 -15.9668 -15.9624 -14.6815 -14.6795 -14.0544 -13.0763 -13.0693 -12.6480 -12.6433 -12.2601 -12.2595 -12.0338 -11.5638 -11.5631 -11.3589 -11.3553 -11.2945 -11.2939
-11.2860 -11.2801 -10.4964 -10.3979 -10.3973 -10.1167 -10.1096 -9.6910
 -9.6681 -9.6498 -9.6455 -9.5250
                                    -9.5246
                                             -9.5055
                                                       -9.4592
                                                                -8.8547
                           -8.7189
                                    -8.4645
                                              -8.2813
                                                       -8.2806
 -8.8277
         -8.8273
                  -8.7195
                                                                -8.2468
                           -8.0296
                                                       -7.8932
                                                                -7.4863
         -8.1005
                  -8.0927
                                    -8.0284
 -8.2375
                                              -7.9061
                  -7.4538
 -7.4853
         -7.4540
                           -7.4409
                                    -7.4402
                                              -7.3035
                                                       -7.1927
                                                                -7.1784
         -7.0787
                           -7.0662
                                    -6.7610
                                              -6.7195
                                                       -6.6990
                                                                -6.6980
 -7.1779
                  -7.0741
 -6.4328
         -6.4287
                  -6.4199
                            -6.3757
                                     -6.3747
                                              -6.3241
                                                       -5.8436
                                                                -5.8019
                            -5.2980
 -5.8007
          -5.3244
                  -5.3073
                                     -5.0512
                                              -5.0505
                                                       -4.6281
                                                                -4.4833
                   -4.2902
 -4.3396
         -4.3348
                            -4.2201
                                     -4.2192
                                              -4.1888
                                                       -4.1729
                                                                -4.1719
 -3.9897
          -3.9889
                   -3.8765
                            -3.8754
                                     -3.4938
                                              -3.4931
                                                       -3.1585
                                                                -3.1523
 0.5811
          0.5995
                    0.6216
                             0.6235
                                      1.1124
                                               1.4664
                                                        1.6107
                                                                 1.6194
  2.0025
           2.2386
                             2.3558
                                      2.6135
                                               2.6770
                                                        2.6804
                    2.3551
                                                                  2.6810
  2.7028
           2.7995
                    3.0163
                             3.0401
                                      3.1098
                                               3.1112
                                                        3.1548
                                                                  3.2509
  3.2516
           3.4113
       k = 0.0000 - 0.2768 \ 0.0000 \ (64781 \ PWs)
                                               bands (ev):
-18.1753 -18.0653 -18.0644 -18.0045 -18.0021 -17.9535 -17.9526 -17.5854
-17.5842 -16.9483 -16.9472 -16.8816 -16.2214 -16.2173 -15.9341 -15.9297
-14.6598 -14.6578 -14.0124 -13.1109 -13.1039 -12.6751 -12.6704 -12.2528
-12.2522 -12.0138 -11.5765 -11.5758 -11.3692 -11.3656 -11.3078 -11.3072
-11.2668 -11.2608 -10.5441 -10.3788 -10.3783 -10.0891 -10.0820
                                                                -9.7119
 -9.6909
         -9.6134
                  -9.6091 -9.5455
                                    -9.5348
                                             -9.5344 -9.4549
                                                                -8.8488
 -8.8488
         -8.8484
                  -8.7033
                           -8.7027
                                    -8.4839
                                              -8.2614
                                                       -8.2562
                                                                -8.2556
                  -8.0720
                           -8.0363
                                    -8.0350
                                              -7.9116
 -8.2521
         -8.0797
                                                       -7.9010
                                                                -7.4925
                  -7.4508
                           -7.4374
                                    -7.4371
 -7.4916
         -7.4515
                                              -7.2595
                                                       -7.1798
                                                                -7.1732
                           -7.0840
                                              -6.6823
                  -7.0902
                                    -6.7320
                                                       -6.6813
 -7.1602
         -7.1019
                                                                -6.6801
         -6.4326
                  -6.4239
                           -6.3945
                                     -6.3935
                                              -6.2973
 -6.4467
                                                       -5.8242
                                                                -5.8031
 -5.8019
         -5.3364
                  -5.3264
                           -5.3069
                                     -5.0756
                                              -5.0749
                                                       -4.6477
                                                                -4.4942
                                     -4.2167
         -4.3522
 -4.3649
                  -4.3109
                            -4.2175
                                              -4.1976
                                                       -4.1707
                                                                -4.1698
         -3.9911
 -3.9919
                  -3.8800
                           -3.8789
                                     -3.4763
                                              -3.4757
                                                       -3.1276
                                                                -3.1215
          0.5663
                                      1.1473
                                              1.4735
                                                        1.6005
 0.5480
                    0.6310
                             0.6328
                                                                 1.6091
 2.0096
          2.2457
                    2.3632
                             2.3638
                                      2.5914
                                               2.6626
                                                        2.6630
                                                                 2.7029
 2.7096
           2.8066
                    3.0517
                             3.0755
                                      3.1023
                                               3.1038
                                                        3.1325
                                                                 3.2413
  3.2420
           3.3884
       k = 0.0000 - 0.2847 \ 0.0000 \ (64763 \ PWs)
                                               bands (ev):
-21.4872 -21.3910 -20.7269 -20.6979 -20.4140 -20.4131 -20.3168 -20.3164
-19.8135 -19.8125 -19.5592 -19.5581 -19.5311 -19.1817 -18.6980 -18.6969
-18.1884 -18.0642 -18.0633 -18.0301 -18.0278 -17.9547 -17.9538 -17.5743
-17.5730 -16.9434 -16.9423 -16.9162 -16.2347 -16.2307 -15.9014 -15.8969
-14.6379 -14.6358 -13.9702 -13.1455 -13.1386 -12.7023 -12.6976 -12.2453
-12.2447 -11.9933 -11.5890 -11.5882 -11.3792 -11.3757 -11.3213 -11.3207
```

```
-8.8696
           -8.8426
                      -8.6869
                                 -8.6863
                                           -8.5031
                                                                 -8.2671
                                                                            -8.2310
                                                      -8.2763
 -8.2304
           -8.0592
                      -8.0516
                                 -8.0427
                                           -8.0415
                                                      -7.9299
                                                                 -7.8958
                                                                            -7.4986
                                                                 -7.1707
 -7.4976
           -7.4624
                      -7.4617
                                 -7.4210
                                           -7.4208
                                                      -7.2156
                                                                            -7.1683
                                 -7.0902
 -7.1421
           -7.1255
                      -7.1143
                                           -6.7027
                                                      -6.6655
                                                                 -6.6644
                                                                            -6.6407
 -6.4605
           -6.4368
                      -6.4281
                                 -6.4136
                                           -6.4126
                                                      -6.2704
                                                                 -5.8049
                                                                            -5.8045
 -5.8033
           -5.3653
                      -5.3546
                                 -5.2894
                                           -5.1000
                                                      -5.0992
                                                                 -4.6677
                                                                            -4.5053
 -4.3909
           -4.3700
                      -4.3317
                                 -4.2150
                                           -4.2141
                                                      -4.2066
                                                                 -4.1685
                                                                            -4.1676
                                           -3.4592
                                                                            -3.0908
 -3.9941
           -3.9933
                      -3.8836
                                -3.8826
                                                      -3.4585
                                                                 -3.0970
  0.5152
            0.5334
                      0.6407
                                 0.6424
                                            1.1828
                                                       1.4808
                                                                  1.5902
                                                                             1.5985
                                                                             2.7167
  2.0168
             2.2531
                       2.3714
                                  2.3721
                                             2.5695
                                                        2.6451
                                                                  2.6455
  2.7291
             2.8139
                       3.0866
                                  3.0950
                                             3.0958
                                                        3.1106
                                                                  3.1119
                                                                             3.2315
  3.2322
             3.3658
        k = 0.0000 - 0.2926 \ 0.0000 \ (64769 \ PWs)
                                                        bands (ev):
-21.4818 -21.3864 -20.7401 -20.7139 -20.4183 -20.4174 -20.3221 -20.3217 -19.8013 -19.8003 -19.5435 -19.5423 -19.5119 -19.1556 -18.7152 -18.7141 -18.2019 -18.0631 -18.0622 -18.0556 -18.0533 -17.9559 -17.9550 -17.5633 -17.5621 -16.9507 -16.9384 -16.9373 -16.2479 -16.2440 -15.8687 -15.8642 -14.6158 -14.6136 -13.9279 -13.1801 -13.1733 -12.7296 -12.7249 -12.2376 -12.2370 -11.9724 -11.6012 -11.6005 -11.3888 -11.3853 -11.3349 -11.3344 -11.2283 -11.2223 -10.6393 -10.3407 -10.3401 -10.0337 -10.0264 -9.7547 -9.7365 -9.6252 -9.5536 -9.5533 -9.5404 -9.5360 -9.4448 -8.8911
                                           -8.5222
           -8.8364
                      -8.6702
 -8.8907
                                -8.6696
                                                      -8.2916
                                                                 -8.2824
                                                                            -8.2057
                      -8.0479
                                                                 -7.8904
                                                                            -7.5045
 -8.2051
           -8.0492
                                -8.0385
                                           -8.0312
                                                      -7.9481
 -7.5035
           -7.4735
                      -7.4728
                                -7.4048
                                           -7.4046
                                                      -7.1720
                                                                 -7.1676
                                                                            -7.1634
                                 -7.0898
 -7.1498
           -7.1391
                      -7.1233
                                           -6.6733
                                                      -6.6486
                                                                 -6.6474
                                                                            -6.6016
 -6.4743
                      -6.4330
           -6.4412
                                 -6.4326
                                            -6.4320
                                                      -6.2434
                                                                 -5.8061
                                                                            -5.8049
 -5.7857
           -5.3942
                      -5.3824
                                 -5.2719
                                            -5.1243
                                                       -5.1236
                                                                 -4.6882
                                                                            -4.5167
           -4.3882
                      -4.3527
                                 -4.2158
                                            -4.2123
                                                       -4.2115
 -4.4175
                                                                 -4.1662
                                                                            -4.1653
 -3.9964
           -3.9956
                      -3.8873
                                 -3.8863
                                            -3.4423
                                                       -3.4417
                                                                 -3.0666
                                                                            -3.0604
  0.4826
            0.5008
                       0.6505
                                  0.6523
                                             1.2189
                                                        1.4882
                                                                  1.5795
                                                                             1.5878
  2.0242
             2.2606
                       2.3799
                                  2.3805
                                             2.5477
                                                        2.6279
                                                                  2.6283
                                                                             2.7240
  2.7559
                                             3.0909
             2.8214
                       3.0853
                                  3.0887
                                                        3.1227
                                                                  3.1468
                                                                             3.2216
  3.2225
             3.3433
        k = 0.0000 - 0.3005 \ 0.0000 \ (64793 \ PWs)
                                                        bands (ev):
-21.4763 -21.3817 -20.7532 -20.7296 -20.4225 -20.4215 -20.3273 -20.3269
-19.7890 -19.7880 -19.5276 -19.5265 -19.4927 -19.1294 -18.7323 -18.7312
-18.2155 -18.0809 -18.0786 -18.0619 -18.0610 -17.9572 -17.9562 -17.5526
-17.5514 -16.9851 -16.9333 -16.9321 -16.2611 -16.2573 -15.8359 -15.8314
-14.5935 -14.5913 -13.8854 -13.2148 -13.2080 -12.7570 -12.7523 -12.2297
-12.2291 -11.9510 -11.6131 -11.6124 -11.3982 -11.3947 -11.3487 -11.3481
-11.2091 -11.2031 -10.6870 -10.3215 -10.3210 -10.0059
                                                                -9.9985
                                                                           -9.7763
 -9.7592
          -9.6649
                     -9.5626
                                -9.5623
                                           -9.5038
                                                      -9.4993
                                                                 -9.4391
                                                                            -8.9123
 -8.9119
           -8.8299
                     -8.6534
                                -8.6528
                                           -8.5411
                                                      -8.3073
                                                                 -8.2981
                                                                            -8.1803
 -8.1797
           -8.0553 -8.0540
                                -8.0185
                                           -8.0112
                                                      -7.9660
                                                                 -7.8848
                                                                            -7.5102
 -7.5093
           -7.4849
                     -7.4842
                                -7.3889
                                           -7.3887
                                                      -7.1746
                                                                 -7.1714
                                                                            -7.1639
 -7.1583
           -7.1282
                      -7.1048
                                 -7.0824
                                           -6.6439
                                                      -6.6315
                                                                 -6.6300
                                                                            -6.5625
 -6.4879
           -6.4527
                      -6.4517
                                 -6.4458
                                           -6.4373
                                                      -6.2164
                                                                 -5.8078
                                                                            -5.8066
                                                                            -4.5284
 -5.7669
           -5.4229
                      -5.4099
                                 -5.2545
                                            -5.1486
                                                      -5.1479
                                                                 -4.7093
 -4.4446
            -4.4069
                      -4.3739
                                 -4.2253
                                            -4.2096
                                                       -4.2088
                                                                 -4.1639
                                                                            -4.1630
 -3.9987
            -3.9979
                      -3.8911
                                 -3.8901
                                            -3.4259
                                                       -3.4252
                                                                 -3.0364
                                                                            -3.0303
  0.4503
            0.4685
                       0.6606
                                  0.6623
                                             1.2556
                                                        1.4959
                                                                  1.5687
                                                                             1.5768
  2.0319
             2.2683
                        2.3885
                                  2.3892
                                             2.5262
                                                        2.6111
                                                                  2.6115
                                                                             2.7315
                                  3.0814
                                                        3.1575
                                                                  3.1811
  2.7831
             2.8291
                        3.0656
                                             3.0824
                                                                             3.2117
  3.2133
             3.3210
        k = 0.0000 - 0.3084 \ 0.0000 \ (64777 \ PWs)
                                                        bands (ev):
-21.4707 -21.3769 -20.7662 -20.7453 -20.4265 -20.4256 -20.3323 -20.3319
```

```
-19.7766 -19.7756 -19.5116 -19.5105 -19.4734 -19.1031 -18.7493 -18.7482
-18.2295 -18.1061 -18.1038 -18.0608 -18.0599 -17.9584 -17.9575 -17.5422
-17.5409 -17.0195 -16.9280 -16.9268 -16.2743 -16.2705 -15.8031 -15.7985
-14.5710 -14.5687 -13.8428 -13.2495 -13.2428 -12.7845 -12.7798 -12.2216 -12.2210 -11.9291 -11.6248 -11.6241 -11.4072 -11.4037 -11.3626 -11.3620
-11.1899 \ -11.1838 \ -10.7346 \ -10.3024 \ -10.3018 \ -9.9779 \ -9.9706 \ -9.7981
           -9.7045
                      -9.5714
                                 -9.5711 -9.4672
 -9.7818
                                                       -9.4626
                                                                  -9.4330
                                                                             -8.9334
           -8.8233
                                 -8.6358
                                            -8.5599
                                                       -8.3234
                                                                  -8.3141
 -8.9330
                      -8.6364
                                                                             -8.1549
           -8.0612
                      -8.0599
                                 -7.9986 -7.9917
                                                       -7.9834
                                                                  -7.8791
                                                                             -7.5158
 -8.1542
                                                       -7.1995
 -7.5149
           -7.4965
                      -7.4958
                                 -7.3732
                                            -7.3730
                                                                  -7.1894
                                                                             -7.1798
 -7.1530
           -7.0866
                      -7.0842
                                 -7.0700
                                            -6.6165
                                                       -6.6143
                                                                  -6.6104
                                                                             -6.5236
 -6.5014
           -6.4726
                      -6.4716
                                 -6.4507
                                            -6.4422
                                                       -6.1893
                                                                  -5.8097
                                                                             -5.8085
 -5.7485
           -5.4515
                      -5.4368
                                 -5.2370
                                            -5.1728
                                                       -5.1721
                                                                  -4.7308
                                                                             -4.5403
 -4.4721
           -4.4261
                      -4.3953
                                 -4.2349
                                            -4.2069
                                                       -4.2061
                                                                  -4.1615
                                                                             -4.1606
                                                                  -3.0065
                                                                             -3.0003
 -4.0011
           -4.0003
                      -3.8949
                                 -3.8939
                                            -3.4097
                                                       -3.4091
  0.4184
             0.4365
                        0.6708
                                   0.6725
                                              1.2929
                                                        1.5038
                                                                   1.5577
                                                                              1.5657
  2.0397
             2.2763
                        2.3974
                                   2.3980
                                              2.5048
                                                        2.5946
                                                                    2.5951
                                                                              2.7393
  2.8110
             2.8370
                        3.0443
                                   3.0746
                                              3.0757
                                                         3.1890
                                                                    3.1986
                                                                              3.2049
  3.2210
             3.2989
        k = 0.0000 - 0.3164 \ 0.0000 \ (64773 \ PWs)
                                                         bands (ev):
-21.4649 -21.3720 -20.7791 -20.7608 -20.4304 -20.4295 -20.3371 -20.3367 -19.7642 -19.7632 -19.4955 -19.4944 -19.4540 -19.0766 -18.7663 -18.7652 -18.2437 -18.1312 -18.1289 -18.0596 -18.0587 -17.9597 -17.9588 -17.5319 -17.5307 -17.0538 -16.9226 -16.9214 -16.2874 -16.2837 -15.7703 -15.7657 -14.5483 -14.5460 -13.8000 -13.2843 -13.2776 -12.8121 -12.8074 -12.2133 -12.2127 -11.9068 -11.6363 -11.6355 -11.4159 -11.4125 -11.3766 -11.3760 -11.1707 -11.1646 -10.7821 -10.2832 -10.2827 -9.9500 -9.9425 -9.8199 -9.8044 -9.7439 -9.5799 -9.5796 -9.4308 -9.4280 -9.4243 -8.9545
 -8.9541
           -8.8166
                      -8.6192
                                 -8.6186
                                            -8.5786
                                                       -8.3397
                                                                  -8.3305
                                                                             -8.1293
                      -8.0657
                                            -7.9787
                                                       -7.9715
                                                                             -7.5212
 -8.1286
           -8.0670
                                 -8.0018
                                                                  -7.8733
 -7.5203
                      -7.5077
           -7.5084
                                 -7.3578
                                            -7.3576
                                                       -7.2249
                                                                  -7.2150
                                                                             -7.1909
           -7.0672
                                            -6.5971
                                                       -6.5967
 -7.1476
                      -7.0551
                                 -7.0412
                                                                  -6.5826
                                                                             -6.5148
                       -6.4849
                                 -6.4558
                                            -6.4473
 -6.4927
            -6.4917
                                                       -6.1622
                                                                  -5.8118
                                                                             -5.8105
 -5.7307
            -5.4800
                       -5.4630
                                 -5.2196
                                            -5.1970
                                                       -5.1963
                                                                  -4.7528
                                                                             -4.5525
                                                                             -4.1581
 -4.5001
            -4.4457
                       -4.4169
                                 -4.2448
                                            -4.2041
                                                       -4.2033
                                                                  -4.1591
            -4.0027
 -4.0035
                       -3.8988
                                 -3.8978
                                            -3.3939
                                                       -3.3933
                                                                  -2.9769
                                                                             -2.9707
  0.3868
             0.4048
                        0.6813
                                   0.6830
                                              1.3308
                                                        1.5119
                                                                    1.5465
                                                                              1.5543
  2.0477
             2.2844
                        2.4064
                                   2.4070
                                              2.4836
                                                         2.5786
                                                                    2.5790
                                                                               2.7472
  2.8393
             2.8451
                        3.0230
                                   3.0680
                                              3.0691
                                                         3.1884
                                                                    3.1897
                                                                               3.2304
  3.2545
             3.2771
        k = 0.0000 - 0.3243 \ 0.0000 \ (64755 \ PWs)
                                                        bands (ev):
-21.4590 -21.3669 -20.7918 -20.7761 -20.4342 -20.4333 -20.3418 -20.3415
-19.7516 -19.7506 -19.4793 -19.4781 -19.4347 -19.0500 -18.7833 -18.7823
-18.2581 -18.1562 -18.1539 -18.0584 -18.0575 -17.9611 -17.9601 -17.5220
-17.5207 -17.0880 -16.9170 -16.9158 -16.3004 -16.2968 -15.7375 -15.7328
-14.5255 -14.5231 -13.7572 -13.3191 -13.3125 -12.8397 -12.8350 -12.2048
-12.2043 -11.8840 -11.6474 -11.6467 -11.4243 -11.4209 -11.3906 -11.3901
-11.1515 -11.1454 -10.8297 -10.2640 -10.2635
                                                       -9.9219
                                                                  -9.9144
                                                                             -9.8417
                       -9.5881
 -9.8269
           -9.7833
                                 -9.5878
                                            -9.4205
                                                       -9.3936
                                                                  -9.3887
                                                                             -8.9755
                                            -8.5971
 -8.9751
           -8.8096
                                                                  -8.3473
                       -8.6018
                                  -8.6012
                                                       -8.3565
                                                                             -8.1036
            -8.0727
                                  -8.0193
                                            -7.9593
                                                       -7.9521
                                                                   -7.8673
 -8.1029
                       -8.0714
                                                                             -7.5265
 -7.5256
            -7.5205
                       -7.5198
                                 -7.3427
                                             -7.3425
                                                       -7.2507
                                                                   -7.2410
                                                                             -7.2032
            -7.0482
                       -7.0383
                                  -6.9982
                                             -6.5796
                                                       -6.5790
                                                                  -6.5527
 -7.1421
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 -6.5130
            -6.5120
                       -6.4610
                                  -6.4526
                                                       -6.1349
                                                                   -5.8139
                                                                             -5.8127
                                            -5.2204
 -5.7138
            -5.5084
                       -5.4882
                                  -5.2211
                                                       -5.2022
                                                                   -4.7753
                                                                             -4.5649
 -4.5284
           -4.4657
                       -4.4389
                                 -4.2549
                                            -4.2013
                                                       -4.2005
                                                                  -4.1565
                                                                             -4.1556
           -4.0051
                      -3.9027
                                 -3.9018
                                            -3.3785
                                                       -3.3779
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 -4.0059
                                                                             -2.9413
                       0.6920
                                 0.6937
  0.3555
            0.3735
                                            1.3692
                                                       1.5202
                                                                   1.5351
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```

```
2.0560
           2.2928
                     2.4156
                                        2.4626
                                                 2.5628
                                                           2.5633
                                                                    2.7553
                              2.4162
  2.8534
           2.8681
                     3.0018
                              3.0617
                                        3.0628
                                                 3.1783
                                                           3.1792
                                                                    3.2554
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           3.2895
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                                                 bands (ev):
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-19.7390 -19.7380 -19.4629 -19.4617 -19.4152 -19.0233 -18.8003 -18.7992
-14.5024 -14.5000 -13.7142 -13.3538 -13.3473 -12.8674 -12.8627 -12.1962
-12.1956 -11.8608 -11.6583 -11.6576 -11.4324 -11.4290 -11.4048 -11.4042
-11.1323 -11.1262 -10.8772 -10.2448 -10.2443 -9.8939
                                                         -9.8864
                                                                   -9.8634
                                                -9.3568
                                                         -9.3519
                                                                   -8.9966
 -9.8494
          -9.8225
                   -9.5961 -9.5958 -9.4135
                                                                   -8.0782
 -8.9962
          -8.8025
                   -8.6154
                             -8.5843
                                      -8.5837
                                                -8.3736
                                                         -8.3644
                                                         -7.8611
 -8.0778
          -8.0771
                   -8.0768
                            -8.0366 -7.9401
                                                -7.9330
                                                                   -7.5329
                   -7.5307
                                                                   -7.2161
 -7.5322
          -7.5316
                             -7.3278
                                      -7.3277
                                                -7.2769
                                                         -7.2673
          -7.0289
                   -7.0207
                                      -6.5620
                                                -6.5613
                                                         -6.5414
                                                                   -6.5337
 -7.1365
                             -6.9552
          -6.5225
                                      -6.4078
                                                -6.1076
                                                         -5.8162
                                                                   -5.8150
 -6.5327
                   -6.4664
                             -6.4581
          -5.5366
                             -5.2452
                                      -5.2445
                                                -5.1848
                                                          -4.7983
                                                                   -4.5775
 -5.6985
                   -5.5116
 -4.5571
          -4.4862
                   -4.4610
                             -4.2652
                                       -4.1984
                                                -4.1977
                                                          -4.1540
                                                                   -4.1531
 -4.0084
          -4.0076
                   -3.9067
                             -3.9058
                                       -3.3635
                                                -3.3628
                                                          -2.9185
                                                                   -2.9123
                    0.7028
                              0.7045
  0.3246
           0.3426
                                        1.4081
                                                 1.5235
                                                           1.5286
                                                                    1.5312
  2.0644
           2.3013
                              2.4256
                                        2.4418
                                                 2.5474
                                                           2.5479
                                                                    2.7636
                     2.4250
  2.8619
           2.8973
                     2.9808
                              3.0556
                                        3.0567
                                                 3.1676
                                                           3.1684
                                                                    3.2339
  3.2999
           3.3247
       k = 0.0000 - 0.3401 \ 0.0000 \ (64761 \ PWs)
                                                 bands (ev):
-21.4466 -21.3564 -20.8171 -20.8063 -20.4415 -20.4406 -20.3508 -20.3504
-19.7262 -19.7252 -19.4463 -19.4452 -19.3958 -18.9964 -18.8173 -18.8162 -18.2877 -18.2057 -18.2035 -18.0559 -18.0550 -17.9638 -17.9628 -17.5028 -17.5015 -17.1562 -16.9056 -16.9043 -16.3263 -16.3228 -15.6719 -15.6671 -14.4792 -14.4768 -13.6710 -13.3886 -13.3821 -12.8951 -12.8905 -12.1874
-12.1868 -11.8372 -11.6689 -11.6682 -11.4401 -11.4368 -11.4191 -11.4185
-11.1132 -11.1070 -10.9247 -10.2256 -10.2250
                                                -9.8858
                                                         -9.8720
                                                                   -9.8655
 -9.8617
          -9.8579
                   -9.6038
                            -9.6035
                                      -9.4064
                                                -9.3200
                                                         -9.3150
                                                                   -9.0176
          -8.7952
                   -8.6336
                             -8.5666
                                      -8.5660
                                                -8.3910
                                                          -8.3818
 -9.0172
                                                                   -8.0834
 -8.0823
          -8.0537
                   -8.0520
                             -8.0512
                                      -7.9212
                                                -7.9142
                                                          -7.8548
                                                                   -7.5455
 -7.5448
          -7.5366
                   -7.5356
                             -7.3133
                                      -7.3131
                                                -7.3034
                                                         -7.2940
                                                                   -7.2294
 -7.1307
          -7.0096
                   -7.0025
                             -6.9124
                                      -6.5551
                                                -6.5539
                                                         -6.5534
                                                                   -6.5442
                   -6.4720
                             -6.4638
                                                -6.0803
 -6.5435
          -6.4923
                                      -6.3695
                                                          -5.8186
                                                                   -5.8174
                   -5.5321
                             -5.2692
          -5.5647
 -5.6861
                                      -5.2685
                                                -5.1674
                                                          -4.8217
                                                                   -4.5904
                             -4.2757
                   -4.4835
                                      -4.1955
                                                -4.1948
 -4.5862
          -4.5071
                                                          -4.1513
                                                                   -4.1504
                   -3.9108
                                                -3.3482
          -4.0101
                             -3.9099
                                      -3.3488
                                                         -2.8898
 -4.0109
                                                                   -2.8836
                    0.7139
 0.2941
           0.3120
                              0.7155
                                        1.4474
                                                1.5117
                                                           1.5191
                                                                    1.5374
                                                           2.5329
                    2.4212
                              2.4345
                                        2.4352
                                                 2.5325
  2.0731
           2.3101
                                                                    2.7722
           2.9270
  2.8707
                    2.9600
                              3.0497
                                        3.0508
                                                 3.1566
                                                           3.1573
                                                                    3.2127
  3.3349
           3.3598
       k = 0.0000 - 0.3480 \ 0.0000 \ (64789 \ PWs)
                                                 bands (ev):
-21.4403 -21.3510 -20.8296 -20.8212 -20.4450 -20.4440 -20.3551 -20.3547
-19.7134 -19.7124 -19.4297 -19.4285 -19.3764 -18.9694 -18.8342 -18.8331
-18.3028 -18.2303 -18.2281 -18.0546 -18.0537 -17.9651 -17.9642 -17.4936
-17.4923 -17.1902 -16.8996 -16.8983 -16.3392 -16.3357 -15.6391 -15.6343
-14.4559 -14.4533 -13.6278 -13.4233 -13.4169 -12.9229 -12.9183 -12.1783
-12.1778 -11.8132 -11.6792 -11.6785 -11.4476 -11.4443 -11.4334 -11.4328
                                               -9.9075
-11.0940 -11.0878 -10.9722 -10.2063 -10.2058
                                                         -9.9007
                                                                   -9.8942
 -9.8375
         -9.8298 -9.6113 -9.6110
                                      -9.3990
                                                -9.2831
                                                         -9.2781
                                                                   -9.0386
                   -8.6516 -8.5488
                                                -8.4088
 -9.0382
         -8.7878
                                      -8.5482
                                                         -8.3996
                                                                   -8.0886
 -8.0876 -8.0705 -8.0261 -8.0253 -7.9025
                                               -7.8957
                                                         -7.8483
                                                                   -7.5584
```

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-7.5577
          -7.5414
                    -7.5404
                                                 -7.2990
                                                           -7.2989
                                                                    -7.2429
                              -7.3303
                                       -7.3210
                                       -6.5757
 -7.1248
          -6.9901
                    -6.9838
                             -6.8698
                                                 -6.5746
                                                           -6.5674
                                                                    -6.5264
          -6.4779
                             -6.4611
                                       -6.3313
                                                           -5.8211
 -6.5256
                    -6.4700
                                                 -6.0529
                                                                     -5.8199
                              -5.2931
                                                 -5.1501
          -5.5927
                    -5.5475
                                       -5.2924
 -5.6786
                                                           -4.8456
                                                                    -4.6155
 -4.6036
          -4.5284
                    -4.5062
                                       -4.1926
                                                 -4.1919
                                                           -4.1486
                              -4.2864
                                                                    -4.1477
 -4.0135
          -4.0127
                    -3.9148
                             -3.9140
                                       -3.3345
                                                 -3.3339
                                                           -2.8615
                                                                    -2.8553
                                                                     1.5463
  0.2640
           0.2819
                    0.7251
                              0.7268
                                        1.4872
                                                 1.4999
                                                            1.5070
                                        2.4449
  2.0819
           2.3190
                     2.4008
                               2.4442
                                                  2.5179
                                                            2.5183
                                                                      2.7809
                               3.0440
  2.8796
           2.9392
                     2.9573
                                        3.0451
                                                  3.1454
                                                            3.1461
                                                                      3.1916
  3.3699
           3.3949
       k = 0.0000 - 0.3559 \ 0.0000 \ (64800 \ PWs)
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-21.4337 -21.3454 -20.8420 -20.8359 -20.4483 -20.4474 -20.3592 -20.3589
-19.7004 -19.6994 -19.4129 -19.4116 -19.3569 -18.9423 -18.8510 -18.8500
-18.3181 -18.2547 -18.2525 -18.0533 -18.0524 -17.9665 -17.9656 -17.4847 -17.4834 -17.2241 -16.8935 -16.8922 -16.3520 -16.3486 -15.6064 -15.6015 -14.4324 -14.4298 -13.5844 -13.4579 -13.4516 -12.9507 -12.9461 -12.1691
-12.1686 -11.7887 -11.6893 -11.6885 -11.4548 -11.4515 -11.4478 -11.4472
                                                 -9.9396
                                                                    -9.9166
-11.0748 -11.0686 -11.0196 -10.1870 -10.1865
                                                           -9.9294
 -9.8093
          -9.8016
                    -9.6185
                             -9.6182
                                       -9.3915
                                                 -9.2463
                                                           -9.2412
                                                                    -9.0595
 -9.0592
          -8.7802
                    -8.6694
                             -8.5309
                                       -8.5303
                                                 -8.4268
                                                           -8.4177
                                                                     -8.0941
                    -8.0001
                             -7.9994
          -8.0861
                                       -7.8842
 -8.0933
                                                 -7.8775
                                                           -7.8417
                                                                    -7.5715
                    -7.5451
                                       -7.3483
                                                 -7.2851
                                                           -7.2850
 -7.5708
          -7.5460
                             -7.3574
                                                                    -7.2564
                    -6.9648
                                       -6.5969
 -7.1187
                             -6.8274
                                                 -6.5959
                                                           -6.5803
          -6.9704
                                                                    -6.5084
                                       -6.2933
 -6.5077
          -6.4836
                    -6.4756
                              -6.4308
                                                 -6.0255
                                                           -5.8237
                                                                     -5.8224
 -5.6788
          -5.6206
                    -5.5552
                              -5.3170
                                       -5.3163
                                                 -5.1328
                                                           -4.8700
                                                                    -4.6451
                    -4.5292
                              -4.2973
 -4.6170
          -4.5502
                                       -4.1896
                                                 -4.1889
                                                           -4.1458
                                                                     -4.1449
 -4.0161
          -4.0153
                    -3.9190
                              -3.9181
                                        -3.3207
                                                 -3.3200
                                                           -2.8336
                                                                     -2.8274
  0.2344
           0.2523
                     0.7365
                               0.7382
                                        1.4876
                                                  1.4947
                                                            1.5277
                                                                      1.5554
  2.0910
           2.3281
                     2.3806
                               2.4541
                                        2.4548
                                                  2.5037
                                                            2.5041
                                                                      2.7898
                                        3.0396
  2.8886
           2.9189
                     2.9878
                               3.0384
                                                  3.1341
                                                            3.1347
                                                                      3.1708
  3.4049
           3.4300
       k = 0.0000 - 0.3638 \ 0.0000 \ (64796 \ PWs)
                                                  bands (ev):
-21.4271 -21.3397 -20.8544 -20.8503 -20.4515 -20.4506 -20.3632 -20.3629
-19.6874 -19.6864 -19.3959 -19.3947 -19.3374 -18.9150 -18.8679 -18.8668
-18.3337 -18.2790 -18.2769 -18.0520 -18.0511 -17.9680 -17.9670 -17.4760
-17.4747 -17.2578 -16.8873 -16.8860 -16.3647 -16.3613 -15.5737 -15.5688
-14.4087 -14.4061 -13.5410 -13.4925 -13.4862 -12.9786 -12.9740 -12.1598
-12.1592 -11.7638 -11.6990 -11.6983 -11.4623 -11.4617 -11.4616 -11.4584
-11.0673 -11.0554 -11.0494 -10.1677 -10.1672
                                                 -9.9783
                                                          -9.9512
                                                                    -9.9388
                                       -9.3837
                                                           -9.2043
                   -9.6254
                             -9.6251
                                                 -9.2094
 -9.7812
          -9.7734
                                                                    -9.0805
          -8.7724
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 -9.0801
                    -8.6871
                                                           -8.4361
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 -8.0982
          -8.0954
                    -7.9740
                             -7.9733
                                       -7.8662
                                                 -7.8596
                                                           -7.8349
                                                                    -7.5848
          -7.5505
                             -7.3850
                    -7.5495
                                       -7.3760
                                                 -7.2715
                                                           -7.2714
 -7.5841
                                                                    -7.2700
                             -6.7852
          -6.9506
                    -6.9454
                                       -6.6184
                                                 -6.6174
                                                           -6.5931
 -7.1126
                                                                    -6.4919
 -6.4904
          -6.4874
                    -6.4812
                             -6.4001
                                       -6.2554
                                                 -5.9980
                                                           -5.8263
                                                                    -5.8251
 -5.6878
          -5.6483
                    -5.5539
                             -5.3408
                                       -5.3401
                                                 -5.1156
                                                           -4.8949
                                                                    -4.6749
 -4.6306
          -4.5724
                    -4.5524
                              -4.3084
                                       -4.1866
                                                 -4.1859
                                                           -4.1430
                                                                     -4.1421
 -4.0187
          -4.0179
                    -3.9232
                             -3.9223
                                       -3.3072
                                                 -3.3065
                                                           -2.8061
                                                                     -2.7999
  0.2053
           0.2231
                     0.7481
                               0.7498
                                        1.4753
                                                  1.4823
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                                                                      1.5688
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           2.3373
                     2.3608
                               2.4642
                                        2.4648
                                                  2.4899
                                                            2.4903
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  2.8964
           2.9003
                     3.0188
                               3.0331
                                        3.0342
                                                  3.1226
                                                            3.1232
                                                                      3.1502
  3.4398
           3.4650
       k = 0.0000 - 0.3717 \ 0.0000 \ (64804 \ PWs)
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-19.6743 -19.6733 -19.3788 -19.3776 -19.3178 -18.8876 -18.8847 -18.8836
-18.3494 -18.3032 -18.3011 -18.0507 -18.0498 -17.9694 -17.9685 -17.4676
```

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-17.4663 -17.2915 -16.8810 -16.8796 -16.3773 -16.3740 -15.5410 -15.5361
-14.3849 -14.3822 -13.5271 -13.5209 -13.4971 -13.0065 -13.0019 -12.1502
-12.1496 -11.7386 -11.7084 -11.7077 -11.4767 -11.4762 -11.4683 -11.4651
-9.9731
                                                                         -9.9610
                                                                         -9.1014
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 -9.1010
           -8.7645
                     -8.7046
                               -8.4948
                                          -8.4942
                                                    -8.4640
                                                               -8.4548
                                                                         -8.1222
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                                                    -7.8422
                                                               -7.8278
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           -8.1007
                                                                         -7.5984
           -7.5548
                     -7.5538
                               -7.4128
                                          -7.4040
                                                    -7.2836
                                                               -7.2583
 -7.5977
                                                                         -7.2581
           -6.9307
                     -6.9259
                               -6.7432
                                          -6.6402
                                                    -6.6392
                                                               -6.6058
 -7.1062
                                                                         -6.4960
 -6.4883
           -6.4716
                     -6.4708
                               -6.3693
                                          -6.2178
                                                    -5.9705
                                                               -5.8290
                                                                         -5.8278
 -5.7040
           -5.6759
                     -5.5454
                                -5.3645
                                          -5.3639
                                                    -5.0983
                                                               -4.9201
                                                                         -4.7050
                     -4.5759
                                                               -4.1401
 -4.6444
           -4.5949
                                -4.3197
                                          -4.1836
                                                    -4.1829
                                                                         -4.1392
                     -3.9274
                                                               -2.7791
 -4.0214
           -4.0206
                                          -3.2941
                                                    -3.2935
                                -3.9266
                                                                         -2.7729
                                                                1.5741
  0.1767
            0.1945
                      0.7598
                                 0.7615
                                           1.4629
                                                     1.4698
                                                                          1.6098
  2.1097
            2.3392
                                 2.4742
                                           2.4749
                                                      2.4767
                                                                2.4771
                      2.3486
                                                                          2.8083
  2.8784
            2.9078
                       3.0279
                                 3.0291
                                           3.0501
                                                      3.1109
                                                                3.1116
                                                                          3.1298
  3.4746
            3.5000
        k = 0.0000 - 0.3796 \ 0.0000 \ (64802 \ PWs)
                                                      bands (ev):
-21.4133 -21.3280 -20.8806 -20.8771 -20.4576 -20.4567 -20.3707 -20.3704 -19.6611 -19.6601 -19.3616 -19.3603 -19.2983 -18.9014 -18.9003 -18.8601 -18.3654 -18.3273 -18.3252 -18.0493 -18.0484 -17.9709 -17.9699 -17.4595 -17.4582 -17.3251 -16.8745 -16.8731 -16.3898 -16.3866 -15.5085 -15.5035 -14.3609 -14.3582 -13.5614 -13.5553 -13.4535 -13.0344 -13.0298 -12.1405 -12.1399 -11.7175 -11.7169 -11.7127 -11.4912 -11.4907 -11.4747 -11.4714 -11.1618 -11.0171 -11.0109 -10.1290 -10.1284 -10.0554 -9.9949 -9.9831
                                         -9.3674
 -9.7249
           -9.7170
                     -9.6385
                               -9.6383
                                                    -9.1357
                                                               -9.1304
                                                                         -9.1223
 -9.1219
           -8.7564
                     -8.7219
                               -8.4831
                                          -8.4766
                                                    -8.4760
                                                               -8.4739
                                                                         -8.1384
 -8.1073
                     -7.9218
                                -7.9210
                                          -7.8313
                                                    -7.8259
                                                               -7.8198
           -8.1053
                                                                         -7.6122
 -7.6115
           -7.5589
                     -7.5580
                               -7.4410
                                          -7.4323
                                                    -7.2971
                                                               -7.2454
                                                                         -7.2452
                     -6.9061
                               -6.7014
 -7.0998
           -6.9106
                                          -6.6621
                                                     -6.6611
                                                               -6.6184
                                                                         -6.5020
                                -6.3384
 -6.4944
           -6.4533
                     -6.4526
                                          -6.1802
                                                     -5.9429
                                                               -5.8318
                                                                         -5.8305
                     -5.5324
                                -5.3882
                                          -5.3876
 -5.7245
           -5.7034
                                                    -5.0811
                                                               -4.9459
                                                                         -4.7354
                     -4.5996
                                -4.3312
 -4.6584
           -4.6179
                                          -4.1805
                                                     -4.1798
                                                               -4.1371
                                                                         -4.1363
                     -3.9317
 -4.0241
           -4.0233
                                -3.9309
                                          -3.2815
                                                     -3.2808
                                                               -2.7525
                                                                          -2.7463
  0.1486
                      0.7717
                                 0.7734
                                           1.4503
                                                      1.4570
            0.1664
                                                                1.5838
                                                                          1.6514
  2.1193
            2.3205
                      2.3574
                                 2.4636
                                           2.4640
                                                      2.4848
                                                                2.4854
                                                                           2.8178
  2.8586
            2.9175
                       3.0230
                                 3.0242
                                           3.0819
                                                      3.0992
                                                                3.0998
                                                                           3.1096
  3.5094
            3.5349
        k = 0.0000 - 0.3875 \ 0.0000 \ (64790 \ PWs)
                                                      bands (ev):
-21.4062 -21.3219 -20.8944 -20.8893 -20.4605 -20.4596 -20.3743 -20.3740
-19.6478 -19.6468 -19.3442 -19.3430 -19.2787 -18.9181 -18.9171 -18.8324
-18.3815 -18.3512 -18.3491 -18.0479 -18.0470 -17.9723 -17.9714 -17.4517
-17.4504 -17.3586 -16.8679 -16.8664 -16.4023 -16.3991 -15.4760 -15.4709
-14.3368 -14.3340 -13.5957 -13.5896 -13.4097 -13.0622 -13.0577 -12.1306
-12.1300 -11.7263 -11.7256 -11.6868 -11.5058 -11.5052 -11.4807 -11.4775
-11.2091 -10.9979 -10.9916 -10.1096 -10.1090 -10.0937 -10.0167 -10.0052
 -9.6968
           -9.6889
                     -9.6447
                               -9.6444
                                          -9.3590
                                                    -9.1432
                                                              -9.1428
                                                                         -9.0988
 -9.0935
           -8.7486
                     -8.7386
                                -8.5024
                                          -8.4933
                                                    -8.4583
                                                               -8.4577
                                                                         -8.1547
 -8.1115
           -8.1096
                     -7.8956
                                -7.8948
                                          -7.8162
                                                     -7.8131
                                                               -7.8068
                                                                         -7.6261
                      -7.5620
                                -7.4695
                                                    -7.3105
           -7.5629
                                          -7.4609
 -7.6255
                                                               -7.2328
                                                                         -7.2326
 -7.0932
           -6.8904
                      -6.8862
                                -6.6843
                                          -6.6833
                                                     -6.6598
                                                               -6.6309
                                                                         -6.5081
                                                     -5.9153
 -6.5006
           -6.4349
                      -6.4341
                                -6.3073
                                          -6.1429
                                                               -5.8345
                                                                         -5.8333
 -5.7474
           -5.7307
                      -5.5170
                                -5.4117
                                          -5.4112
                                                     -5.0639
                                                               -4.9720
                                                                         -4.7659
 -4.6727
           -4.6413
                      -4.6235
                                -4.3429
                                          -4.1774
                                                     -4.1767
                                                               -4.1341
                                                                          -4.1332
                                -3.9352
 -4.0268
           -4.0260
                      -3.9360
                                          -3.2692
                                                     -3.2686
                                                               -2.7265
                                                                         -2.7203
  0.1211
            0.1388
                      0.7838
                                0.7855
                                          1.4376
                                                     1.4442
                                                               1.5937
                                                                          1.6935
                                                      2.4953
  2.1292
            2.3012
                      2.3673
                                 2.4511
                                           2.4516
                                                                2.4960
                                                                          2.8275
            2.9274
                                 3.0194
                                           3.0873
                                                      3.0879
                                                                3.0896
  2.8390
                      3.0182
                                                                          3.1141
```

```
3.5289
              3.5440
         k = 0.0000 - 0.3954 \ 0.0000 \ (64802 \ PWs)
                                                           bands (ev):
-21.3989 -21.3157 -20.9083 -20.9012 -20.4633 -20.4623 -20.3777 -20.3774
-19.6344 -19.6334 -19.3267 -19.3254 -19.2591 -18.9348 -18.9337 -18.8047
-18.3979 -18.3750 -18.3730 -18.0466 -18.0457 -17.9738 -17.9729 -17.4441
-17.4428 -17.3921 -16.8611 -16.8597 -16.4146 -16.4115 -15.4436 -15.4385 -14.3126 -14.3097 -13.6297 -13.6238 -13.3658 -13.0901 -13.0856 -12.1205 -12.1199 -11.7348 -11.7341 -11.6604 -11.5204 -11.5198 -11.4865 -11.4833
-11.2563 \ -10.9786 \ -10.9723 \ -10.1319 \ -10.0901 \ -10.0896 \ -10.0384 \ -10.0272
            -9.6607
                                                                     -9.1636
 -9.6687
                       -9.6506 -9.6504 -9.3504
                                                         -9.1641
                                                                                -9.0620
                                                                     -8.4393
-7.7909
                                                                                -8.1708
 -9.0566
            -8.7566
                       -8.7391 -8.5221 -8.5130
                                                         -8.4399
                                  -7.8686 -7.8076
-7.4983 -7.4897
                                                         -7.7973
            -8.1138
                       -7.8693
                                                                                -7.6403
 -8.1156
                       -7.5658
                                                                     -7.2206
                                                                                -7.2205
 -7.6397
            -7.5667
                                                         -7.3239
 -7.0865
            -6.8701
                       -6.8660
                                  -6.7066
                                              -6.7057
                                                          -6.6433
                                                                     -6.6184
                                                                                 -6.5142
                                                                     -5.8374
                       -6.4154
                                                                                 -5.8361
 -6.5069
            -6.4162
                                   -6.2762
                                              -6.1057
                                                          -5.8876
                       -5.5003
                                   -5.4351
                                              -5.4347
                                                                     -4.9986
 -5.7716
            -5.7579
                                                          -5.0468
                                                                                 -4.7966
 -4.6871
            -4.6650
                        -4.6477
                                   -4.3547
                                              -4.1743
                                                          -4.1736
                                                                     -4.1310
                                                                                 -4.1301
                                   -3.9396
                                              -3.2574
                                                          -3.2568
                                                                     -2.7010
                                                                                 -2.6948
 -4.0296
            -4.0288
                        -3.9403
  0.0942
             0.1119
                         0.7960
                                    0.7977
                                                1.4248
                                                           1.4312
                                                                       1.6038
                                                                                  1.7360
  2.1393
              2.2820
                         2.3775
                                    2.4390
                                                2.4395
                                                           2.5060
                                                                       2.5066
                                                                                  2.8195
  2.8375
                                                           3.0753
              2.9375
                         3.0136
                                    3.0148
                                                3.0699
                                                                       3.0759
                                                                                  3.1466
  3.5099
              3.5535
         k = 0.0000 - 0.4034 \ 0.0000 \ (64788 \ PWs)
                                                           bands (ev):
-21.3915 -21.3094 -20.9222 -20.9129 -20.4659 -20.4650 -20.3810 -20.3806 -19.6209 -19.6199 -19.3091 -19.3078 -19.2396 -18.9514 -18.9504 -18.7768 -18.4144 -18.3987 -18.3967 -18.0451 -18.0442 -17.9753 -17.9744 -17.4369 -17.4356 -17.4254 -16.8542 -16.8527 -16.4269 -16.4238 -15.4114 -15.4062 -14.2882 -14.2853 -13.6636 -13.6578 -13.3217 -13.1180 -13.1135 -12.1102 -12.1097 -11.7430 -11.7422 -11.6336 -11.5349 -11.5344 -11.4921 -11.4889 -11.3036 -10.9593 -10.9529 -10.1699 -10.0707 -10.0702 -10.0601 -10.0492 -9.6563 -9.6560 -9.6406 -9.6326 -9.3416 -9.1849 -9.1845 -9.0252 -0.0108 -8.7732 -8.7307 -8.5420 -8.5320 -8.4215 -8.4200 -8.1867
 -9.0198
            -8.7732
                       -8.7307
                                   -8.5420
                                              -8.5329
                                                          -8.4215
                                                                     -8.4209
                                                                                -8.1867
                                              -7.7999
                                                          -7.7813
 -8.1195
            -8.1177
                       -7.8430
                                  -7.8423
                                                                     -7.7750
                                                                                 -7.6547
 -7.6541
            -7.5704
                       -7.5695
                                  -7.5273
                                              -7.5189
                                                          -7.3372
                                                                     -7.2088
                                                                                 -7.2087
 -7.0797
            -6.8496
                       -6.8458
                                  -6.7292
                                              -6.7282
                                                          -6.6557
                                                                     -6.5773
                                                                                 -6.5204
 -6.5132
            -6.3975
                       -6.3966
                                   -6.2450
                                              -6.0687
                                                          -5.8600
                                                                     -5.8402
                                                                                 -5.8389
                                   -5.4583
                                                                                 -4.8275
 -5.7965
            -5.7849
                       -5.4834
                                              -5.4576
                                                          -5.0297
                                                                     -5.0256
                       -4.6721
                                   -4.3668
            -4.6892
 -4.7018
                                              -4.1711
                                                          -4.1705
                                                                     -4.1278
                                                                                 -4.1270
 -4.0324
            -4.0316
                       -3.9446
                                              -3.2461
                                   -3.9439
                                                          -3.2455
                                                                     -2.6761
                                                                                 -2.6699
                                                1.4118
                                                           1.4180
  0.0680
             0.0857
                         0.8084
                                    0.8101
                                                                       1.6141
                                                                                  1.7788
                                    2.4274
                                                2.4279
                                                           2.5168
  2.1495
             2.2630
                         2.3878
                                                                       2.5175
                                                                                  2.8003
  2.8475
             2.9479
                         3.0091
                                    3.0105
                                                3.0505
                                                           3.0632
                                                                       3.0638
                                                                                  3.1794
  3.4910
              3.5491
         k = 0.0000 - 0.4113 \ 0.0000 \ (64786 \ PWs)
                                                           bands (ev):
-21.3840 -21.3030 -20.9359 -20.9245 -20.4684 -20.4675 -20.3841 -20.3838
-19.6074 -19.6063 -19.2913 -19.2900 -19.2200 -18.9680 -18.9669 -18.7487
-18.4310 -18.4222 -18.4202 -18.0437 -18.0428 -17.9768 -17.9759 -17.4586
-17.4299 -17.4286 -16.8472 -16.8457 -16.4391 -16.4360 -15.3793 -15.3741
-14.2637 -14.2607 -13.6973 -13.6916 -13.2776 -13.1459 -13.1414 -12.0998
-12.0992 -11.7508 -11.7501 -11.6064 -11.5495 -11.5490 -11.4973 -11.4941
-11.3507 -10.9400 -10.9336 -10.2078 -10.0817 -10.0710 -10.0512 -10.0507
            -9.6614
                       -9.6126
                                  -9.6046
                                             -9.3326
                                                         -9.2057
                                                                     -9.2053
                                                                                -8.9885
 -9.6617
 -8.9830
            -8.7898
                       -8.7219
                                  -8.5623
                                              -8.5532
                                                          -8.4030
                                                                     -8.4024
                                                                                 -8.2026
            -8.1215
                       -7.8167
                                  -7.8160
                                              -7.7922
                                                          -7.7656
                                                                     -7.7595
                                                                                -7.6694
 -8.1233
                                  -7.5566
 -7.6687
            -7.5740
                       -7.5731
                                             -7.5483
                                                         -7.3503
                                                                     -7.1975
                                                                                -7.1973
                      -6.8253 -6.7519 -6.7510 -6.6678 -6.5365
 -7.0727 -6.8290
                                                                                -6.5264
```

```
-6.3777
                                          -6.0319
                                                    -5.8430
                                                               -5.8417
                                                                         -5.8322
 -6.5194
           -6.3786
                                -6.2137
           -5.8118
                                          -5.4622
 -5.8219
                     -5.4840
                               -5.4816
                                                    -5.0530
                                                              -5.0126
                                                                         -4.8586
 -4.7167
           -4.7138
                     -4.6967
                               -4.3790
                                          -4.1680
                                                    -4.1673
                                                              -4.1246
                                                                         -4.1238
           -4.0344
                     -3.9490
                               -3.9484
 -4.0352
                                          -3.2352
                                                    -3.2346
                                                              -2.6518
                                                                         -2.6457
  0.0424
            0.0601
                     0.8209
                                0.8227
                                          1.3987
                                                     1.4048
                                                               1.6246
                                                                         1.8220
  2.1600
            2.2442
                      2.3985
                                 2.4163
                                           2.4168
                                                     2.5278
                                                                2.5284
                                                                          2.7812
  2.8578
            2.9584
                      3.0045
                                 3.0063
                                           3.0315
                                                     3.0510
                                                                3.0516
                                                                          3.2126
  3.4723
            3.5448
        k = 0.0000 - 0.4192 \ 0.0000 \ (64798 \ PWs)
                                                     bands (ev):
-21.3763 -21.2965 -20.9495 -20.9360 -20.4708 -20.4699 -20.3871 -20.3867
-19.5937 \ -19.5927 \ -19.2734 \ -19.2721 \ -19.2004 \ -18.9846 \ -18.9835 \ -18.7205
-18.3937 -19.3927 -19.2734 -19.2721 -19.2004 -10.9040 -10.9033 -10.7203 -18.4479 -18.4457 -18.4437 -18.0423 -18.0414 -17.9784 -17.9774 -17.4917 -17.4233 -17.4220 -16.8401 -16.8385 -16.4511 -16.4481 -15.3474 -15.3422 -14.2390 -14.2360 -13.7308 -13.7251 -13.2334 -13.1737 -13.1693 -12.0893 -12.0887 -11.7576 -11.5789 -11.5641 -11.5636 -11.5023 -11.4991 -11.3979 -10.9206 -10.9142 -10.2455 -10.1034 -10.0929 -10.0317 -10.0312
                               -9.5766
 -9.6669
           -9.6666
                     -9.5847
                                         -9.3233
                                                    -9.2264
                                                              -9.2260
                                                                        -8.9519
                                         -8.5738
-7.7845
                                                    -8.3845
                                                              -8.3839
                                                                         -8.2182
 -8.9462
           -8.8063
                     -8.7130
                               -8.5828
                     -7.7904
                                                    -7.7504
                                                                         -7.6842
 -8.1269
           -8.1250
                               -7.7896
                                                              -7.7445
                     -7.5797
                                         -7.5754
                                                    -7.3634
 -7.6835
           -7.5869
                               -7.5760
                                                              -7.1865
                                                                         -7.1864
                     -6.8049
                               -6.7748
                                         -6.7739
                                                    -6.6799
                                                              -6.5325
                                                                         -6.5257
 -7.0656
           -6.8084
                     -6.3587
                                          -5.9953
                                                               -5.8458
           -6.3595
                               -6.1823
                                                    -5.8475
                                                                         -5.8445
 -6.4956
                     -5.5063
                               -5.5050
 -5.8385
           -5.8045
                                          -5.4447
                                                    -5.0808
                                                              -4.9957
                                                                         -4.8898
 -4.7387
           -4.7317
                     -4.7215
                                -4.3914
                                          -4.1648
                                                    -4.1641
                                                               -4.1213
                                                                         -4.1205
                                                    -3.2241
 -4.0381
           -4.0373
                     -3.9535
                                -3.9528
                                          -3.2248
                                                               -2.6282
                                                                         -2.6221
                      0.8335
                                                                1.6352
  0.0176
            0.0352
                                 0.8353
                                           1.3854
                                                     1.3914
                                                                          1.8655
  2.1707
            2.2256
                      2.4055
                                 2.4060
                                           2.4093
                                                     2.5388
                                                                2.5395
                                                                          2.7624
            2.9692
  2.8683
                      2.9992
                                 3.0022
                                           3.0138
                                                     3.0387
                                                                3.0393
                                                                          3.2461
  3.4537
            3.5407
        k = 0.0000 - 0.4271 \ 0.0000 \ (64818 \ PWs)
                                                     bands (ev):
-21.3685 -21.2898 -20.9630 -20.9473 -20.4731 -20.4722 -20.3899 -20.3896
-19.5800 -19.5790 -19.2553 -19.2540 -19.1807 -19.0010 -19.0000 -18.6922
-18.4689 -18.4670 -18.4649 -18.0408 -18.0399 -17.9799 -17.9790 -17.5247
-17.4169 -17.4156 -16.8328 -16.8312 -16.4631 -16.4602 -15.3158 -15.3105
-14.2142 -14.2112 -13.7639 -13.7583 -13.2017 -13.1974 -13.1886 -12.0785
-12.0779 -11.7655 -11.7647 -11.5787 -11.5781 -11.5510 -11.5071 -11.5039
-11.4449 -10.9012 -10.8947 -10.2831 -10.1249 -10.1146 -10.0122 -10.0117
 -9.6718
          -9.6715
                    -9.5568
                              -9.5487
                                         -9.3139
                                                   -9.2472
                                                              -9.2468
                                                                        -8.9153
                                         -8.5946
 -8.9095
           -8.8225
                    -8.7039
                               -8.6037
                                                    -8.3659
                                                              -8.3653
                                                                         -8.2338
                                         -7.7633
                                                              -7.7299
                    -7.7766
                               -7.7640
                                                    -7.7356
 -8.1303
           -8.1285
                                                                         -7.6992
                               -7.5802
                    -7.6084
                                         -7.5793
                                                    -7.3764
 -7.6985
           -7.6165
                                                              -7.1760
                                                                         -7.1759
                               -6.7872
                                         -6.7838
 -7.0584
          -6.7983
                    -6.7975
                                                    -6.6918
                                                              -6.5384
                                                                         -6.5317
          -6.3404
                     -6.3395
                               -6.1509
                                         -5.9589
                                                    -5.8732
                                                              -5.8651
 -6.4553
                                                                         -5.8486
 -5.8473
           -5.7767
                     -5.5293
                               -5.5282
                                         -5.4260
                                                    -5.1091
                                                              -4.9787
                                                                         -4.9211
           -4.7470
                     -4.7465
                               -4.4040
                                          -4.1616
                                                    -4.1609
                                                              -4.1179
 -4.7639
                                                                         -4.1172
 -4.0410
           -4.0402
                     -3.9579
                               -3.9573
                                          -3.2148
                                                    -3.2141
                                                              -2.6053
                                                                         -2.5992
 -0.0065
            0.0112
                      0.8463
                                 0.8482
                                           1.3721
                                                     1.3780
                                                                1.6461
                                                                          1.9093
  2.1815
            2.2073
                      2.3953
                                 2.3958
                                           2.4203
                                                     2.5501
                                                                2.5507
                                                                          2.7437
  2.8789
            2.9801
                       2.9886
                                 2.9983
                                           3.0019
                                                     3.0263
                                                                3.0269
                                                                          3.2798
  3.4353
            3.5364
        k = 0.0000 - 0.4350 \ 0.0000 \ (64816 \ PWs)
                                                     bands (ev):
-21.3605 -21.2830 -20.9763 -20.9585 -20.4753 -20.4744 -20.3926 -20.3923
-19.5661 -19.5651 -19.2371 -19.2358 -19.1611 -19.0175 -19.0164 -18.6638
-18.4921 -18.4901 -18.4820 -18.0393 -18.0384 -17.9815 -17.9805 -17.5576
-17.4108 -17.4096 -16.8254 -16.8238 -16.4750 -16.4721 -15.2844 -15.2791
-14.1893 -14.1862 -13.7967 -13.7913 -13.2295 -13.2250 -13.1445 -12.0676
```

```
-12.0670 -11.7723 -11.7716 -11.5933 -11.5927 -11.5227 -11.5117 -11.5084
-11.4918 -10.8818 -10.8752 -10.3205 -10.1464 -10.1363
                                                                  -9.9926
                                                                             -9.9921
                      -9.5290
 -9.6764
           -9.6762
                                 -9.5209
                                            -9.3044
                                                       -9.2679
                                                                  -9.2675
                                                                              -8.8788
 -8.8730
                                                                              -8.2491
           -8.8385
                      -8.6945
                                 -8.6248
                                            -8.6158
                                                       -8.3473
                                                                   -8.3467
                                            -7.7369
                                                       -7.7214
                                                                   -7.7159
 -8.1335
            -8.1317
                      -7.7686
                                 -7.7377
                                                                              -7.7144
 -7.7137
           -7.6467
                      -7.6386
                                 -7.5832
                                            -7.5823
                                                       -7.3893
                                                                  -7.1659
                                                                             -7.1658
 -7.0510
           -6.8214
                      -6.8205
                                 -6.7666
                                            -6.7632
                                                       -6.7037
                                                                   -6.5441
                                                                             -6.5376
           -6.3211
 -6.4151
                      -6.3202
                                 -6.1194
                                            -5.9227
                                                        -5.8990
                                                                  -5.8915
                                                                              -5.8513
                                                                   -4.9618
           -5.7490
                                 -5.5514
 -5.8501
                      -5.5524
                                            -5.4072
                                                       -5.1377
                                                                             -4.9526
 -4.7896
           -4.7717
                      -4.7625
                                 -4.4167
                                             -4.1584
                                                       -4.1577
                                                                   -4.1145
                                                                              -4.1138
 -4.0439
           -4.0431
                      -3.9624
                                 -3.9617
                                            -3.2053
                                                       -3.2046
                                                                   -2.5831
                                                                              -2.5771
 -0.0297
           -0.0121
                       0.8592
                                   0.8611
                                             1.3587
                                                        1.3644
                                                                    1.6572
                                                                               1.9534
                        2.3856
                                                         2.5614
             2.1931
                                   2.3861
                                              2.4315
  2.1887
                                                                    2.5621
                                                                               2.7252
  2.8897
             2.9717
                        2.9909
                                   2.9945
                                              2.9969
                                                         3.0139
                                                                    3.0145
                                                                               3.3139
  3.4172
             3.5283
        k = 0.0000 - 0.4429 \ 0.0000 \ (64828 \ PWs)
                                                         bands (ev):
-21.3524 -21.2761 -20.9895 -20.9696 -20.4774 -20.4764 -20.3951 -20.3948 -19.5522 -19.5512 -19.2188 -19.2174 -19.1415 -19.0338 -19.0328 -18.6352 -18.5151 -18.5132 -18.4994 -18.0378 -18.0369 -17.9830 -17.9821 -17.5904 -17.4051 -17.4038 -16.8178 -16.8162 -16.4868 -16.4839 -15.2534 -15.2480 -14.1643 -14.1612 -13.8292 -13.8238 -13.2573 -13.2529 -13.0999 -12.0566 -12.0560 -11.7788 -11.7780 -11.6078 -11.6073 -11.5393 -11.5155 -11.5126 -11.4942 -10.8623 -10.8557 -10.3578 -10.1679 -10.1580 -9.9730 -9.9725 -9.6808 -9.6806 -9.5013 -9.4931 -9.2946 -9.2886 -9.2881 -8.8557 -8.8414 -8.8361 -8.6851 -8.6663 -8.6677 -8.3327 -8.3327 -8.33281 -8.2663
 -8.8414
           -8.8361
                      -8.6851
                                 -8.6462
                                            -8.6372
                                                       -8.3287
                                                                   -8.3281
                                                                              -8.2643
                      -7.7604
                                 -7.7298
                                            -7.7291
                                                       -7.7113
                                                                   -7.7105
 -8.1366
           -8.1348
                                                                              -7.7078
                                 -7.5861
                                            -7.5852
 -7.7024
                      -7.6691
                                                       -7.4020
           -7.6771
                                                                   -7.1563
                                                                             -7.1561
                      -6.8439
                                 -6.7458
                                            -6.7425
                                                        -6.7154
                                                                   -6.5496
 -7.0435
           -6.8449
                                                                              -6.5433
 -6.3753
           -6.3017
                      -6.3008
                                 -6.0879
                                             -5.9247
                                                        -5.9178
                                                                   -5.8867
                                                                              -5.8540
                      -5.5754
                                 -5.5744
 -5.8527
            -5.7212
                                             -5.3882
                                                        -5.1667
                                                                   -4.9842
                                                                              -4.9450
                       -4.7781
                                 -4.4296
 -4.8157
            -4.7972
                                             -4.1551
                                                        -4.1545
                                                                   -4.1110
                                                                              -4.1103
 -4.0469
            -4.0460
                       -3.9668
                                  -3.9662
                                                        -3.1956
                                                                   -2.5618
                                                                              -2.5557
                                             -3.1962
 -0.0521
           -0.0345
                                              1.3451
                                                         1.3507
                                                                               1.9975
                        0.8722
                                   0.8742
                                                                    1.6685
  2.1715
             2.2040
                        2.3764
                                   2.3769
                                              2.4430
                                                         2.5729
                                                                    2.5736
                                                                               2.7070
  2.9006
             2.9538
                        2.9909
                                   2.9922
                                              3.0013
                                                         3.0019
                                                                    3.0031
                                                                               3.3481
  3.3992
             3.5110
        k = 0.0000 - 0.4508 \ 0.0000 \ (64836 \ PWs)
                                                         bands (ev):
-21.3441 -21.2691 -21.0026 -20.9805 -20.4793 -20.4784 -20.3975 -20.3972
-19.5382 -19.5372 -19.2004 -19.1990 -19.1219 -19.0502 -19.0491 -18.6066
-18.5380 -18.5361 -18.5168 -18.0363 -18.0354 -17.9846 -17.9837 -17.6230
-17.3997 -17.3984 -16.8102 -16.8085 -16.4985 -16.4956 -15.2227 -15.2173
-14.1392 -14.1360 -13.8611 -13.8559 -13.2850 -13.2807 -13.0553 -12.0454
-12.0448 -11.7849 -11.7842 -11.6224 -11.6218 -11.5861 -11.5196 -11.5166
-11.4652 -10.8428 -10.8361 -10.3948 -10.1893 -10.1796
                                                                  -9.9534
                                                                             -9.9529
 -9.6850
           -9.6847
                      -9.4736
                                 -9.4654
                                            -9.3092
                                                       -9.3088
                                                                  -9.2846
                                                                             -8.8709
 -8.8055
           -8.7998
                      -8.6754
                                 -8.6679
                                            -8.6588
                                                       -8.3101
                                                                  -8.3095
                                                                             -8.2794
 -8.1395
            -8.1377
                       -7.7521
                                 -7.7454
                                            -7.7447
                                                        -7.7081
                                                                  -7.7002
                                                                             -7.6942
 -7.6892
            -7.6848
                      -7.6840
                                 -7.5888
                                             -7.5879
                                                        -7.4146
                                                                   -7.1471
                                                                              -7.1470
 -7.0359
            -6.8685
                       -6.8676
                                  -6.7270
                                             -6.7250
                                                        -6.7217
                                                                   -6.5547
                                                                              -6.5487
                                             -5.9504
                                                                   -5.8567
 -6.3359
            -6.2821
                       -6.2813
                                  -6.0563
                                                        -5.9437
                                                                              -5.8555
                       -5.5984
                                                        -5.1960
 -5.8507
            -5.6933
                                  -5.5974
                                             -5.3691
                                                                   -5.0159
                                                                              -4.9283
 -4.8420
            -4.8227
                       -4.7939
                                  -4.4426
                                             -4.1519
                                                        -4.1513
                                                                   -4.1075
                                                                              -4.1068
 -4.0498
            -4.0490
                       -3.9713
                                  -3.9707
                                             -3.1877
                                                        -3.1870
                                                                   -2.5413
                                                                              -2.5353
 -0.0736
            -0.0559
                                             1.3315
                                                        1.3369
                                                                    1.6799
                       0.8853
                                  0.8873
                                                                              2.0415
  2.1546
             2.2154
                        2.3676
                                   2.3681
                                              2.4546
                                                         2.5845
                                                                    2.5851
                                                                               2.6889
  2.9115
             2.9359
                        2.9864
                                   2.9875
                                              2.9903
                                                         2.9907
                                                                    3.0145
                                                                               3.3812
  3.3828
             3.4929
```

```
k = 0.0000 - 0.4587 \ 0.0000 \ (64850 \ PWs)
                                                          bands (ev):
-21.3357 -21.2619 -21.0155 -20.9914 -20.4811 -20.4802 -20.3997 -20.3994
-19.5242 -19.5231 -19.1817 -19.1804 -19.1023 -19.0664 -19.0654 -18.5777 -18.5608 -18.5589 -18.5344 -18.0348 -18.0339 -17.9862 -17.9853 -17.6556
-17.3945 -17.3933 -16.8024 -16.8007 -16.5100 -16.5072 -15.1925 -15.1870 -14.1139 -14.1107 -13.8926 -13.8875 -13.3127 -13.3084 -13.0106 -12.0340 -12.0334 -11.7907 -11.7899 -11.6369 -11.6363 -11.6330 -11.5234 -11.5203
-11.4360 -10.8232 -10.8165 -10.4317 -10.2106 -10.2011 -9.9337
                                                                              -9.9332
                      -9.4461 -9.4378 -9.3299
 -9.6889
            -9.6886
                                                        -9.3294
                                                                   -9.2745
                                                                               -8.8864
 -8.7692
            -8.7635
                       -8.6898
                                  -8.6807
                                             -8.6656
                                                        -8.2943
                                                                   -8.2914
                                                                               -8.2908
                                                                               -7.6819
 -8.1422
            -8.1404
                       -7.7612
                                  -7.7605
                                             -7.7438
                                                        -7.7389
                                                                    -7.7310
 -7.6770
            -7.6585
                       -7.6576
                                  -7.5913
                                             -7.5904
                                                        -7.4272
                                                                    -7.1384
                                                                               -7.1383
                                             -6.7043
                                                                               -6.5537
 -7.0282
            -6.8924
                       -6.8914
                                  -6.7385
                                                        -6.7010
                                                                    -6.5594
                                                        -5.9694
                                                                    -5.8592
                                                                               -5.8579
 -6.2969
            -6.2625
                       -6.2617
                                  -6.0247
                                             -5.9760
 -5.8153
            -5.6655
                       -5.6213
                                  -5.6203
                                             -5.3500
                                                        -5.2257
                                                                    -5.0476
                                                                               -4.9116
 -4.8688
            -4.8485
                       -4.8099
                                  -4.4559
                                             -4.1487
                                                         -4.1481
                                                                    -4.1039
                                                                               -4.1032
                                                                    -2.5217
                                                                               -2.5157
 -4.0528
            -4.0520
                       -3.9758
                                  -3.9753
                                             -3.1796
                                                         -3.1790
            -0.0765
 -0.0941
                        0.8985
                                   0.9006
                                               1.3178
                                                          1.3231
                                                                     1.6916
                                                                                2.0835
                                                          2.5962
  2.1402
             2.2271
                        2.3593
                                    2.3599
                                               2.4665
                                                                     2.5968
                                                                                2.6710
  2.9157
             2.9249
                         2.9755
                                    2.9761
                                               2.9854
                                                          2.9869
                                                                     3.0263
                                                                                3.3637
  3.4171
             3.4749
        k = 0.0000 - 0.4666 \ 0.0000 \ (64828 \ PWs)
                                                          bands (ev):
-21.3271 -21.2546 -21.0283 -21.0021 -20.4828 -20.4819 -20.4018 -20.4016 -19.5100 -19.5090 -19.1630 -19.1616 -19.0829 -19.0826 -19.0815 -18.5834 -18.5815 -18.5521 -18.5488 -18.0333 -18.0324 -17.9878 -17.9869 -17.6880 -17.3897 -17.3885 -16.7944 -16.7927 -16.5215 -16.5187 -15.1628 -15.1573 -14.0885 -14.0852 -13.9234 -13.9185 -13.3404 -13.3361 -12.9658 -12.0225 -12.0219 -11.7961 -11.7954 -11.6798 -11.6513 -11.6508 -11.5268 -11.5238 -11.4064 -10.8036 -10.7968 -10.4885 -10.2319 -10.2225 -9.9141 -9.9136
                       -9.4186
                                 -9.4103
                                             -9.3504
                                                        -9.3500
                                                                   -9.2641
                                                                               -8.9019
 -9.6925
            -9.6922
                       -8.7117
                                  -8.7026
                                             -8.6556
                                                        -8.3090
                                                                    -8.2728
 -8.7331
            -8.7277
                                                                               -8.2722
 -8.1448
                       -7.7771
                                  -7.7764
                                             -7.7701
                                                         -7.7623
                                                                    -7.7351
            -8.1430
                                                                               -7.6700
                                             -7.5928
 -7.6653
            -7.6320
                       -7.6312
                                  -7.5937
                                                         -7.4395
                                                                    -7.1302
                                                                               -7.1301
                       -6.9154
                                  -6.7499
                                             -6.6840
 -7.0203
            -6.9163
                                                         -6.6807
                                                                    -6.5635
                                                                               -6.5580
                                  -6.0016
 -6.2585
            -6.2427
                       -6.2419
                                             -5.9950
                                                         -5.9927
                                                                    -5.8617
                                                                               -5.8604
 -5.7799
            -5.6441
                       -5.6432
                                  -5.6377
                                             -5.3309
                                                         -5.2558
                                                                    -5.0795
                                                                               -4.8959
            -4.8743
 -4.8950
                       -4.8261
                                  -4.4692
                                             -4.1454
                                                         -4.1448
                                                                    -4.1002
                                                                               -4.0996
            -4.0550
                                  -3.9798
                                             -3.1720
                                                         -3.1714
 -4.0558
                       -3.9803
                                                                    -2.5031
                                                                               -2.4971
 -0.1136
            -0.0960
                        0.9119
                                   0.9140
                                              1.3040
                                                          1.3092
                                                                     1.7035
                                                                                2.1059
                                               2.4785
                                                          2.6080
  2.1457
             2.2390
                        2.3516
                                    2.3521
                                                                     2.6086
                                                                                2.6533
  2.8990
             2.9349
                                               2.9824
                                                          2.9844
                                                                     3.0383
                        2.9629
                                    2.9635
                                                                                3.3463
  3.4504
             3.4572
        k = 0.0000 - 0.4745 \ 0.0000 \ (64824 \ PWs)
                                                          bands (ev):
-21.3184 -21.2472 -21.0409 -21.0127 -20.4844 -20.4835 -20.4038 -20.4035
-19.4957 -19.4947 -19.1441 -19.1427 -19.0988 -19.0978 -19.0631 -18.6059
-18.6040 -18.5699 -18.5197 -18.0317 -18.0308 -17.9894 -17.9885 -17.7204
-17.3853 -17.3840 -16.7864 -16.7846 -16.5328 -16.5301 -15.1337 -15.1281
-14.0630 -14.0597 -13.9536 -13.9487 -13.3681 -13.3638 -12.9209 -12.0108
-12.0102 -11.8011 -11.8004 -11.7266 -11.6657 -11.6652 -11.5301 -11.5270
-11.3765 -10.7840 -10.7771 -10.5050 -10.2531 -10.2439
                                                                   -9.8944
                                                                               -9.8939
 -9.6959
            -9.6956
                       -9.3913
                                  -9.3829
                                             -9.3710
                                                        -9.3706
                                                                    -9.2536
                                                                               -8.9172
 -8.7347
            -8.7259
                       -8.6967
                                  -8.6904
                                             -8.6455
                                                         -8.3236
                                                                    -8.2542
                                                                               -8.2536
                                  -7.7938
                                             -7.7932
                                                         -7.7926
 -8.1472
            -8.1455
                       -7.8015
                                                                    -7.7264
                                                                               -7.6587
 -7.6543
            -7.6057
                       -7.6048
                                  -7.5959
                                             -7.5950
                                                         -7.4518
                                                                    -7.1225
                                                                               -7.1224
 -7.0123
            -6.9404
                       -6.9395
                                  -6.7611
                                             -6.6643
                                                        -6.6609
                                                                    -6.5666
                                                                               -6.5614
                       -6.2209
                                  -6.0270
                                             -6.0191
                                                        -5.9615
                                                                    -5.8640
 -6.2228
           -6.2220
                                                                               -5.8627
 -5.7448
           -5.6668
                      -5.6659
                                 -5.6099
                                             -5.3118
                                                        -5.2861
                                                                   -5.1114
                                                                               -4.9234
```

```
-4.9004
          -4.8785
                     -4.8424
                               -4.4828
                                                   -4.1416
                                                             -4.0965
                                                                       -4.0959
                                         -4.1422
                    -3.9849
                               -3.9843
 -4.0589
          -4.0580
                                         -3.1649
                                                   -3.1643
                                                             -2.4854
                                                                       -2.4794
                                          1.2902
 -0.1321
          -0.1144
                     0.9253
                                0.9276
                                                   1.2952
                                                             1.7156
                                                                       2.0955
           2.2511
                                          2.4908
                                                    2.6199
  2.1846
                      2.3443
                                2.3449
                                                              2.6206
                                                                        2.6359
            2.9458
                      2.9502
                                2.9508
                                          2.9797
                                                    2.9825
                                                              3.0504
  2.8814
                                                                        3.3291
  3.4391
            3.4467
       k = 0.0000 - 0.4824 \ 0.0000 \ (64832 \ PWs)
                                                    bands (ev):
-21.3095 -21.2397 -21.0534 -21.0232 -20.4859 -20.4850 -20.4056 -20.4053
-19.4814 -19.4804 -19.1251 -19.1237 -19.1149 -19.1139 -19.0436 -18.6283
-18.6264 -18.5879 -18.4905 -18.0302 -18.0293 -17.9910 -17.9901 -17.7526 -17.3811 -17.3798 -16.7782 -16.7764 -16.5440 -16.5414 -15.1053 -15.0997 -14.0374 -14.0341 -13.9829 -13.9782 -13.3957 -13.3914 -12.8759 -11.9990 -11.9984 -11.8058 -11.8058 -11.8058 -11.8058 -11.8058 -10.7733 -10.7743 -10.7745 -10.7746
-11.3463 -10.7643 -10.7573 -10.5413 -10.2743 -10.2652 -9.8746
                                                                      -9.8741
                    -9.3915
                              -9.3911 -9.3640
                                                  -9.3557
                                                             -9.2429
                                                                       -8.9323
 -9.6990
          -9.6987
                    -8.6607
                                                  -8.3380
                                                             -8.2356
                                                                       -8.2349
 -8.7573
          -8.7484
                              -8.6545
                                        -8.6352
                                                  -7.8088
                                                             -7.7176
                                                                       -7.6481
          -8.1477
                    -7.8332
                                        -7.8095
 -8.1495
                              -7.8255
          -7.5979
                    -7.5970
                                                             -7.1153
 -7.6439
                              -7.5793
                                        -7.5785
                                                   -7.4639
                                                                       -7.1152
 -7.0042
          -6.9647
                    -6.9638
                              -6.7723
                                        -6.6459
                                                   -6.6425
                                                             -6.5678
                                                                       -6.5630
                    -6.1849
                                                   -5.9299
                                                                       -5.8649
 -6.2028
          -6.2020
                              -6.0524
                                        -6.0421
                                                             -5.8662
                     -5.6885
                               -5.5820
                                         -5.3167
 -5.7099
          -5.6894
                                                   -5.2927
                                                             -5.1434
                                                                       -4.9512
 -4.9266
                     -4.8589
                               -4.4964
                                         -4.1389
          -4.8621
                                                   -4.1383
                                                             -4.0927
                                                                       -4.0921
 -4.0619
                     -3.9894
                               -3.9889
                                         -3.1583
                                                   -3.1577
                                                             -2.4688
                                                                       -2.4629
          -4.0610
 -0.1494
                                          1.2762
                                                              1.7278
          -0.1318
                      0.9389
                                0.9412
                                                    1.2811
                                                                        2.0799
                                          2.5033
  2.2291
            2.2634
                      2.3376
                                2.3382
                                                    2.6186
                                                              2.6320
                                                                        2.6326
  2.8639
            2.9373
                      2.9380
                                2.9561
                                          2.9773
                                                    2.9818
                                                              3.0628
                                                                        3.3121
  3.3979
            3.4219
       k = 0.0000 - 0.4904 \ 0.0000 \ (64840 \ PWs)
                                                    bands (ev):
-18.6487 -18.6060 -18.4612 -18.0286 -18.0277 -17.9927 -17.9917 -17.7847 -17.3772 -17.3759 -16.7699 -16.7680 -16.5552 -16.5526 -15.0778 -15.0722 -14.0128 -14.0107 -14.0092 -14.0055 -13.4233 -13.4190 -12.8308 -11.9871
-11.9865 -11.8200 -11.8102 -11.8095 -11.6944 -11.6939 -11.5358 -11.5328
-11.3158 -10.7445 -10.7375 -10.5775 -10.2954 -10.2864
                                                            -9.8549
                                                                       -9.8544
 -9.7019
          -9.7016 -9.4120
                              -9.4116 -9.3369
                                                  -9.3285
                                                            -9.2320
                                                                       -8.9472
                              -8.6246
 -8.7802
          -8.7714
                    -8.6249
                                        -8.6186
                                                  -8.3523
                                                             -8.2170
                                                                       -8.2164
                    -7.8650
                              -7.8574
 -8.1516
          -8.1499
                                        -7.8259
                                                  -7.8253
                                                             -7.7087
                                                                       -7.6382
          -7.5998
 -7.6343
                    -7.5989
                              -7.5529
                                        -7.5521
                                                  -7.4759
                                                             -7.1087
                                                                       -7.1086
                                                  -6.6266
                              -6.7833
 -6.9960
          -6.9891
                    -6.9882
                                        -6.6303
                                                             -6.5660
                                                                       -6.5616
                                        -6.0610
                              -6.0776
                                                   -5.8983
                                                             -5.8683
 -6.1827
          -6.1818
                    -6.1532
                                                                       -5.8670
 -5.7120
          -5.7111
                    -5.6752
                              -5.5542
                                        -5.3476
                                                  -5.2737
                                                             -5.1754
                                                                       -4.9793
          -4.8756
 -4.9529
                    -4.8457
                              -4.5103
                                        -4.1356
                                                  -4.1350
                                                             -4.0889
                                                                       -4.0884
 -4.0650
          -4.0640
                    -3.9939
                              -3.9934
                                        -3.1523
                                                   -3.1516
                                                             -2.4533
                                                                       -2.4474
                     0.9525
 -0.1656
          -0.1480
                                          1.2623
                                                    1.2670
                                0.9549
                                                             1.7403
                                                                        2.0636
  2.2737
           2.2769
                      2.3314
                                2.3321
                                          2.5159
                                                    2.6016
                                                              2.6441
                                                                        2.6447
  2.8466
            2.9245
                      2.9251
                                2.9640
                                          2.9751
                                                    2.9839
                                                              3.0754
                                                                        3.2952
  3.3479
            3,4046
       k = 0.0000 - 0.4983 \ 0.0000 \ (64826 \ PWs)
                                                    bands (ev):
-21.2914 -21.2243 -21.0779 -21.0439 -20.4885 -20.4875 -20.4088 -20.4085
-19.4525 -19.4515 -19.1470 -19.1459 -19.0867 -19.0852 -19.0045 -18.6726
-18.6708 -18.6242 -18.4317 -18.0270 -18.0261 -17.9943 -17.9934 -17.8167
-17.3737 -17.3724 -16.7614 -16.7596 -16.5662 -16.5636 -15.0513 -15.0457
-14.0386 -14.0344 -13.9858 -13.9823 -13.4508 -13.4466 -12.7857 -11.9750
-11.9744 -11.8667 -11.8141 -11.8134 -11.7087 -11.7081 -11.5383 -11.5353
-11.2850 -10.7247 -10.7177 -10.6135 -10.3164 -10.3076 -9.8351 -9.8346
```

```
-9.7045
            -9.7043
                       -9.4325
                                  -9.4321
                                             -9.3099
                                                        -9.3015
                                                                    -9.2209
                                                                               -8.9620
 -8.8034
            -8.7945
                       -8.6140
                                  -8.5890
                                             -8.5828
                                                        -8.3664
                                                                   -8.1984
                                                                               -8.1978
 -8.1536
            -8.1519
                       -7.8970
                                  -7.8895
                                             -7.8425
                                                        -7.8418
                                                                   -7.6996
                                                                               -7.6290
                                  -7.5266
                                                                               -7.1025
            -7.6015
                       -7.6006
                                             -7.5258
                                                        -7.4878
                                                                   -7.1026
 -7.6254
 -7.0137
            -7.0128
                       -6.9876
                                  -6.7942
                                             -6.6193
                                                        -6.6155
                                                                    -6.5590
                                                                               -6.5550
 -6.1624
            -6.1616
                       -6.1358
                                  -6.1027
                                             -6.0659
                                                        -5.8702
                                                                   -5.8690
                                                                               -5.8669
                                  -5.5265
 -5.7345
            -5.7335
                       -5.6407
                                             -5.3787
                                                        -5.2547
                                                                    -5.2074
                                                                               -5.0078
 -4.9793
            -4.8924
                       -4.8294
                                  -4.5242
                                             -4.1324
                                                        -4.1318
                                                                   -4.0850
                                                                               -4.0846
                                                                               -2.4330
 -4.0681
           -4.0670
                       -3.9984
                                  -3.9979
                                             -3.1467
                                                        -3.1461
                                                                   -2.4389
 -0.1806
            -0.1629
                       0.9662
                                  0.9686
                                              1.2482
                                                         1.2528
                                                                    1.7529
                                                                               2.0471
  2.2884
             2.3196
                        2.3258
                                   2.3281
                                               2.5288
                                                         2.5847
                                                                     2.6563
                                                                                2.6569
  2.8295
             2.9116
                        2.9122
                                   2.9674
                                               2.9730
                                                          2.9910
                                                                     3.0882
                                                                                3.2785
  3.2978
             3.3875
        k = 0.0000 - 0.5062 \ 0.0000 \ (64826 \ PWs)
                                                          bands (ev):
-21.2821 -21.2164 -21.0899 -21.0540 -20.4896 -20.4887 -20.4102 -20.4099 -19.4379 -19.4369 -19.1629 -19.1619 -19.0673 -19.0658 -18.9850 -18.6946 -18.6928 -18.6425 -18.4021 -18.0255 -18.0245 -17.9959 -17.9950 -17.8486 -17.3705 -17.3692 -16.7529 -16.7510 -16.5771 -16.5745 -15.0261 -15.0204 -14.0646 -14.0606 -13.9599 -13.9564 -13.4782 -13.4740 -12.7404 -11.9627 -11.9622 -11.9132 -11.8177 -11.8170 -11.7229 -11.7223 -11.5405 -11.5375 -11.2539 -10.7048 -10.6977 -10.6492 -10.3374 -10.3287 -9.8152 -9.8147 -9.7069 -9.7066 -9.4529 -9.4525 -9.2830 -9.2745 -9.2097 -8.9766 -8.8268 -8.8180 -8.6032 -8.5534 -8.5471 -8.3803 -8.1700 -8.1703
            -8.8180
                       -8.6032
                                                        -8.3803
 -8.8268
                                  -8.5534
                                             -8.5471
                                                                   -8.1799
                                                                               -8.1793
                                  -7.9217
                                                        -7.8586
 -8.1555
            -8.1538
                       -7.9291
                                             -7.8592
                                                                   -7.6903
                                                                               -7.6205
                                  -7.5003
                                                        -7.4995
 -7.6173
            -7.6031
                       -7.6021
                                             -7.4996
                                                                   -7.0970
                                                                              -7.0969
 -7.0384
            -7.0375
                       -6.9791
                                  -6.8050
                                             -6.6138
                                                        -6.6099
                                                                   -6.5461
                                                                               -6.5424
                                                                    -5.8708
 -6.1430
            -6.1421
                       -6.1412
                                  -6.1278
                                             -6.0462
                                                        -5.8721
                                                                               -5.8356
 -5.7568
            -5.7559
                       -5.6065
                                  -5.4988
                                             -5.4098
                                                        -5.2395
                                                                    -5.2357
                                                                               -5.0366
 -5.0059
            -4.9093
                       -4.8132
                                  -4.5383
                                             -4.1291
                                                        -4.1285
                                                                    -4.0811
                                                                               -4.0809
            -4.0698
                                                                    -2.4258
 -4.0712
                       -4.0030
                                  -4.0025
                                              -3.1417
                                                         -3.1410
                                                                               -2.4199
 -0.1943
            -0.1767
                        0.9800
                                   0.9825
                                               1.2341
                                                         1.2386
                                                                     1.7657
                                                                                2.0308
                                               2.5419
  2.3013
                        2.3209
                                   2.3683
                                                          2.5681
             2.3206
                                                                     2.6686
                                                                                2.6692
  2.8125
             2.8987
                        2.8993
                                   2.9677
                                               2.9712
                                                          3.0015
                                                                     3.1012
                                                                                3.2473
  3.2624
             3.3706
        k = 0.0000 - 0.5141 \ 0.0000 \ (64828 \ PWs)
                                                         bands (ev):
-21.2727 -21.2084 -21.1018 -21.0640 -20.4906 -20.4897 -20.4114 -20.4111
-19.4233 -19.4222 -19.1788 -19.1777 -19.0477 -19.0462 -18.9655 -18.7164
-18.7147 -18.6609 -18.3724 -18.0239 -18.0229 -17.9975 -17.9966 -17.8804
-17.3677 -17.3664 -16.7442 -16.7422 -16.5879 -16.5854 -15.0022 -14.9965
-14.0891 -14.0853 -13.9339 -13.9303 -13.5056 -13.5015 -12.6951 -11.9598
-11.9504 -11.9498 -11.8210 -11.8202 -11.7370 -11.7364 -11.5425 -11.5395
-11.2225 -10.6849 -10.6848 -10.6778 -10.3583 -10.3497
                                                                   -9.7954
                                                                              -9.7949
                      -9.4733
 -9.7090
           -9.7088
                                 -9.4729
                                             -9.2562
                                                        -9.2478
                                                                   -9.1982
                                                                              -8.9911
 -8.8505
            -8.8416
                       -8.5922
                                  -8.5179
                                             -8.5115
                                                        -8.3941
                                                                   -8.1614
                                                                               -8.1608
 -8.1573
            -8.1556
                       -7.9613
                                  -7.9540
                                             -7.8761
                                                        -7.8754
                                                                   -7.6810
                                                                               -7.6129
 -7.6099
            -7.6044
                       -7.6035
                                  -7.5112
                                             -7.4741
                                                        -7.4733
                                                                   -7.0920
                                                                               -7.0919
 -7.0632
           -7.0623
                       -6.9705
                                  -6.8157
                                             -6.6122
                                                        -6.6084
                                                                   -6.5288
                                                                               -6.5253
 -6.1621
            -6.1527
                       -6.1216
                                  -6.1207
                                             -6.0146
                                                        -5.8737
                                                                    -5.8724
                                                                               -5.8047
 -5.7791
            -5.7782
                       -5.5726
                                  -5.4715
                                              -5.4405
                                                        -5.2715
                                                                    -5.2168
                                                                               -5.0658
                       -4.7970
                                                         -4.1253
 -5.0326
            -4.9264
                                  -4.5526
                                              -4.1258
                                                                    -4.0780
                                                                               -4.0771
            -4.0719
                       -4.0075
                                  -4.0070
                                              -3.1371
                                                         -3.1365
                                                                    -2.4138
 -4.0742
                                                                               -2.4080
                                                                     1.7788
 -0.2068
            -0.1891
                        0.9938
                                   0.9964
                                              1.2200
                                                         1.2244
                                                                                2.0146
                                               2.5518
                                                          2.5552
                                                                     2.6809
  2.3144
             2.3160
                        2.3164
                                   2.4150
                                                                                2.6816
  2.7958
             2.8857
                        2.8864
                                   2.9670
                                               2.9696
                                                          3.0134
                                                                     3.1144
                                                                                3.1974
  3.2461
             3.3539
        k = 0.0000 - 0.5220 \ 0.0000 \ (64840 \ PWs)
                                                          bands (ev):
```

```
-21.2631 -21.2003 -21.1136 -21.0740 -20.4915 -20.4905 -20.4125 -20.4122
-19.4085 -19.4075 -19.1946 -19.1935 -19.0280 -19.0265 -18.9461 -18.7382
-18.7364 -18.6794 -18.3426 -18.0223 -18.0213 -17.9992 -17.9983 -17.9121
-11.9379 -11.9373 -11.8238 -11.8231 -11.7510 -11.7505 -11.5443 -11.5413
-11.1908 -10.7201 -10.6650 -10.6577 -10.3792 -10.3707
                                                             -9.7755
                                                                        -9.7750
           -9.7106 -9.4937
                               -9.4932 -9.2296 -9.2211
 -9.7109
                                                              -9.1866
                                                                        -9.0053
 -8.8743
           -8.8655
                     -8.5811
                               -8.4826
                                         -8.4761
                                                   -8.4077
                                                              -8.1591
                                                                        -8.1575
                                                                        -7.6061
 -8.1429
           -8.1423
                     -7.9935
                               -7.9864
                                         -7.8931
                                                   -7.8924
                                                              -7.6715
 -7.6056
           -7.6047
                     -7.6034
                               -7.5226
                                         -7.4479
                                                   -7.4470
                                                              -7.0891
                                                                        -7.0876
 -7.0874
           -7.0865
                     -6.9617
                               -6.8263
                                         -6.6125
                                                    -6.6089
                                                              -6.5090
                                                                        -6.5057
                                                                        -5.8013
 -6.1846
           -6.1775
                     -6.1010
                               -6.1002
                                         -5.9800
                                                    -5.8752
                                                              -5.8739
                                                                        -5.0952
 -5.8004
           -5.7743
                     -5.5388
                               -5.4732
                                         -5.4421
                                                    -5.3035
                                                              -5.1980
 -5.0594
           -4.9437
                     -4.7810
                               -4.5670
                                         -4.1226
                                                    -4.1220
                                                              -4.0781
                                                                        -4.0775
 -4.0729
           -4.0709
                     -4.0120
                               -4.0115
                                         -3.1332
                                                    -3.1325
                                                              -2.4032
                                                                        -2.3974
 -0.2179
           -0.2002
                      1.0077
                                1.0104
                                           1.2059
                                                     1.2101
                                                               1.7920
                                                                         1.9985
  2.3119
            2.3123
                      2.3277
                                 2.4618
                                           2.5361
                                                     2.5687
                                                               2.6934
                                                                         2.6940
  2.7792
            2.8728
                      2.8734
                                 2.9660
                                           2.9681
                                                     3.0260
                                                               3.1275
                                                                          3.1477
  3.2300
            3.3375
        k = 0.0000 - 0.5299 \ 0.0000 \ (64858 \ PWs)
                                                     bands (ev):
-21.2534 -21.1920 -21.1252 -21.0837 -20.4922 -20.4913 -20.4134 -20.4132 -19.3937 -19.3927 -19.2103 -19.2093 -19.0082 -19.0066 -18.9267 -18.7597 -18.7580 -18.6980 -18.3126 -18.0207 -18.0197 -18.0008 -17.9999 -17.9436 -17.3630 -17.3617 -16.7264 -16.7244 -16.6091 -16.6067 -14.9598 -14.9540 -14.1325 -14.1292 -13.8816 -13.8779 -13.5602 -13.5561 -12.6042 -12.0526 -11.9253 -11.9247 -11.8263 -11.8256 -11.7650 -11.7645 -11.5458 -11.5428 -11.1588 -10.7553 -10.6449 -10.6376 -10.4000 -10.3916 -9.7556 -9.7551
 -9.7125
           -9.7123
                     -9.5140
                               -9.5136
                                         -9.2032
                                                   -9.1947
                                                              -9.1748
                                                                        -9.0194
                     -8.5698
                                         -8.4410
 -8.8984
           -8.8897
                               -8.4474
                                                    -8.4211
                                                              -8.1610
                                                                        -8.1595
                     -8.0255
                                                    -7.9096
 -8.1246
           -8.1239
                               -8.0186
                                         -7.9102
                                                              -7.6619
                                                                        -7.6067
           -7.6000
                     -7.5977
                               -7.5339
                                         -7.4217
                                                    -7.4209
 -7.6058
                                                              -7.1133
                                                                        -7.1124
                     -6.9529
 -7.0836
           -7.0836
                               -6.8368
                                          -6.6135
                                                    -6.6102
                                                              -6.4880
                                                                        -6.4846
 -6.2080
           -6.2022
                     -6.0803
                               -6.0794
                                          -5.9446
                                                    -5.8765
                                                              -5.8752
                                                                        -5.8234
           -5.7450
                     -5.5054
                               -5.5029
                                          -5.4149
                                                    -5.3354
 -5.8224
                                                              -5.1792
                                                                        -5.1250
 -5.0863
           -4.9610
                     -4.7650
                               -4.5815
                                          -4.1193
                                                    -4.1188
                                                              -4.0806
                                                                        -4.0806
 -4.0688
           -4.0675
                     -4.0164
                               -4.0160
                                          -3.1297
                                                    -3.1291
                                                              -2.3939
                                                                        -2.3881
 -0.2275
           -0.2099
                      1.0217
                                1.0245
                                           1.1917
                                                     1.1958
                                                               1.8054
                                                                         1.9826
                                           2.5246
  2.3084
            2.3088
                      2.3412
                                 2.5047
                                                     2.5824
                                                               2.7059
                                                                          2.7066
  2.7629
            2.8598
                      2.8605
                                 2.9651
                                           2.9669
                                                     3.0389
                                                               3.0972
                                                                         3.1417
  3.2142
            3.3212
        k = 0.0000 - 0.5378 \ 0.0000 \ (64866 \ PWs)
                                                     bands (ev):
-21.2435 -21.1837 -21.1367 -21.0934 -20.4929 -20.4920 -20.4142 -20.4140
-19.3788 -19.3778 -19.2260 -19.2249 -18.9882 -18.9867 -18.9074 -18.7812
-18.7794 -18.7167 -18.2826 -18.0191 -18.0181 -18.0025 -18.0016 -17.9750
-17.3611 -17.3598 -16.7173 -16.7153 -16.6195 -16.6171 -14.9418 -14.9361
-14.1508 -14.1478 -13.8553 -13.8516 -13.5874 -13.5834 -12.5586 -12.0990
-11.9125 -11.9120 -11.8284 -11.8277 -11.7789 -11.7783 -11.5471 -11.5441
-11.1266 -10.7902 -10.6249 -10.6175 -10.4208 -10.4125
                                                              -9.7356
                                                                        -9.7352
                     -9.5343
                               -9.5339
                                         -9.1769
 -9.7139
           -9.7136
                                                    -9.1685
                                                              -9.1626
                                                                        -9.0333
                     -8.5583
                               -8.4344
                                          -8.4125
                                                    -8.4060
 -8.9228
           -8.9140
                                                              -8.1633
                                                                        -8.1619
 -8.1062
           -8.1056
                     -8.0570
                               -8.0503
                                          -7.9275
                                                    -7.9269
                                                              -7.6523
                                                                        -7.6076
           -7.5949
                     -7.5929
                               -7.5451
                                          -7.3956
                                                    -7.3948
                                                              -7.1385
 -7.6067
                                                                        -7.1376
 -7.0804
           -7.0803
                     -6.9439
                               -6.8471
                                          -6.6149
                                                    -6.6117
                                                              -6.4661
                                                                        -6.4628
 -6.2319
           -6.2268
                     -6.0595
                               -6.0586
                                          -5.9091
                                                    -5.8776
                                                              -5.8763
                                                                        -5.8453
 -5.8443
           -5.7177
                     -5.5313
                               -5.4722
                                         -5.3874
                                                    -5.3672
                                                              -5.1606
                                                                        -5.1551
                                                    -4.1155
 -5.1133
           -4.9785
                     -4.7491
                               -4.5962
                                         -4.1161
                                                              -4.0838
                                                                        -4.0835
                    -4.0209 -4.0204 -3.1267
                                                   -3.1261
 -4.0647
          -4.0637
                                                              -2.3859
                                                                        -2.3801
```

```
-0.2358
           -0.2181
                      1.0357
                                1.0386
                                                             1.8190
                                                                        1.9670
                                          1.1775
                                                    1.1815
                                                                       2.7191
  2.3054
           2.3058
                      2.3549
                                2.5015
                                          2.5597
                                                    2.5963
                                                             2.7185
  2.7467
            2.8469
                      2.8475
                                2.9642
                                          2.9658
                                                   3.0474
                                                             3.0523
                                                                        3.1554
  3.1987
            3.3051
       k = 0.0000 - 0.5457 \ 0.0000 \ (64846 \ PWs)
                                                   bands (ev):
-21.2335 -21.1752 -21.1480 -21.1030 -20.4934 -20.4925 -20.4149 -20.4146
-19.3639 -19.3629 -19.2416 -19.2405 -18.9681 -18.9665 -18.8880 -18.8025
-18.8008 -18.7354 -18.2524 -18.0174 -18.0165 -18.0063 -18.0041 -18.0032 -17.3596 -17.3583 -16.7081 -16.7060 -16.6298 -16.6275 -14.9265 -14.9207 -14.1664 -14.1637 -13.8289 -13.8252 -13.6145 -13.6105 -12.5130 -12.1452 -11.8991 -11.8991 -11.8391 -11.8394 -11.7927 -11.7922 -11.5482 -11.5452
                                                            -9.7161
-11.0941 -10.8249 -10.6047 -10.5973 -10.4414 -10.4333
                                                                      -9.7154
                    -9.5546 -9.5541 -9.1522 -9.1494
                                                            -9.1419
                                                                      -9.0470
 -9.7147
          -9.7144
                                                  -8.3713
 -8.9473
          -8.9385
                    -8.5466 -8.4475
                                        -8.3778
                                                            -8.1667
                                                                      -8.1656
                                                            -7.6425
                                                                      -7.6083
 -8.0880
          -8.0873
                    -8.0871
                              -8.0810 -7.9449
                                                  -7.9442
                    -7.5890
                              -7.5560
                                        -7.3696
 -7.6074
          -7.5906
                                                  -7.3687
                                                            -7.1638
                                                                      -7.1629
                    -6.9347
                                        -6.6161
                                                  -6.6132
 -7.0777
          -7.0776
                              -6.8573
                                                            -6.4437
                                                                      -6.4404
                    -6.0385
                                                  -5.8772
                                                            -5.8747
 -6.2558
          -6.2512
                              -6.0377
                                        -5.8785
                                                                      -5.8672
 -5.8651
          -5.6950
                    -5.5554
                              -5.4392
                                        -5.3989
                                                  -5.3597
                                                            -5.1855
                                                                      -5.1420
                    -4.7334
 -5.1404
          -4.9962
                              -4.6109
                                        -4.1128
                                                  -4.1123
                                                            -4.0869
                                                                      -4.0866
                                                            -2.3794
          -4.0596
 -4.0606
                    -4.0253
                              -4.0249
                                        -3.1243
                                                  -3.1237
                                                                      -2.3736
 -0.2426
          -0.2249
                     1.0498
                               1.0528
                                         1.1633
                                                   1.1672
                                                             1.8327
                                                                       1.9515
  2.3029
           2.3034
                      2.3688
                                2.4866
                                                   2.6105
                                                             2.7308
                                          2.6068
                                                                        2.7312
  2.7318
            2.8339
                      2.8346
                                2.9635
                                          2.9650
                                                   2.9980
                                                             3.0656
                                                                       3.1692
  3.1836
            3.2893
       k = 0.0000 - 0.5536 \ 0.0000 \ (64840 \ PWs)
                                                   bands (ev):
-18.8220 -18.7543 -18.2220 -18.0375 -18.0158 -18.0149 -18.0057 -18.0048 -17.3584 -17.3571 -16.6988 -16.6967 -16.6400 -16.6377 -14.9141 -14.9083 -14.1789 -14.1766 -13.8024 -13.7986 -13.6416 -13.6376 -12.4673 -12.1914
-11.8867 -11.8861 -11.8314 -11.8307 -11.8064 -11.8059 -11.5490 -11.5460
-11.0613 -10.8594 -10.5845 -10.5770 -10.4621 -10.4540
                                                            -9.7159
                                                                      -9.7157
 -9.6956
          -9.6951
                   -9.5748
                              -9.5744
                                       -9.1387
                                                  -9.1245
                                                            -9.1160
                                                                      -9.0606
 -8.9720
          -8.9633
                    -8.5348
                              -8.4605
                                        -8.3435
                                                  -8.3370
                                                            -8.1735
                                                                      -8.1722
 -8.1135
          -8.1086
                    -8.0698
                              -8.0692
                                        -7.9624
                                                  -7.9618
                                                            -7.6327
                                                                      -7.6089
                    -7.5860
 -7.6080
          -7.5873
                              -7.5666
                                        -7.3435
                                                  -7.3427
                                                            -7.1892
                                                                      -7.1883
 -7.0756
          -7.0755
                    -6.9255
                              -6.8674
                                        -6.6172
                                                  -6.6145
                                                            -6.4210
                                                                      -6.4176
                    -6.0175
                              -6.0167
                                        -5.8890
                                                  -5.8883
                                                            -5.8792
 -6.2798
          -6.2755
                                                                      -5.8779
          -5.6833
                                        -5.4065
                    -5.5690
                              -5.4303
 -5.8383
                                                  -5.3321
                                                            -5.2162
                                                                      -5.1676
          -5.0139
                    -4.7177
                              -4.6258
                                        -4.1096
                                                  -4.1091
                                                            -4.0901
 -5.1235
                                                                      -4.0897
 -4.0564
          -4.0555
                                                            -2.3743
                    -4.0297
                              -4.0293
                                        -3.1224
                                                  -3.1218
                                                                      -2.3685
                     1.0639
                               1.0670
 -0.2480
          -0.2303
                                         1.1490
                                                   1.1528
                                                             1.8465
                                                                       1.9363
                                2.4713
                                          2.6247
                                                   2.6549
                                                             2.7151
 2.3010
           2.3015
                     2.3828
                                                                        2.7439
  2.7445
           2.8210
                      2.8216
                                2.9485
                                                   2.9643
                                                             3.0792
                                          2.9629
                                                                       3.1678
  3.1841
            3.2736
       k = 0.0000 - 0.5615 \ 0.0000 \ (64846 \ PWs)
                                                   bands (ev):
-21.2130 -21.1701 -21.1579 -21.1217 -20.4941 -20.4932 -20.4158 -20.4155
-19.3337 -19.3327 -19.2726 -19.2715 -18.9275 -18.9259 -18.8495 -18.8447
-18.8430 -18.7732 -18.1916 -18.0685 -18.0143 -18.0133 -18.0073 -18.0064
-17.3576 -17.3563 -16.6894 -16.6872 -16.6500 -16.6478 -14.9049 -14.8992
-14.1882 -14.1860 -13.7758 -13.7720 -13.6686 -13.6646 -12.4215 -12.2375
-11.8736 -11.8730 -11.8324 -11.8317 -11.8200 -11.8195 -11.5496 -11.5466
-11.0283 -10.8936 -10.5643 -10.5567 -10.4826 -10.4746 -9.7165
                                                                     -9.7163
 -9.6755 -9.6751 -9.5950 -9.5946 -9.1262 -9.0987
                                                            -9.0902
                                                                      -9.0739
 -8.9969 -8.9882 -8.5229 -8.4733 -8.3097 -8.3032 -8.1885 -8.1851
```

```
-8.1292
                     -8.0517
                                -8.0510
                                          -7.9801
                                                     -7.9794
                                                               -7.6231
                                                                          -7.6093
 -8.1317
 -7.6084
           -7.5851
                     -7.5840
                                -7.5764
                                          -7.3176
                                                     -7.3167
                                                               -7.2147
                                                                          -7.2138
                                -6.8774
                                                                          -6.3945
 -7.0740
           -7.0740
                     -6.9162
                                          -6.6181
                                                     -6.6155
                                                               -6.3980
           -6.2997
                     -5.9963
                                -5.9955
                                                     -5.9099
                                                                          -5.8784
 -6.3037
                                          -5.9107
                                                               -5.8797
 -5.8041
           -5.6895
                     -5.5648
                                -5.4612
                                          -5.3741
                                                     -5.3046
                                                               -5.2472
                                                                          -5.1948
 -5.1052
           -5.0316
                     -4.7021
                               -4.6408
                                          -4.1064
                                                     -4.1059
                                                                -4.0933
                                                                          -4.0928
                                -4.0336
 -4.0523
           -4.0513
                     -4.0340
                                          -3.1211
                                                     -3.1205
                                                               -2.3706
                                                                          -2.3648
 -0.2518
           -0.2341
                      1.0780
                                1.0812
                                           1.1348
                                                     1.1385
                                                                1.8604
                                                                          1.9215
                                                      2.6989
                                                                 2.7038
  2.2996
            2.3001
                       2.3971
                                 2.4562
                                            2.6392
                                                                           2.7566
  2.7572
            2.8080
                       2.8087
                                 2.8993
                                            2.9624
                                                      2.9638
                                                                 3.0929
                                                                           3.1533
  3.1983
            3.2582
        k = 0.0000 - 0.5694 \ 0.0000 \ (64862 \ PWs)
                                                      bands (ev):
-21.2027 -21.1809 -21.1490 -21.1309 -20.4943 -20.4934 -20.4160 -20.4157
-19.3186 -19.3175 -19.2880 -19.2869 -18.9070 -18.9054 -18.8656 -18.8639
-18.3160 -19.3173 -19.2660 -19.2669 -16.9670 -18.9634 -18.8636 -18.8639 -18.8304 -18.7922 -18.1610 -18.0995 -18.0128 -18.0118 -18.0088 -18.0080 -17.3571 -17.3558 -16.6799 -16.6777 -16.6598 -16.6576 -14.8993 -14.8936 -14.1938 -14.1919 -13.7492 -13.7453 -13.6954 -13.6915 -12.3757 -12.2836 -11.8604 -11.8598 -11.8337 -11.8334 -11.8326 -11.8320 -11.5499 -11.5470 -10.9950 -10.9277 -10.5440 -10.5363 -10.5031 -10.4952 -9.7169 -9.7166 -9.6555 -9.6550 -9.6152 -9.6148 -9.1137 -9.0869 -9.0732 -9.0646
                                          -8.2769
 -9.0219
                     -8.5107
                                -8.4859
                                                     -8.2705
           -9.0132
                                                               -8.2126
                                                                          -8.2075
           -8.1393
                     -8.0336
                                                               -7.6142
                                -8.0330
                                          -7.9978
                                                     -7.9972
 -8.1403
                                                                          -7.6095
                                -7.5814
                                                               -7.2403
                                                                          -7.2394
 -7.6086
           -7.5877
                     -7.5830
                                          -7.2918
                                                     -7.2909
 -7.0731
           -7.0731
                     -6.9067
                                -6.8873
                                          -6.6186
                                                     -6.6161
                                                               -6.3747
                                                                          -6.3712
                                -5.9743
 -6.3274
           -6.3236
                     -5.9751
                                          -5.9323
                                                     -5.9314
                                                               -5.8800
                                                                          -5.8787
 -5.7708
           -5.7107
                                -5.4913
                     -5.5460
                                          -5.3419
                                                     -5.2785
                                                                -5.2771
                                                                          -5.2222
                     -4.6867
                                -4.6560
                                                                          -4.0959
 -5.0873
           -5.0492
                                          -4.1033
                                                     -4.1028
                                                                -4.0963
                                -4.0377
 -4.0484
           -4.0472
                     -4.0380
                                           -3.1203
                                                     -3.1197
                                                                -2.3684
                                                                          -2.3626
 -0.2541
           -0.2364
                       1.0922
                                 1.0955
                                            1.1206
                                                      1.1242
                                                                1.8738
                                                                           1.9075
  2.2988
            2.2993
                       2.4116
                                 2.4411
                                            2.6539
                                                      2.6842
                                                                 2.7514
                                                                           2.7694
  2.7700
            2.7951
                       2.7958
                                 2.8505
                                            2.9622
                                                      2.9635
                                                                 3.1061
                                                                           3.1395
  3.2128
            3.2430
        k = 0.0000 - 0.5774 \ 0.0000 \ (64894 \ PWs)
                                                      bands (ev):
-21.1940 -21.1898 -21.1407 -21.1394 -20.4944 -20.4934 -20.4161 -20.4158
-19.3037 -19.3031 -19.3029 -19.3015 -18.8869 -18.8862 -18.8847 -18.8844
-18.8119 -18.8106 -18.1309 -18.1297 -18.0120 -18.0108 -18.0096 -18.0089
-17.3569 -17.3556 -16.6721 -16.6702 -16.6674 -16.6657 -14.8974 -14.8917
-14.1957 -14.1938 -13.7243 -13.7206 -13.7202 -13.7165 -12.3326 -12.3268
-11.8481 -11.8471 -11.8460 -11.8458 -11.8331 -11.8324 -11.5501 -11.5471
-10.9619 -10.9609 -10.5246 -10.5227 -10.5171 -10.5142
                                                               -9.7170
                                                                          -9.7168
          -9.6351
                    -9.6349
                               -9.6346
                                          -9.1036
                                                    -9.0972
                                                               -9.0509
 -9.6359
                                                                          -9.0451
          -9.0355
 -9.0411
                     -8.4992
                               -8.4977
                                          -8.2515
                                                    -8.2463
                                                               -8.2344
                                                                          -8.2302
                     -8.0163
           -8.1419
                               -8.0159
                                          -8.0151
                                                    -8.0141
                                                               -7.6097
 -8.1426
                                                                          -7.6093
 -7.6087
          -7.5922
                     -7.5826
                               -7.5814
                                          -7.2664
                                                     -7.2661
                                                               -7.2653
                                                                          -7.2645
 -7.0728
          -7.0728
                     -6.8980
                               -6.8962
                                          -6.6187
                                                     -6.6163
                                                               -6.3531
                                                                          -6.3516
 -6.3473
          -6.3454
                     -5.9540
                                -5.9535
                                          -5.9534
                                                     -5.9523
                                                               -5.8801
                                                                          -5.8788
 -5.7403
          -5.7379
                     -5.5225
                                -5.5178
                                          -5.3107
                                                     -5.3095
                                                               -5.2502
                                                                          -5.2490
 -5.0739
           -5.0626
                     -4.6724
                                -4.6702
                                          -4.1011
                                                     -4.1006
                                                                -4.0985
                                                                          -4.0980
 -4.0461
           -4.0444
                      -4.0408
                                -4.0402
                                           -3.1200
                                                     -3.1194
                                                                -2.3676
                                                                          -2.3619
 -0.2549
           -0.2372
                      1.1061
                                1.1066
                                           1.1090
                                                      1.1106
                                                                 1.8824
                                                                           1.8987
                                                      2.6709
  2.2985
            2.2990
                       2.4252
                                 2.4273
                                            2.6669
                                                                 2.7815
                                                                           2.7820
  2.7825
            2.7843
                       2.7929
                                 2.8088
                                            2.9621
                                                      2.9634
                                                                 3.1145
                                                                           3.1309
  3.2258
            3.2298
        k = 0.0079 - 0.5774 \ 0.0000 \ (64850 \ PWs)
                                                      bands (ev):
-21.1939 -21.1897 -21.1407 -21.1393 -20.5089 -20.4788 -20.4342 -20.3975
-19.3162 -19.3153 -19.2903 -19.2893 -18.9045 -18.9026 -18.8684 -18.8665
```

```
-18.8119 -18.8105 -18.1309 -18.1296 -18.0253 -18.0238 -17.9971 -17.9955
-17.3624 -17.3502 -16.7042 -16.7011 -16.6365 -16.6333 -14.9102 -14.8789
-14.2071 -14.1826 -13.7546 -13.7508 -13.6899 -13.6860 -12.3325 -12.3267
-11.8623 -11.8612 -11.8390 -11.8320 -11.8309 -11.8266 -11.5870 -11.5100
-10.9619 -10.9609 -10.5618 -10.5575 -10.4821 -10.4777
                                                               -9.7383
                                                                          -9.6952
 -9.6658
           -9.6652 -9.6051 -9.6046 -9.1035
                                                     -9.0971
                                                               -9.0691
                                                                          -9.0600
                     -8.4991
                               -8.4976 -8.2544
                                                     -8.2445
                                                                -8.2345
 -9.0263
           -9.0171
                                                                          -8.2300
           -8.1231 -8.0322
                                -8.0314 -7.9993
                                                     -7.9985
                                                               -7.6299
 -8.1600
                                                                          -7.6208
 -7.6093
           -7.5918
                     -7.5883
                                -7.5443 -7.2684
                                                     -7.2681
                                                               -7.2630
                                                                          -7.2625
                                                     -6.5880
                                                                          -6.3651
 -7.1089
           -7.0367
                     -6.8982
                                -6.8963
                                          -6.6477
                                                                -6.3726
 -6.3319
           -6.3268
                     -5.9719
                                -5.9711
                                          -5.9354
                                                     -5.9346
                                                                -5.9043
                                                                          -5.8547
           -5.7380
                                -5.5178
                                                     -5.3096
 -5.7404
                     -5.5224
                                          -5.3109
                                                                -5.2501
                                                                          -5.2489
           -5.0628
                                                                -4.0786
                                                                          -4.0769
 -5.0741
                     -4.6726
                                -4.6703
                                          -4.1235
                                                     -4.1210
 -4.0723
           -4.0692
                     -4.0164
                                -4.0126
                                          -3.1289
                                                     -3.1106
                                                                -2.3876
                                                                          -2.3417
 -0.2661
           -0.2263
                      1.0748
                                 1.0765
                                            1.1400
                                                      1.1419
                                                                 1.8825
                                                                            1.8988
  2.2964
            2.3011
                       2.4253
                                  2.4274
                                            2.6670
                                                       2.6710
                                                                 2.7608
                                                                            2,7620
  2.7929
            2.8036
                       2.8048
                                  2.8088
                                            2.9376
                                                       2.9881
                                                                 3.1147
                                                                            3.1310
  3.2259
            3.2299
        k = 0.0159 - 0.5774 \ 0.0000 \ (64838 \ PWs)
                                                       bands (ev):
-21.1937 -21.1895 -21.1405 -21.1391 -20.5238 -20.4636 -20.4524 -20.3789 -19.3291 -19.3281 -19.2772 -19.2762 -18.9223 -18.9204 -18.8501 -18.8483 -18.8117 -18.8103 -18.1307 -18.1294 -18.0396 -18.0381 -17.9833 -17.9818 -17.3685 -17.3442 -16.7378 -16.7349 -16.6027 -16.5994 -14.9252 -14.8634 -14.2194 -14.1705 -13.7867 -13.7829 -13.6574 -13.6534 -12.3324 -12.3266 -11.8768 -11.8757 -11.8452 -11.8207 -11.8162 -11.8152 -11.6251 -11.4712 -10.9618 -10.9608 -10.6016 -10.5973 -10.4427 -10.4383 -9.7594 -9.6963 -9.6957 -9.6731 -9.5750 -9.5745 -9.1033 -9.0969 -9.0900 -9.0810
                               -9.5745
                                          -9.1033
           -9.6731
                     -9.5750
                                                     -9.0969
                                                                -9.0900
 -9.6957
                                                                          -9.0810
           -8.9959
                     -8.4988
                                -8.4973
                                          -8.2605
                                                                -8.2347
 -9.0052
                                                     -8.2418
                                                                          -8.2293
 -8.1759
           -8.1029
                      -8.0485
                                -8.0477
                                           -7.9828
                                                     -7.9820
                                                                -7.6586
                                                                          -7.6504
           -7.5928
                      -7.5673
                                -7.5064
                                          -7.2707
                                                     -7.2704
                                                                -7.2602
 -7.6104
                                                                          -7.2598
           -7.0007
                      -6.8989
                                -6.8970
                                                     -6.5597
 -7.1450
                                          -6.6782
                                                                -6.3928
                                                                          -6.3827
 -6.3114
                      -5.9901
                                -5.9892
                                           -5.9292
                                                     -5.9170
                                                                -5.9162
           -6.3069
                                                                           -5.8300
                      -5.5222
                                -5.5176
                                                                -5.2499
 -5.7408
           -5.7384
                                           -5.3113
                                                     -5.3100
                                                                          -5.2487
                      -4.6731
 -5.0748
           -5.0636
                                -4.6709
                                           -4.1473
                                                     -4.1443
                                                                -4.1005
                                                                           -4.0976
 -4.0566
           -4.0550
                      -3.9882
                                -3.9841
                                           -3.1382
                                                     -3.1016
                                                                -2.4100
                                                                           -2.3188
 -0.2833
           -0.2099
                       1.0428
                                 1.0445
                                            1.1731
                                                      1.1752
                                                                 1.8829
                                                                            1.8991
                       2.4257
                                            2.6673
                                                       2.6714
  2.2940
            2.3033
                                  2.4277
                                                                 2.7400
                                                                            2.7412
  2.7928
            2.8087
                       2.8256
                                  2.8268
                                            2.9127
                                                       3.0135
                                                                 3.1150
                                                                            3.1314
  3.2262
            3.2302
        k = 0.0238 - 0.5774 \ 0.0000 \ (64844 \ PWs)
                                                       bands (ev):
-21.1933 -21.1891 -21.1402 -21.1388 -20.5386 -20.4705 -20.4482 -20.3601
-19.3419 -19.3409 -19.2641 -19.2631 -18.9400 -18.9381 -18.8317 -18.8299
-18.8115 -18.8101 -18.1303 -18.1290 -18.0542 -18.0527 -17.9697 -17.9682
-17.3747 -17.3383 -16.7715 -16.7685 -16.5688 -16.5654 -14.9403 -14.8478
-14.2318 -14.1586 -13.8185 -13.8149 -13.6247 -13.6207 -12.3321 -12.3263
-11.8909 -11.8899 -11.8515 -11.8148 -11.8002 -11.7991 -11.6630 -11.4323
-10.9617 -10.9607 -10.6417 -10.6373 -10.4034 -10.3991
                                                               -9.7801
                                                                          -9.7268
 -9.7263
           -9.6508
                      -9.5450
                                -9.5445
                                          -9.1114
                                                     -9.1035
                                                                -9.1014
                                                                          -9.0961
 -8.9840
           -8.9747
                      -8.4984
                                -8.4969
                                          -8.2690
                                                     -8.2393
                                                                -8.2349
                                                                          -8.2284
           -8.0821
                                -8.0640
                                           -7.9663
                                                                -7.6966
 -8.1892
                      -8.0648
                                                     -7.9654
                                                                          -7.6708
           -7.5944
                      -7.5462
                                -7.4685
                                           -7.2730
                                                      -7.2727
                                                                -7.2572
 -7.6121
                                                                           -7.2568
 -7.1812
           -6.9647
                      -6.9001
                                -6.8982
                                           -6.7091
                                                      -6.5335
                                                                -6.4128
                                                                           -6.3981
 -6.2908
           -6.2866
                      -6.0081
                                -6.0072
                                           -5.9542
                                                      -5.8985
                                                                -5.8977
                                                                           -5.8054
                                           -5.3121
 -5.7414
           -5.7389
                      -5.5219
                                -5.5172
                                                                -5.2495
                                                      -5.3108
                                                                           -5.2483
 -5.0761
           -5.0648
                      -4.6740
                                -4.6718
                                           -4.1719
                                                      -4.1684
                                                                -4.1278
                                                                           -4.1251
 -4.0355
           -4.0341
                     -3.9599
                                -3.9556
                                          -3.1475
                                                     -3.0927
                                                                -2.4323
                                                                          -2.2956
                                                                1.8834
 -0.3016
           -0.1932
                      1.0113
                                1.0129
                                           1.2067
                                                      1.2088
                                                                           1.8996
  2.2916
                                 2.4282
                                                       2.6719
           2.3054
                      2.4262
                                            2.6678
                                                                 2.7197
                                                                            2.7209
```

```
2.7926
            2.8086
                      2.8480
                                2.8491
                                          2.8880
                                                    3.0391
                                                              3.1155
                                                                        3.1320
  3.2267
            3.2307
       k = 0.0317 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                    bands (ev):
-21.1928 -21.1886 -21.1397 -21.1384 -20.5533 -20.4884 -20.4328 -20.3412
-19.3546 -19.3536 -19.2509 -19.2499 -18.9575 -18.9557 -18.8132 -18.8114
-18.8111 -18.8097 -18.1298 -18.1286 -18.0689 -18.0674 -17.9563 -17.9548
-11.9047 -11.9036 -11.8579 -11.8089 -11.7837 -11.7827 -11.7007 -11.3932
-10.9616 -10.9606 -10.6819 -10.6775 -10.3643 -10.3600
                                                            -9.8005
                                                                      -9.7575
                                                            -9.1021
 -9.7569
          -9.6281
                    -9.5152
                              -9.5147
                                        -9.1323
                                                  -9.1233
                                                                      -9.0956
                                        -8.2803
                                                  -8.2371
 -8.9627
          -8.9534
                    -8.4978
                              -8.4963
                                                            -8.2350
                                                                      -8.2273
                    -8.0802
                              -8.0607
                                                                      -7.6911
 -8.1995
          -8.0811
                                        -7.9497
                                                  -7.9488
                                                            -7.7346
 -7.6143
          -7.5967
                    -7.5249
                              -7.4306
                                        -7.2752
                                                  -7.2748
                                                            -7.2541
                                                                      -7.2537
          -6.9287
                    -6.9018
                                                  -6.5118
                                                                       -6.4089
 -7.2173
                              -6.8999
                                        -6.7403
                                                             -6.4328
          -6.2661
                    -6.0259
                                                  -5.8799
                                                             -5.8791
                                                                       -5.7809
 -6.2701
                              -6.0251
                                        -5.9792
          -5.7397
                    -5.5214
                                         -5.3131
                                                  -5.3119
 -5.7422
                              -5.5168
                                                             -5.2490
                                                                       -5.2478
 -5.0778
           -5.0665
                    -4.6753
                               -4.6730
                                         -4.1975
                                                   -4.1935
                                                             -4.1545
                                                                       -4.1520
 -4.0148
           -4.0135
                    -3.9317
                               -3.9272
                                         -3.1569
                                                   -3.0839
                                                             -2.4545
                                                                       -2.2722
 -0.3203
           -0.1766
                      0.9802
                                0.9817
                                          1.2406
                                                    1.2428
                                                              1.8841
                                                                        1.9003
  2.2890
            2.3075
                                2.4289
                                                              2.6998
                                                                        2.7010
                      2.4269
                                          2.6686
                                                    2.6726
  2.7924
            2.8083
                                2.8710
                                          2.8728
                                                    3.0647
                      2.8624
                                                              3.1163
                                                                        3.1331
  3.2275
            3.2314
       k = 0.0397 - 0.5774 \ 0.0000 \ (64814 \ PWs)
                                                    bands (ev):
-21.1921 -21.1880 -21.1392 -21.1378 -20.5679 -20.5061 -20.4173 -20.3222 -19.3672 -19.3663 -19.2377 -19.2367 -18.9749 -18.9731 -18.8106 -18.8092 -18.7946 -18.7927 -18.1292 -18.1279 -18.0838 -18.0823 -17.9431 -17.9416 -17.3873 -17.3268 -16.8385 -16.8357 -16.5008 -16.4973 -14.9700 -14.8161 -14.2569 -14.1353 -13.8818 -13.8782 -13.5588 -13.5547 -12.3314 -12.3256 -11.9181 -11.9170 -11.8644 -11.8032 -11.7669 -11.7658 -11.7381 -11.3540
-10.9614 -10.9604 -10.7222 -10.7179 -10.3254 -10.3211
                                                            -9.8205
                                                                      -9.7882
 -9.7877
          -9.6052
                    -9.4854
                              -9.4849
                                        -9.1533
                                                  -9.1443
                                                             -9.1013
                                                                      -9.0948
 -8.9414
          -8.9321
                    -8.4970
                              -8.4955
                                        -8.2941
                                                  -8.2354
                                                             -8.2346
                                                                       -8.2260
 -8.2069
          -8.0972
                    -8.0964
                              -8.0389
                                        -7.9331
                                                  -7.9322
                                                            -7.7726
                                                                       -7.7112
 -7.6173
          -7.5996
                    -7.5035
                              -7.3927
                                        -7.2772
                                                  -7.2768
                                                             -7.2539
                                                                       -7.2507
 -7.2501
          -6.9040
                    -6.9022
                              -6.8927
                                        -6.7716
                                                  -6.4999
                                                             -6.4526
                                                                       -6.4101
                                        -6.0043
                                                             -5.8604
                                                  -5.8612
 -6.2493
          -6.2453
                    -6.0437
                              -6.0429
                                                                       -5.7564
                              -5.5162
 -5.7432
          -5.7407
                    -5.5208
                                         -5.3145
                                                   -5.3133
                                                             -5.2484
                                                                       -5.2471
          -5.0687
                    -4.6769
 -5.0800
                              -4.6747
                                         -4.2242
                                                   -4.2196
                                                             -4.1807
                                                                       -4.1783
 -3.9946
          -3.9933
                    -3.9037
                                                   -3.0752
                                                             -2.4765
                              -3.8990
                                         -3.1664
                                                                       -2.2486
 -0.3393
          -0.1602
                      0.9495
                                0.9510
                                          1.2749
                                                    1.2772
                                                              1.8850
                                                                        1.9012
  2.2865
            2.3094
                      2.4278
                                2.4298
                                          2.6695
                                                    2.6735
                                                              2.6804
                                                                        2.6816
  2.7921
                                          2.8954
                                                    3.0899
                                                              3.1174
            2.8081
                      2.8386
                                2.8941
                                                                        3.1347
  3.2284
            3.2323
       k = 0.0476 - 0.5774 \ 0.0000 \ (64808 \ PWs)
                                                    bands (ev):
-21.1913 -21.1872 -21.1385 -21.1371 -20.5824 -20.5237 -20.4017 -20.3030
-19.3798 -19.3789 -19.2244 -19.2234 -18.9922 -18.9904 -18.8100 -18.8087
-18.7758 -18.7739 -18.1284 -18.1272 -18.0989 -18.0974 -17.9302 -17.9286
-17.3937 -17.3212 -16.8719 -16.8692 -16.4667 -16.4631 -14.9847 -14.8001
-14.2695 -14.1239 -13.9132 -13.9097 -13.5257 -13.5215 -12.3308 -12.3250
-11.9310 -11.9300 -11.8708 -11.7976 -11.7751 -11.7498 -11.7487 -11.3147
-10.9611 -10.9601 -10.7627 -10.7583 -10.2867 -10.2824
                                                            -9.8401
                                                                      -9.8191
                                                            -9.1003
          -9.5821
                    -9.4559
                             -9.4554
                                        -9.1743
                                                  -9.1653
 -9.8185
                                                                      -9.0938
 -8.9201
          -8.9107
                    -8.4961
                              -8.4946
                                        -8.3100
                                                  -8.2351
                                                            -8.2329
                                                                       -8.2246
 -8.2120
          -8.1134
                    -8.1125
                              -8.0167
                                        -7.9164
                                                  -7.9156
                                                            -7.8107
                                                                       -7.7312
 -7.6208 -7.6032 -7.4819 -7.3548 -7.2898 -7.2791 -7.2787
                                                                      -7.2473
```

```
-6.9066
                    -6.9048
                              -6.8568
                                        -6.8031
                                                  -6.5012
                                                            -6.4723
                                                                     -6.3979
 -7.2469
                                                                     -5.7445
 -6.2284
          -6.2243
                    -6.0614
                              -6.0606
                                       -6.0295
                                                  -5.8425
                                                           -5.8416
                                                 -5.3149
                                                           -5.2476
 -5.7420
          -5.7321
                    -5.5200
                              -5.5155
                                        -5.3162
                                                                     -5.2463
                              -4.6767
                                                            -4.2062
 -5.0826
          -5.0714
                    -4.6789
                                        -4.2518
                                                  -4.2469
                                                                     -4.2039
 -3.9747
          -3.9735
                    -3.8758
                              -3.8709
                                                  -3.0667
                                                            -2.4983
                                                                     -2.2249
                                        -3.1759
 -0.3588
          -0.1441
                    0.9193
                              0.9207
                                        1.3095
                                                  1.3119
                                                            1.8861
                                                                      1.9024
 2.2838
           2.3113
                     2.4289
                               2.4309
                                         2.6614
                                                   2.6626
                                                             2.6706
                                                                       2.6746
  2.7918
           2.8077
                     2.8145
                               2.9176
                                         2.9189
                                                   3.1122
                                                             3.1202
                                                                       3.1383
  3.2295
           3.2335
       k = 0.0556 - 0.5774 \ 0.0000 \ (64828 \ PWs)
                                                   bands (ev):
-21.1904 -21.1862 -21.1377 -21.1363 -20.5968 -20.5412 -20.3860 -20.2837
-19.3923 -19.3914 -19.2110 -19.2100 -19.0093 -19.0075 -18.8094 -18.8080
-18.7568 -18.7549 -18.1275 -18.1262 -18.1141 -18.1126 -17.9174 -17.9159 -17.4001 -17.3156 -16.9052 -16.9025 -16.4327 -16.4290 -14.9993 -14.7839 -14.2821 -14.1127 -13.9443 -13.9409 -13.4924 -13.4882 -12.3302 -12.3244 -11.9436 -11.9425 -11.8774 -11.8119 -11.7920 -11.7322 -11.7312 -11.2753
-10.9608 -10.9598 -10.8032 -10.7988 -10.2482 -10.2439
                                                                     -9.8499
                                                           -9.8594
                                        -9.1952
                                                           -9.0992
                                                                     -9.0926
 -9.8494
          -9.5586
                    -9.4265
                              -9.4260
                                                 -9.1863
                                                           -8.2310
 -8.8988
          -8.8894
                    -8.4950
                              -8.4935
                                        -8.3272
                                                  -8.2348
                                                                     -8.2231
                                                                     -7.7510
 -8.2152
                    -8.1286
                                                           -7.8487
          -8.1295
                              -7.9942
                                        -7.8997
                                                  -7.8989
                                        -7.3170
                    -7.4602
          -7.6074
                              -7.3259
 -7.6251
                                                 -7.2809
                                                           -7.2805
                                                                     -7.2436
                    -6.9079
                              -6.8347
                                        -6.8209
 -7.2433
          -6.9097
                                                  -6.5118
                                                           -6.4919
                                                                     -6.3764
 -6.2073
          -6.2032
                    -6.0790
                              -6.0782
                                        -6.0548
                                                  -5.8236
                                                                     -5.7460
                                                            -5.8228
 -5.7434
          -5.7078
                    -5.5191
                              -5.5146
                                        -5.3182
                                                  -5.3169
                                                            -5.2466
                                                                     -5.2454
                                        -4.2803
                                                  -4.2751
 -5.0858
          -5.0746
                    -4.6813
                              -4.6790
                                                            -4.2313
                                                                     -4.2289
 -3.9552
          -3.9541
                    -3.8481
                                        -3.1855
                                                            -2.5199
                                                                      -2.2010
                              -3.8431
                                                  -3.0582
 -0.3785
                               0.8909
                                         1.3445
                                                             1.8875
          -0.1283
                     0.8896
                                                   1.3470
                                                                       1.9037
  2.2811
           2.3131
                     2.4303
                               2.4323
                                         2.6429
                                                   2.6441
                                                             2.6720
                                                                       2.6759
  2.7904
           2.7915
                     2.8073
                               2.9415
                                         2.9428
                                                   3.1186
                                                             3.1301
                                                                       3.1512
  3.2309
           3.2348
       k = 0.0635 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                   bands (ev):
-21.1893 -21.1851 -21.1367 -21.1354 -20.6111 -20.5585 -20.3701 -20.2643
-19.4048 -19.4038 -19.1976 -19.1966 -19.0263 -19.0245 -18.8086 -18.8072
-18.7378 -18.7358 -18.1295 -18.1280 -18.1265 -18.1252 -17.9049 -17.9033
-17.4065 -17.3101 -16.9384 -16.9358 -16.3986 -16.3948 -15.0138 -14.7676
-14.2948 -14.1018 -13.9753 -13.9719 -13.4589 -13.4547 -12.3295 -12.3237
-11.9558 -11.9547 -11.8840 -11.8483 -11.7866 -11.7144 -11.7133 -11.2357
-10.9605 -10.9595 -10.8439 -10.8395 -10.2100 -10.2057
                                                           -9.8811
                                                                     -9.8804
                                                 -9.2072
                                       -9.2161
 -9.8780
          -9.5349
                   -9.3973
                             -9.3968
                                                           -9.0978
                                                                     -9.0913
                                       -8.3453
                   -8.4937
                             -8.4922
                                                 -8.2343
 -8.8774
          -8.8680
                                                           -8.2292
                                                                     -8.2216
                    -8.1447
                             -7.9715
                                       -7.8868
                                                 -7.8830
                                                           -7.8821
 -8.2171
          -8.1455
                                                                     -7.7707
                                       -7.2826
                             -7.3621
                                                 -7.2822
                                                           -7.2792
 -7.6299
          -7.6123
                   -7.4384
                                                                     -7.2398
          -6.9133
                   -6.9115
                              -6.8665
                                       -6.7851
                                                 -6.5266
                                                           -6.5113
 -7.2395
                                                                     -6.3507
                                       -6.0801
          -6.1819
                    -6.0965
                              -6.0956
                                                 -5.8047
                                                           -5.8039
 -6.1862
                                                                     -5.7478
                              -5.5136
                                                 -5.3192
 -5.7451
          -5.6837
                    -5.5181
                                       -5.3205
                                                           -5.2455
                                                                     -5.2443
 -5.0894
          -5.0782
                    -4.6839
                              -4.6817
                                        -4.3094
                                                 -4.3041
                                                           -4.2560
                                                                     -4.2536
          -3.9351
 -3.9362
                    -3.8206
                              -3.8155
                                        -3.1951
                                                 -3.0499
                                                           -2.5414
                                                                     -2.1769
 -0.3986
          -0.1127
                     0.8603
                               0.8616
                                         1.3798
                                                   1.3824
                                                            1.8890
                                                                      1.9052
  2.2784
           2.3149
                     2.4318
                               2.4338
                                         2.6248
                                                   2.6261
                                                             2.6735
                                                                       2.6774
           2.7909
                     2.8069
                                                   3.1205
  2.7668
                               2.9658
                                         2.9671
                                                             3.1344
                                                                       3.1748
  3.2324
           3.2364
       k = 0.0714 - 0.5774 \ 0.0000 \ (64814 \ PWs)
                                                   bands (ev):
-21.1880 -21.1838 -21.1357 -21.1343 -20.6252 -20.5757 -20.3542 -20.2447
-19.4172 -19.4162 -19.1841 -19.1831 -19.0432 -19.0414 -18.8077 -18.8063
-18.7186 -18.7166 -18.1451 -18.1436 -18.1253 -18.1240 -17.8926 -17.8910
-17.4130 -17.3047 -16.9715 -16.9690 -16.3644 -16.3605 -15.0282 -14.7512
```

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-14.3074 -14.0911 -14.0061 -14.0027 -13.4254 -13.4211 -12.3287 -12.3229
-11.9675 -11.9665 -11.8906 -11.8844 -11.7814 -11.6961 -11.6950 -11.1960
-10.9601 -10.9591 -10.8846 -10.8803 -10.1720 -10.1677
                                                               -9.9120
                                                                          -9.9114
                                                     -9.2281
           -9.5110 -9.3683
                               -9.3678 -9.2370
                                                                -9.0963
 -9.8965
                                                                           -9.0897
                                -8.4907
 -8.8560
           -8.8465
                      -8.4923
                                           -8.3640
                                                      -8.2336
                                                                -8.2274
                                                                           -8.2203
 -8.2176
           -8.1615
                      -8.1607
                                -7.9485
                                           -7.9248
                                                     -7.8662
                                                                -7.8653
                                                                           -7.7902
                                -7.3983
                                          -7.2842
                                                     -7.2838
 -7.6354
           -7.6178
                     -7.4164
                                                                -7.2414
                                                                           -7.2358
                     -6.9156
                                -6.8984
                                           -6.7493
 -7.2355
           -6.9174
                                                     -6.5432
                                                                -6.5306
                                                                           -6.3231
                                -6.1130
                                                                -5.7849
                                                                           -5.7498
 -6.1649
           -6.1605
                      -6.1139
                                           -6.1054
                                                      -5.7857
 -5.7470
           -5.6596
                      -5.5169
                                -5.5125
                                           -5.3231
                                                     -5.3219
                                                                -5.2443
                                                                           -5.2431
 -5.0935
           -5.0823
                      -4.6870
                                -4.6848
                                           -4.3391
                                                     -4.3337
                                                                -4.2804
                                                                           -4.2781
 -3.9175
           -3.9164
                      -3.7934
                                -3.7882
                                           -3.2048
                                                      -3.0417
                                                                -2.5627
                                                                           -2.1527
 -0.4190
           -0.0974
                                 0.8328
                                                                 1.8907
                       0.8316
                                            1.4155
                                                       1.4182
                                                                            1.9070
                       2.4335
                                  2.4355
                                            2.6072
                                                       2.6085
                                                                  2.6753
  2.2756
            2.3165
                                                                            2.6791
  2.7432
            2.7904
                       2.8064
                                  2.9905
                                            2.9918
                                                       3.1223
                                                                  3.1369
                                                                            3.2008
  3.2341
             3.2381
        k = 0.0794 - 0.5774 \ 0.0000 \ (64784 \ PWs)
                                                       bands (ev):
-21.1866 -21.1824 -21.1345 -21.1331 -20.6393 -20.5927 -20.3382 -20.2249 -19.4295 -19.4285 -19.1706 -19.1696 -19.0599 -19.0581 -18.8067 -18.8053 -18.6992 -18.6973 -18.1608 -18.1593 -18.1240 -18.1227 -17.8805 -17.8790 -17.4196 -17.2994 -17.0046 -17.0021 -16.3303 -16.3263 -15.0424 -14.7347 -14.3201 -14.0807 -14.0366 -14.0333 -13.3917 -13.3873 -12.3278 -12.3220 -11.9789 -11.9778 -11.9200 -11.8972 -11.7762 -11.6776 -11.6765 -11.1563 -10.9596 -10.9586 -10.9254 -10.9211 -10.1342 -10.1300 -9.9430 -9.9424 -9.9145 -9.4868 -9.3394 -9.3390 -9.2579 -9.2490 -9.0946 -9.0880
                     -8.4907
                                -8.4891
                                          -8.3830
                                                     -8.2327
                                                                -8.2258
 -8.8346
           -8.8251
                                                                           -8.2195
                                -7.9628
                                           -7.9252
 -8.2168
                      -8.1766
                                                     -7.8494
                                                                -7.8485
                                                                           -7.8096
           -8.1774
 -7.6415
                      -7.4345
                                -7.3943
                                           -7.2857
                                                      -7.2853
           -7.6239
                                                                -7.2316
                                                                           -7.2313
 -7.2037
           -6.9305
                      -6.9219
                                -6.9201
                                           -6.7136
                                                      -6.5607
                                                                -6.5498
                                                                           -6.2947
                                                      -5.7669
                                                                           -5.7518
 -6.1436
           -6.1390
                      -6.1311
                                -6.1308
                                           -6.1302
                                                                -5.7660
                      -5.5155
                                -5.5112
 -5.7488
           -5.6356
                                           -5.3260
                                                      -5.3248
                                                                -5.2429
                                                                           -5.2417
                      -4.6904
                                -4.6882
                                           -4.3691
                                                      -4.3637
 -5.0980
           -5.0869
                                                                -4.3047
                                                                           -4.3024
 -3.8991
           -3.8980
                      -3.7665
                                -3.7612
                                           -3.2146
                                                      -3.0336
                                                                -2.5838
                                                                           -2.1283
 -0.4397
           -0.0825
                       0.8033
                                  0.8046
                                            1.4515
                                                       1.4542
                                                                 1.8927
                                                                            1.9089
  2.2729
                       2.4355
                                  2.4375
                                            2.5901
                                                       2.5913
                                                                  2.6772
            2.3181
                                                                            2.6808
                                                       3.1243
  2.7201
             2.7898
                       2.8058
                                  3.0155
                                            3.0168
                                                                  3.1391
                                                                            3.2273
  3.2361
             3.2400
        k = 0.0873 - 0.5774 \ 0.0000 \ (64796 \ PWs)
                                                       bands (ev):
-21.1851 -21.1809 -21.1332 -21.1318 -20.6533 -20.6096 -20.3221 -20.2050
-19.4417 -19.4407 -19.1570 -19.1561 -19.0764 -19.0747 -18.8056 -18.8042
-18.6797 -18.6778 -18.1767 -18.1751 -18.1225 -18.1212 -17.8687 -17.8671
-17.4261 -17.2942 -17.0376 -17.0352 -16.2962 -16.2921 -15.0565 -14.7180
-14.3328 -14.0716 -14.0666 -14.0632 -13.3578 -13.3535 -12.3267 -12.3209
-11.9898 -11.9887 -11.9552 -11.9039 -11.7712 -11.6587 -11.6575 -11.1165
-10.9664 -10.9620 -10.9592 -10.9582 -10.0968 -10.0925
                                                                -9.9741
                                                                          -9.9735
 -9.9321
           -9.4624
                     -9.3108
                               -9.3104
                                          -9.2786
                                                     -9.2698
                                                                -9.0928
                                                                           -9.0861
 -8.8132
           -8.8036
                      -8.4889
                                -8.4873
                                           -8.4021
                                                     -8.2316
                                                                -8.2243
                                                                           -8.2187
 -8.2152
           -8.1932
                      -8.1924
                                -8.0008
                                           -7.9018
                                                      -7.8325
                                                                -7.8317
                                                                           -7.8288
 -7.6483
           -7.6307
                      -7.4706
                                -7.3720
                                           -7.2871
                                                      -7.2866
                                                                -7.2272
                                                                           -7.2269
                                           -6.6779
                                                                -6.5689
 -7.1660
           -6.9626
                      -6.9270
                                -6.9251
                                                      -6.5786
                                                                           -6.2659
           -6.1482
                      -6.1473
                                           -6.1173
                                                      -5.7556
                                                                -5.7533
 -6.1563
                                -6.1222
                                                                           -5.7463
 -5.7450
           -5.6117
                      -5.5141
                                -5.5098
                                           -5.3293
                                                      -5.3281
                                                                 -5.2414
                                                                           -5.2402
           -5.0919
                      -4.6941
                                -4.6919
                                           -4.3996
                                                      -4.3942
                                                                 -4.3289
 -5.1031
                                                                           -4.3267
           -3.8801
                      -3.7398
                                -3.7345
                                           -3.2243
                                                      -3.0257
                                                                -2.6047
                                                                           -2.1037
 -3.8812
 -0.4607
           -0.0677
                                           1.4877
                                                      1.4906
                                                                 1.8948
                      0.7756
                                 0.7768
                                                                           1.9111
  2.2701
            2.3196
                                  2.4396
                                            2.5735
                                                       2.5747
                                                                  2.6791
                       2.4376
                                                                            2.6821
  2.6980
            2.7892
                       2.8051
                                  3.0408
                                            3.0421
                                                       3.1265
                                                                  3.1415
                                                                            3.2324
  3.2393
             3.2425
```

```
k = 0.0952 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                        bands (ev):
-18.6601 -18.6581 -18.1927 -18.1912 -18.1209 -18.1196 -17.8570 -17.8555
-17.4327 -17.2892 -17.0705 -17.0681 -16.2621 -16.2579 -15.0705 -14.7013 -14.3455 -14.0971 -14.0941 -14.0606 -13.3239 -13.3195 -12.3256 -12.3198 -12.0003 -11.9992 -11.9899 -11.9106 -11.7663 -11.6394 -11.6383 -11.0767
-11.0073 \ -11.0030 \ -10.9586 \ -10.9576 \ -10.0596 \ -10.0554 \ -10.0053 \ -10.0046
 -9.9492
           -9.4378
                      -9.2994
                                -9.2906 -9.2824
                                                      -9.2820
                                                                 -9.0908
                                                                           -9.0840
 -8.7917
           -8.7822
                      -8.4869
                                -8.4854
                                           -8.4213
                                                      -8.2302
                                                                 -8.2229
                                                                            -8.2175
 -8.2133
           -8.2090
                      -8.2082
                                -8.0388
                                           -7.8781
                                                      -7.8479
                                                                 -7.8156
                                                                            -7.8148
                                                                            -7.2224
 -7.6557
           -7.6381
                      -7.5068
                                -7.3496
                                           -7.2884
                                                      -7.2879
                                                                 -7.2227
                                                                            -6.2369
 -7.1284
           -6.9948
                      -6.9324
                                -6.9306
                                           -6.6423
                                                      -6.5966
                                                                 -6.5878
 -6.1818
           -6.1653
                      -6.1643
                                 -6.1007
                                           -6.0956
                                                      -5.7579
                                                                 -5.7549
                                                                            -5.7276
                                           -5.3329
                                                      -5.3317
 -5.7267
           -5.5879
                      -5.5124
                                 -5.5083
                                                                 -5.2397
                                                                            -5.2385
 -5.1085
           -5.0974
                      -4.6982
                                 -4.6960
                                            -4.4302
                                                      -4.4249
                                                                 -4.3532
                                                                            -4.3510
                      -3.7135
                                                      -3.0179
                                                                            -2.0789
 -3.8636
           -3.8625
                                 -3.7081
                                           -3.2341
                                                                 -2.6255
 -0.4820
           -0.0533
                       0.7484
                                  0.7496
                                             1.5243
                                                        1.5273
                                                                  1.8972
                                                                             1.9134
  2.2672
             2.3210
                       2.4400
                                  2.4420
                                             2.5574
                                                        2.5586
                                                                  2.6710
                                                                             2.6822
             2.7884
  2.6877
                       2.8044
                                  3.0665
                                             3.0678
                                                        3.1288
                                                                  3.1439
                                                                             3.2103
  3.2409
             3.2447
        k = 0.1032 - 0.5774 \ 0.0000 \ (64796 \ PWs)
                                                        bands (ev):
-21.1815 -21.1774 -21.1302 -21.1288 -20.6809 -20.6430 -20.2896 -20.1649 -19.4659 -19.4649 -19.1297 -19.1288 -19.1092 -19.1074 -18.8031 -18.8017 -18.6404 -18.6384 -18.2088 -18.2073 -18.1191 -18.1179 -17.8457 -17.8441 -17.4393 -17.2842 -17.1033 -17.1010 -16.2280 -16.2237 -15.0844 -14.6844 -14.3581 -14.1270 -14.1240 -14.0513 -13.2898 -13.2853 -12.3244 -12.3186 -12.0241 -12.0103 -12.0093 -11.9174 -11.7616 -11.6198 -11.6187 -11.0484
-11.0441 -11.0368 -10.9581 -10.9571 -10.0364 -10.0358 -10.0227 -10.0185 -9.9658 -9.4131 -9.3201 -9.3113 -9.2543 -9.2539 -9.0885 -9.0817
                      -8.4848
                                 -8.4833
                                           -8.4404
                                                      -8.2286
 -8.7702
           -8.7607
                                                                 -8.2248
                                                                            -8.2240
 -8.2215
            -8.2159
                      -8.2113
                                 -8.0768
                                           -7.8668
                                                      -7.8543
                                                                 -7.7987
                                                                            -7.7978
                                                                            -7.2176
 -7.6637
           -7.6462
                      -7.5430
                                 -7.3271
                                           -7.2896
                                                      -7.2891
                                                                 -7.2179
           -7.0271
                      -6.9384
                                 -6.9366
                                           -6.6148
                                                      -6.6067
                                                                 -6.6065
 -7.0908
                                                                            -6.2081
 -6.2074
           -6.1822
                      -6.1809
                                 -6.0792
                                           -6.0737
                                                      -5.7608
                                                                 -5.7576
                                                                            -5.7083
 -5.7075
           -5.5642
                      -5.5106
                                 -5.5066
                                           -5.3368
                                                      -5.3356
                                                                 -5.2379
                                                                            -5.2367
                                 -4.7004
 -5.1144
           -5.1033
                      -4.7026
                                            -4.4612
                                                      -4.4559
                                                                 -4.3775
                                                                            -4.3754
           -3.8452
 -3.8464
                      -3.6876
                                 -3.6821
                                           -3.2440
                                                      -3.0103
                                                                 -2.6461
                                                                            -2.0540
 -0.5036
           -0.0392
                       0.7218
                                  0.7230
                                             1.5612
                                                        1.5643
                                                                  1.8998
                                                                             1.9160
                       2.4425
                                  2.4445
                                             2.5418
                                                        2.5430
  2.2644
            2.3223
                                                                  2.6494
                                                                             2.6846
                                                        3.1313
  2.6892
             2.7876
                       2.8037
                                  3.0925
                                             3.0938
                                                                  3.1465
                                                                             3.1875
  3.2434
             3.2473
        k = 0.1111 - 0.5774 \ 0.0000 \ (64852 \ PWs)
                                                        bands (ev):
-21.1795 -21.1754 -21.1285 -21.1272 -20.6945 -20.6594 -20.2732 -20.1446
-19.4779 -19.4769 -19.1253 -19.1236 -19.1160 -19.1150 -18.8016 -18.8003
-18.6205 -18.6185 -18.2251 -18.2236 -18.1173 -18.1160 -17.8346 -17.8330
-17.4460 -17.2793 -17.1359 -17.1337 -16.1939 -16.1895 -15.0981 -14.6674
-14.3708 -14.1566 -14.1537 -14.0424 -13.2556 -13.2510 -12.3232 -12.3173
-12.0578 -12.0200 -12.0189 -11.9241 -11.7570 -11.5999 -11.5988 -11.0895
-11.0852 -10.9968 -10.9575 -10.9565 -10.0676 -10.0670
                                                                 -9.9862
                                                                           -9.9820
                                                      -9.2259
 -9.9820
           -9.3881
                     -9.3408
                                -9.3320
                                           -9.2263
                                                                 -9.0862
                                                                            -9.0793
 -8.7488
           -8.7391
                      -8.4827
                                 -8.4811
                                           -8.4593
                                                      -8.2405
                                                                 -8.2397
                                                                            -8.2267
                      -8.2092
 -8.2199
           -8.2140
                                -8.1148
                                           -7.8856
                                                      -7.8303
                                                                 -7.7817
                                                                            -7.7809
           -7.6549
                      -7.5791
                                -7.3044
                                           -7.2907
                                                      -7.2902
                                                                 -7.2128
 -7.6724
                                                                            -7.2126
                     -6.9448 -6.9430
                                                      -6.6252
 -7.0596
           -7.0533
                                           -6.6329
                                                                 -6.5712
                                                                            -6.2330
                     -6.1778 -6.0576 -6.0518 -5.7641
 -6.1991
           -6.1987
                                                                 -5.7606
                                                                            -5.6889
```

```
-5.6881
          -5.5407
                    -5.5087
                              -5.5047
                                                 -5.3399
                                                           -5.2359
                                                                     -5.2347
                                        -5.3411
 -5.1207
          -5.1097
                    -4.7073
                              -4.7052
                                        -4.4923
                                                 -4.4870
                                                           -4.4019
                                                                     -4.3998
 -3.8295
          -3.8284
                    -3.6620
                              -3.6564
                                       -3.2538
                                                 -3.0028
                                                           -2.6665
                                                                     -2.0289
 -0.5255
                     0.6957
          -0.0253
                               0.6969
                                        1.5984
                                                            1.9025
                                                                     1.9187
                                                  1.6016
 2.2615
           2.3235
                     2.4453
                               2.4473
                                         2.5266
                                                  2.5278
                                                            2.6271
                                                                      2.6874
  2.6918
           2.7868
                     2.8028
                               3.1188
                                         3.1201
                                                   3.1341
                                                            3.1491
                                                                      3.1649
  3.2461
           3.2501
       k = 0.1190 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                  bands (ev):
-21.1774 -21.1733 -21.1267 -21.1254 -20.7080 -20.6758 -20.2567 -20.1241
-19.4898 -19.4888 -19.1413 -19.1396 -19.1023 -19.1013 -18.8001 -18.7987
-18.6004 -18.5984 -18.2415 -18.2400 -18.1152 -18.1139 -17.8237 -17.8221 -17.4527 -17.2746 -17.1685 -17.1664 -16.1599 -16.1554 -15.1117 -14.6502 -14.3834 -14.1859 -14.1831 -14.0339 -13.2212 -13.2166 -12.3218 -12.3159 -12.0910 -12.0292 -12.0281 -11.9309 -11.7526 -11.5786 -11.1307
-11.1264 -10.9569 -10.9568 -10.9558 -10.0988 -10.0981 -9.9977
                                                                     -9.9500
                                                           -9.0836
                    -9.3614
                             -9.3527
                                                                     -9.0766
 -9.9458
          -9.3630
                                       -9.1986
                                                 -9.1982
                                                           -8.2553
                                                                     -8.2246
 -8.7273
          -8.7176
                    -8.4826
                             -8.4792
                                       -8.4755
                                                 -8.2561
          -8.2120
                    -8.2070
                             -8.1526
                                       -7.9042
                                                 -7.8061
                                                           -7.7647
 -8.2182
                                                                     -7.7639
 -7.6817
          -7.6641
                    -7.6153
                              -7.2917
                                        -7.2912
                                                 -7.2816
                                                           -7.2076
                                                                     -7.2074
                                                                     -6.2587
 -7.0921
          -7.0158
                    -6.9517
                              -6.9499
                                       -6.6510
                                                 -6.6437
                                                           -6.5358
 -6.2157
          -6.2150
                                       -6.0298
                                                 -5.7677
                                                           -5.7639
                    -6.1492
                             -6.0361
                                                                     -5.6694
                                        -5.3456
          -5.5172
                    -5.5066
                              -5.5027
 -5.6686
                                                 -5.3445
                                                           -5.2338
                                                                     -5.2326
                    -4.7123
                              -4.7102
                                        -4.5235
                                                 -4.5184
 -5.1275
          -5.1164
                                                           -4.4263
                                                                     -4.4243
                    -3.6368
                                        -3.2637
                                                 -2.9956
 -3.8131
          -3.8119
                              -3.6311
                                                           -2.6867
                                                                     -2.0036
 -0.5478
          -0.0117
                     0.6702
                               0.6714
                                         1.6358
                                                  1.6391
                                                            1.9055
                                                                      1.9217
  2.2586
                               2.4503
                                                   2.5132
                                                            2.6047
           2.3246
                     2.4482
                                         2.5120
                                                                      2.6903
  2.6947
           2.7859
                     2.8019
                                                   3.1456
                                                            3.1473
                               3.1369
                                         3.1412
                                                                      3.1524
  3.2491
           3.2530
       k = 0.1270 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                  bands (ev):
-21.1751 -21.1710 -21.1248 -21.1234 -20.7214 -20.6919 -20.2401 -20.1035
-19.5016 -19.5006 -19.1572 -19.1555 -19.0885 -19.0875 -18.7985 -18.7971
-18.5803 -18.5783 -18.2581 -18.2565 -18.1131 -18.1118 -17.8130 -17.8115
-17.4593 -17.2700 -17.2010 -17.1989 -16.1260 -16.1213 -15.1252 -14.6330
-14.3960 \ -14.2150 \ -14.2123 \ -14.0258 \ -13.1867 \ -13.1821 \ -12.3203 \ -12.3144
-12.1234 -12.0380 -12.0369 -11.9377 -11.7483 -11.5591 -11.5580 -11.1719
-11.1676 -10.9561 -10.9551 -10.9169 -10.1300 -10.1293 -10.0128
                                                                    -9.9142
                             -9.3376 -9.1712 -9.1708
 -9.9100
          -9.3819
                   -9.3733
                                                          -9.0809
                                                                     -9.0738
                   -8.4985
 -8.7057
          -8.6961
                             -8.4771 -8.4754
                                                 -8.2716
                                                           -8.2708
                                                                     -8.2221
                   -8.2049
                             -8.1902
                                       -7.9227
                                                 -7.7817
 -8.2161
          -8.2100
                                                           -7.7477
                                                                     -7.7468
          -7.6741
                                       -7.2922
                   -7.6514
                             -7.2927
                                                 -7.2586
                                                           -7.2021
 -7.6916
                                                                     -7.2019
                                                 -6.6621
          -6.9784
                   -6.9591
                             -6.9573
                                       -6.6690
                                                           -6.5005
 -7.1247
                                                                     -6.2845
                             -6.0145
 -6.2322
          -6.2315
                   -6.1202
                                       -6.0077
                                                 -5.7715
                                                           -5.7673
                                                                     -5.6499
 -5.6490
          -5.5043
                   -5.5005
                             -5.4938
                                       -5.3506
                                                 -5.3494
                                                           -5.2315
                                                                     -5.2303
          -5.1236
                    -4.7177
                              -4.7155
                                       -4.5549
                                                 -4.5498
                                                           -4.4509
 -5.1346
                                                                     -4.4489
                                                           -2.7068
 -3.7970
          -3.7958
                    -3.6120
                             -3.6063
                                       -3.2736
                                                 -2.9884
                                                                     -1.9781
 -0.5703
           0.0016
                     0.6452
                               0.6466
                                        1.6735
                                                  1.6770
                                                            1.9087
                                                                      1.9249
 2.2557
           2.3257
                     2.4514
                               2.4534
                                         2.4979
                                                  2.4991
                                                            2.5825
                                                                      2.6936
  2.6978
           2.7849
                     2.8009
                               3.1196
                                         3.1402
                                                  3.1554
                                                            3.1723
                                                                      3.1737
  3.2523
           3.2562
       k = 0.1349 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                   bands (ev):
-21.1727 -21.1685 -21.1227 -21.1214 -20.7347 -20.7080 -20.2234 -20.0828
-19.5133 -19.5124 -19.1729 -19.1712 -19.0746 -19.0736 -18.7968 -18.7954
-18.5600 -18.5579 -18.2747 -18.2732 -18.1108 -18.1095 -17.8027 -17.8011
-17.4661 -17.2655 -17.2335 -17.2314 -16.0921 -16.0873 -15.1386 -14.6156
-14.4085 \ -14.2438 \ -14.2411 \ -14.0184 \ -13.1521 \ -13.1475 \ -12.3187 \ -12.3129
-12.1553 -12.0463 -12.0453 -11.9445 -11.7442 -11.5382 -11.5371 -11.2132
```

```
-11.2089 -10.9554 -10.9544 -10.8769 -10.1612 -10.1605 -10.0275
                                                                         -9.8787
                              -9.3122
                                         -9.1440 -9.1437
                                                              -9.0780
 -9.8746
          -9.4025
                    -9.3938
                                                                        -9.0708
 -8.6842
           -8.6745
                     -8.5172
                               -8.4743
                                         -8.4728
                                                    -8.2871
                                                              -8.2863
                                                                         -8.2291
           -8.2137
                     -8.2072
                                          -7.9410
 -8.2193
                               -8.2021
                                                    -7.7573
                                                              -7.7306
                                                                         -7.7298
 -7.7021
           -7.6874
                     -7.6846 -7.2935
                                         -7.2930
                                                    -7.2356
                                                              -7.1965
                                                                         -7.1962
 -7.1573
           -6.9669
                     -6.9651
                               -6.9411
                                         -6.6870
                                                    -6.6803
                                                              -6.4652
                                                                         -6.3102
 -6.2487
           -6.2479
                     -6.0914
                               -5.9931
                                         -5.9857
                                                    -5.7756
                                                              -5.7709
                                                                         -5.6302
                     -5.4982
 -5.6294
           -5.5019
                               -5.4705
                                          -5.3558
                                                    -5.3547
                                                              -5.2291
                                                                         -5.2279
 -5.1421
           -5.1311
                     -4.7233
                               -4.7212
                                          -4.5864
                                                    -4.5814
                                                              -4.4756
                                                                         -4.4736
 -3.7813
           -3.7801
                     -3.5876
                               -3.5818
                                          -3.2835
                                                    -2.9815
                                                              -2.7266
                                                                         -1.9525
 -0.5931
            0.0146
                      0.6209
                                0.6223
                                           1.7115
                                                     1.7151
                                                                1.9120
                                                                          1.9282
  2.2529
            2.3266
                      2.4548
                                 2.4568
                                           2.4843
                                                     2.4855
                                                                2.5605
                                                                          2.6970
  2.7012
            2.7838
                      2.7999
                                 3.0974
                                           3.1435
                                                     3.1587
                                                                3.1996
                                                                          3.2009
  3.2557
            3.2597
        k = 0.1429 - 0.5774 \ 0.0000 \ (64840 \ PWs)
                                                     bands (ev):
-19.5250 -19.5240 -19.1885 -19.1808 -19.0007 -19.0597 -10.7949 -10.7950 -18.5395 -18.5375 -18.2915 -18.2900 -18.1083 -18.1070 -17.7926 -17.7910 -17.4728 -17.2658 -17.2637 -17.2611 -16.0583 -16.0534 -15.1519 -14.5981 -14.4210 -14.2722 -14.2697 -14.0115 -13.1174 -13.1127 -12.3170 -12.3112 -12.1864 -12.0542 -12.0532 -11.9513 -11.7402 -11.5170 -11.5159 -11.2545 -11.2502 -10.9546 -10.9536 -10.8369 -10.1924 -10.1917 -10.0417 -9.8436 -9.8395 -9.4229 -9.4144 -9.2866 -9.1171 -9.1168 -9.0749 -9.0676
           -8.6530
                     -8.5358
                               -8.4714
                                          -8.4698
                                                    -8.3025
                                                              -8.3017
 -8.6627
                                                                         -8.2667
                     -8.2050
                                                    -7.7346
                                                              -7.7215
 -8.2162
           -8.2111
                               -8.1999
                                          -7.9592
                                                                         -7.7135
                               -7.2943
           -7.7127
                                          -7.2938
 -7.7132
                     -7.6957
                                                    -7.2124
                                                              -7.1905
                                                                         -7.1903
           -6.9751
                               -6.9038
                                          -6.7048
 -7.1900
                     -6.9733
                                                    -6.6983
                                                              -6.4300
                                                                         -6.3360
 -6.2650
           -6.2642
                                -5.9719
                                          -5.9636
                                                    -5.7799
                                                               -5.7745
                     -6.0626
                                                                         -5.6105
 -5.6096
           -5.4993
                     -5.4957
                               -5.4474
                                          -5.3615
                                                    -5.3603
                                                               -5.2266
                                                                         -5.2254
                                -4.7271
 -5.1500
           -5.1390
                     -4.7292
                                          -4.6180
                                                    -4.6130
                                                               -4.5004
                                                                         -4.4985
                     -3.5637
                                -3.5579
 -3.7660
           -3.7648
                                          -3.2934
                                                    -2.9748
                                                               -2.7463
                                                                         -1.9267
                      0.5972
                                 0.5987
                                           1.7498
                                                     1.7535
 -0.6163
            0.0274
                                                                1.9156
                                                                          1.9318
                      2.4583
                                 2.4604
                                           2.4712
                                                     2.4723
                                                                2.5387
  2.2500
            2.3275
                                                                          2.7006
  2.7048
            2.7827
                      2.7988
                                 3.0755
                                           3.1470
                                                     3.1622
                                                                3.2270
                                                                          3.2284
  3.2593
            3.2633
        k = 0.1508 - 0.5774 \ 0.0000 \ (64844 \ PWs)
                                                     bands (ev):
-21.1674 -21.1633 -21.1182 -21.1169 -20.7610 -20.7396 -20.1897 -20.0410
-19.5366 -19.5356 -19.2040 -19.2023 -19.0468 -19.0458 -18.7930 -18.7916
-18.5190 -18.5169 -18.3084 -18.3069 -18.1058 -18.1044 -17.7827 -17.7812
-17.4795 -17.2980 -17.2960 -17.2568 -16.0247 -16.0197 -15.1650 -14.5805
-14.4335 -14.3003 -14.2979 -14.0052 -13.0825 -13.0778 -12.3153 -12.3094
-12.2167 -12.0617 -12.0607 -11.9581 -11.7365 -11.4955 -11.4944 -11.2959
-11.2916 -10.9537 -10.9527 -10.7969 -10.2235 -10.2229 -10.0553
                                                                        -9.8090
 -9.8049
          -9.4434
                     -9.4348
                               -9.2608
                                         -9.0905
                                                   -9.0902
                                                              -9.0716
                                                                        -9.0643
          -8.6315
                     -8.5543
                               -8.4683
                                          -8.4667
                                                    -8.3179
                                                              -8.3171
                                                                        -8.3044
 -8.6412
 -8.2128
           -8.2082
                     -8.2025
                               -8.1974
                                          -7.9772
                                                    -7.7604
                                                              -7.7251
                                                                         -7.7090
 -7.7052
           -7.6964
                     -7.6955
                               -7.2951
                                          -7.2946
                                                    -7.2229
                                                              -7.1890
                                                                         -7.1844
                                                                         -6.3619
 -7.1842
           -6.9838
                     -6.9820
                               -6.8666
                                          -6.7225
                                                    -6.7162
                                                              -6.3948
 -6.2812
           -6.2804
                     -6.0339
                                -5.9511
                                          -5.9417
                                                    -5.7842
                                                               -5.7780
                                                                         -5.5907
                                          -5.3674
 -5.5899
           -5.4966
                     -5.4930
                                -5.4244
                                                    -5.3663
                                                               -5.2239
                                                                         -5.2227
                                -4.7333
                                          -4.6497
                                                    -4.6448
                                                               -4.5253
 -5.1582
           -5.1473
                     -4.7354
                                                                         -4.5234
 -3.7511
           -3.7499
                     -3.5402
                                -3.5343
                                          -3.3033
                                                    -2.9682
                                                               -2.7659
                                                                         -1.9007
            0.0399
 -0.6397
                      0.5742
                                 0.5757
                                           1.7883
                                                     1.7921
                                                                1.9194
                                                                          1.9356
                                                                2.5171
  2.2472
            2.3282
                      2.4586
                                 2.4598
                                           2.4621
                                                      2.4641
                                                                          2.7044
  2.7087
            2.7815
                       2.7976
                                 3.0537
                                           3.1507
                                                     3.1659
                                                                3.2547
                                                                          3.2561
  3.2631
            3.2671
        k = 0.1587 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                     bands (ev):
```

```
-21.1645 -21.1604 -21.1158 -21.1145 -20.7740 -20.7552 -20.1728 -20.0198
-19.5481 -19.5471 -19.2193 -19.2176 -19.0328 -19.0318 -18.7910 -18.7896
-14.4459 -14.3281 -14.3257 -13.9996 -13.0476 -13.0428 -12.3134 -12.3076 -12.2462 -12.0687 -12.0677 -11.9648 -11.7329 -11.4737 -11.4726 -11.3373
-11.3330 -10.9529 -10.9519 -10.7569 -10.2547 -10.2541 -10.0684 -9.7748
           -9.4637
                     -9.4552 -9.2349 -9.0682
                                                    -9.0642
 -9.7707
                                                               -9.0639
                                                                          -9.0607
 -8.6198
           -8.6101
                     -8.5725
                                -8.4649
                                          -8.4634
                                                     -8.3422
                                                               -8.3332
                                                                          -8.3324
 -8.2090
           -8.2050
                     -8.1998
                               -8.1949
                                          -7.9950
                                                     -7.7962
                                                               -7.7374
                                                                          -7.7200
 -7.6817
           -7.6793
                     -7.6784
                                -7.2957
                                          -7.2952
                                                     -7.2557
                                                               -7.1779
                                                                          -7.1777
 -7.1656
           -6.9929
                     -6.9911
                                -6.8295
                                          -6.7401
                                                     -6.7340
                                                               -6.3878
                                                                          -6.3598
                     -6.0053
                                -5.9308
                                                               -5.7812
                                                                          -5.5708
 -6.2973
           -6.2965
                                          -5.9201
                                                     -5.7886
                                          -5.3738
                                                                          -5.2199
 -5.5700
           -5.4937
                     -5.4902
                                -5.4014
                                                               -5.2211
                                                     -5.3727
 -5.1668
           -5.1560
                     -4.7418
                                -4.7397
                                           -4.6814
                                                     -4.6766
                                                               -4.5503
                                                                          -4.5485
                                                                          -1.8746
 -3.7366
           -3.7354
                     -3.5172
                                -3.5113
                                          -3.3133
                                                     -2.9619
                                                               -2.7852
 -0.6635
            0.0521
                       0.5518
                                 0.5534
                                           1.8270
                                                      1.8309
                                                                 1.9234
                                                                           1.9396
  2.2444
            2.3289
                       2.4466
                                 2.4478
                                            2.4660
                                                      2.4681
                                                                 2.4958
                                                                           2.7085
  2.7127
            2.7802
                       2.7964
                                 3.0321
                                            3.1547
                                                      3.1698
                                                                 3.2671
                                                                           3.2711
  3.2827
            3.2840
        k = 0.1667 - 0.5774 \ 0.0000 \ (64864 \ PWs)
                                                      bands (ev):
-21.1615 -21.1574 -21.1133 -21.1119 -20.7869 -20.7706 -20.1557 -19.9985 -19.5595 -19.5585 -19.2344 -19.2328 -19.0188 -19.0178 -18.7888 -18.7874 -18.4774 -18.4753 -18.3426 -18.3410 -18.1002 -18.0989 -17.7638 -17.7622 -17.4930 -17.3621 -17.3602 -17.2488 -15.9579 -15.9526 -15.1909 -14.5449 -14.4583 -14.3554 -14.3532 -13.9947 -13.0125 -13.0077 -12.3115 -12.3056 -12.2749 -12.0753 -12.0743 -11.9716 -11.7295 -11.4516 -11.4505 -11.3787 -11.3745 -10.9520 -10.9510 -10.7169 -10.2859 -10.2852 -10.0810 -9.7411
 -9.7370
                     -9.4756
                               -9.2088
                                          -9.0647
                                                     -9.0570
           -9.4840
                                                               -9.0382
                                                                          -9.0379
 -8.5997
           -8.5925
                     -8.5854
                                -8.4615
                                          -8.4600
                                                     -8.3799
                                                               -8.3484
                                                                          -8.3476
 -8.2049
           -8.2017
                                                     -7.8321
                                                               -7.7503
                      -8.1969
                                -8.1923
                                          -8.0127
                                                                          -7.7329
           -7.6612
                                -7.2963
                                          -7.2958
                     -7.6566
                                                     -7.2887
                                                               -7.1713
 -7.6621
                                                                          -7.1711
 -7.1420
           -7.0025
                      -7.0007
                                -6.7925
                                           -6.7576
                                                     -6.7516
                                                               -6.4137
                                                                          -6.3248
                                                                          -5.5509
 -6.3132
           -6.3124
                      -5.9769
                                -5.9116
                                          -5.8990
                                                     -5.7927
                                                               -5.7836
 -5.5501
           -5.4906
                     -5.4873
                                -5.3809
                                           -5.3796
                                                     -5.3780
                                                               -5.2181
                                                                          -5.2169
 -5.1758
           -5.1649
                      -4.7485
                                -4.7465
                                           -4.7132
                                                     -4.7085
                                                                -4.5755
                                                                          -4.5736
 -3.7225
           -3.7213
                      -3.4947
                                -3.4888
                                           -3.3232
                                                     -2.9558
                                                               -2.8044
                                                                          -1.8483
 -0.6875
            0.0641
                       0.5301
                                 0.5318
                                            1.8660
                                                      1.8701
                                                                 1.9276
                                                                           1.9438
  2.2415
            2.3295
                       2.4352
                                 2.4363
                                            2.4692
                                                      2.4722
                                                                 2.4756
                                                                           2.7127
  2.7169
            2.7789
                       2.7950
                                 3.0107
                                            3.1588
                                                      3.1739
                                                                 3.2636
                                                                           3.2717
  3.2754
            3.3109
        k = 0.1746 - 0.5774 \ 0.0000 \ (64816 \ PWs)
                                                      bands (ev):
-21.1583 -21.1542 -21.1106 -21.1092 -20.7997 -20.7859 -20.1386 -19.9771
-19.5708 -19.5699 -19.2495 -19.2478 -19.0048 -19.0038 -18.7866 -18.7852
-18.4564 -18.4543 -18.3598 -18.3583 -18.0972 -18.0958 -17.7548 -17.7532
-17.4997 -17.3939 -17.3921 -17.2449 -15.9248 -15.9193 -15.2037 -14.5270
-14.4706 -14.3824 -14.3802 -13.9905 -12.9773 -12.9724 -12.3098 -12.3046
-12.3013 -12.0814 -12.0804 -11.9784 -11.7263 -11.4292 -11.4281 -11.4202
-11.4159 -10.9510 -10.9500 -10.6770 -10.3170 -10.3163 -10.0930
                                                                         -9.7079
 -9.7038
           -9.5043
                     -9.4959
                                -9.1827
                                           -9.0610
                                                     -9.0531
                                                               -9.0125
                                                                          -9.0122
                                                               -8.3635
 -8.6104
           -8.5760
                      -8.5661
                                -8.4579
                                           -8.4564
                                                     -8.4174
                                                                          -8.3627
 -8.2004
           -8.1983
                      -8.1935
                                -8.1895
                                           -8.0302
                                                     -7.8681
                                                               -7.7638
                                                                          -7.7465
 -7.6449
           -7.6440
                      -7.6312
                                -7.3216
                                           -7.2968
                                                     -7.2963
                                                                -7.1643
                                                                          -7.1641
 -7.1182
           -7.0125
                      -7.0107
                                -6.7750
                                           -6.7692
                                                     -6.7554
                                                               -6.4397
                                                                          -6.3290
 -6.3283
           -6.2899
                     -5.9486
                               -5.8941
                                          -5.8790
                                                     -5.7959
                                                               -5.7846
                                                                          -5.5309
                                                     -5.3558
 -5.5301
           -5.4874
                     -5.4841
                                -5.3876
                                          -5.3866
                                                               -5.2150
                                                                          -5.2138
                     -4.7555 -4.7535
                                          -4.7451
 -5.1850
           -5.1742
                                                     -4.7404
                                                               -4.6007
                                                                          -4.5989
```

```
-3.7088
          -3.7076
                   -3.4727
                             -3.4667
                                               -2.9498
                                                        -2.8234
                                                                  -1.8218
                                      -3.3331
                                               1.9094
 -0.7118
           0.0758
                    0.5091
                             0.5108
                                       1.9052
                                                         1.9320
                                                                  1.9482
  2.2388
           2.3300
                    2.4242
                              2.4254
                                       2.4531
                                                2.4750
                                                          2.4768
                                                                   2.7172
                    2.7936
                              2.9894
                                                3.1780
                                                          3.2424
  2.7214
           2.7775
                                       3.1631
                                                                   3.2759
  3.2798
           3.3393
       k = 0.1825 - 0.5774 \ 0.0000 \ (64810 \ PWs)
                                                bands (ev):
-21.1550 -21.1509 -21.1078 -21.1064 -20.8123 -20.8010 -20.1213 -19.9556
-19.5821 -19.5811 -19.2643 -19.2627 -18.9907 -18.9897 -18.7842 -18.7829
-18.4353 -18.4332 -18.3771 -18.3756 -18.0940 -18.0927 -17.7460 -17.7444 -17.5065 -17.4257 -17.4239 -17.2412 -15.8919 -15.8863 -15.2164 -14.5089 -14.4828 -14.4088 -14.4068 -13.9873 -12.9419 -12.9371 -12.3298 -12.3071
-12.3013 -12.0871 -12.0861 -11.9852 -11.7232 -11.4617 -11.4574 -11.4065
                                                                 -9.6752
-11.4054 -10.9500 -10.9490 -10.6371 -10.3480 -10.3474 -10.1045
 -9.6712
         -9.5245
                   -9.5161 -9.1565
                                     -9.0571 -9.0490
                                                        -8.9871
                                                                 -8.9868
                                               -8.4504
                                                        -8.3786
 -8.6282
         -8.5546
                   -8.5447
                            -8.4579
                                     -8.4533
                                                                  -8.3778
                                                        -7.7780
         -8.1947
                            -8.1864
                                     -8.0476
                                               -7.9040
                                                                 -7.7606
 -8.1961
                   -8.1898
          -7.6268
                   -7.6056
                            -7.3547
                                               -7.2968
                                                        -7.1571
                                                                  -7.1569
 -7.6277
                                     -7.2973
                   -7.0212
                            -6.7922
                                     -6.7865
                                               -6.7186
                                                                  -6.3447
 -7.0944
          -7.0230
                                                        -6.4656
 -6.3440
          -6.2552
                   -5.9205
                            -5.8795
                                      -5.8617
                                               -5.7968
                                                         -5.7831
                                                                  -5.5109
                            -5.3951
                                                                  -5.2106
 -5.5101
          -5.4839
                   -5.4808
                                      -5.3940
                                               -5.3333
                                                         -5.2118
 -5.1944
                   -4.7770
                            -4.7723
                                      -4.7627
                                               -4.7607
          -5.1837
                                                         -4.6261
                                                                  -4.6243
                                                                  -1.7952
 -3.6955
          -3.6943
                   -3.4513
                            -3.4453
                                      -3.3430
                                               -2.9441
                                                        -2.8422
 -0.7365
                    0.4888
           0.0873
                             0.4906
                                       1.9365
                                                1.9445
                                                         1.9487
                                                                   1.9532
                                                2.4794
                                                          2.4813
                                                                   2.7219
  2.2361
           2.3304
                    2.4139
                              2.4150
                                       2.4324
  2.7260
           2.7760
                    2.7922
                              2.9684
                                       3.1676
                                                3.1822
                                                          3.2214
                                                                   3.2805
  3.2845
           3.3677
       k = 0.1905 - 0.5774 \ 0.0000 \ (64822 \ PWs)
                                                bands (ev):
-21.1516 -21.1474 -21.1049 -21.1035 -20.8249 -20.8160 -20.1040 -19.9339
-19.5932 -19.5922 -19.2791 -19.2775 -18.9766 -18.9756 -18.7818 -18.7804
-18.4140 -18.4119 -18.3945 -18.3930 -18.0908 -18.0894 -17.7375 -17.7359
-17.5132 -17.4574 -17.4556 -17.2377 -15.8594 -15.8536 -15.2289 -14.4950
-14.4907 -14.4348 -14.4329 -13.9849 -12.9065 -12.9016 -12.3554 -12.3050
-12.2991 -12.0924 -12.0913 -11.9920 -11.7203 -11.5032 -11.4989 -11.3835
-11.3824 -10.9490 -10.9480 -10.5972 -10.3791 -10.3784 -10.1154 -9.6430
 -9.6391
         -9.5445
                  -9.5363
                           -9.1301 -9.0531 -9.0447
                                                        -8.9621
                                                                 -8.9618
 -8.6460
          -8.5331
                  -8.5231 -8.4931 -8.4498
                                               -8.4482
                                                        -8.3935
                                                                 -8.3928
                                               -7.9400
                                     -8.0648
                                                                  -7.7754
 -8.1927
          -8.1899
                   -8.1859
                            -8.1825
                                                        -7.7927
                   -7.5799
 -7.6104
         -7.6095
                            -7.3878
                                     -7.2977
                                               -7.2972
                                                        -7.1497
                                                                 -7.1495
                   -7.0321
                            -6.8093
                                     -6.8037
                                               -6.6818
                                                        -6.4917
 -7.0704
         -7.0339
                                                                  -6.3603
                                     -5.8500
                                                        -5.7775
                            -5.8691
                                               -5.7924
 -6.3595
         -6.2205
                   -5.8926
                                                                  -5.4909
                                               -5.3109
         -5.4803
                  -5.4773
                            -5.4029
                                     -5.4019
                                                        -5.2087
 -5.4901
                                                                  -5.2075
                   -4.8089
                                                        -4.6516
                                     -4.7701
 -5.2038
          -5.1935
                            -4.8043
                                               -4.7681
                                                                  -4.6498
          -3.6815
                   -3.4304
                            -3.4243
                                     -3.3530
                                               -2.9387
                                                        -2.8608
 -3.6827
                                                                  -1.7684
           0.0985
                    0.4692
                                                         1.9843
                             0.4712
                                      1.9413
                                               1.9574
 -0.7614
                                                                   1.9889
                                                          2.4861
 2.2335
           2.3307
                    2.4040
                              2.4052
                                       2.4119
                                                2.4842
                                                                   2.7267
  2.7309
           2.7744
                    2.7906
                              2.9476
                                       3.1722
                                                3.1854
                                                          3.2019
                                                                   3.2854
  3.2893
           3.3953
       k = 0.1984 - 0.5774 \ 0.0000 \ (64802 \ PWs)
                                                bands (ev):
-21.1480 -21.1438 -21.1018 -21.1005 -20.8374 -20.8308 -20.0866 -19.9120
-19.6043 -19.6033 -19.2937 -19.2921 -18.9625 -18.9615 -18.7792 -18.7778
-18.4120 -18.4105 -18.3927 -18.3905 -18.0873 -18.0860 -17.7292 -17.7277
-17.5200 -17.4890 -17.4872 -17.2343 -15.8271 -15.8212 -15.2413 -14.5071
-14.4723 -14.4602 -14.4584 -13.9834 -12.8709 -12.8660 -12.3800 -12.3027
-12.2967 -12.0972 -12.0961 -11.9987 -11.7177 -11.5447 -11.5404 -11.3602
```

```
-8.6636
                -8.5305
                               -8.5115
                                              -8.5015
                                                             -8.4457
                                                                             -8.4441
                                                                                            -8.4085
                                                                                                           -8.4077
                                                                            -7.9758
                                                                                           -7.8079
 -8.1898
                -8.1850
                               -8.1817
                                              -8.1777
                                                             -8.0819
                                                                                                          -7.7907
 -7.5931
                -7.5922
                               -7.5539
                                              -7.4210
                                                             -7.2980
                                                                            -7.2975
                                                                                           -7.1419
                                                                                                          -7.1417
                -7.0452
 -7.0463
                               -7.0434
                                              -6.8262
                                                             -6.8207
                                                                             -6.6452
                                                                                            -6.5177
                                                                                                           -6.3758
 -6.3750
                -6.1859
                               -5.8657
                                              -5.8633
                                                             -5.8459
                                                                             -5.7805
                                                                                            -5.7671
                                                                                                           -5.4770
 -5.4742
                -5.4703
                               -5.4694
                                              -5.4112
                                                             -5.4102
                                                                            -5.2886
                                                                                            -5.2147
                                                                                                           -5.2059
 -5.2037
                -5.2022
                               -4.8409
                                              -4.8363
                                                             -4.7778
                                                                             -4.7758
                                                                                            -4.6771
                                                                                                           -4.6753
 -3.6702
                -3.6690
                               -3.4101
                                              -3.4040
                                                             -3.3628
                                                                            -2.9334
                                                                                           -2.8793
                                                                                                          -1.7414
 -0.7866
                                0.4504
                 0.1094
                                               0.4524
                                                              1.9463
                                                                             1.9625
                                                                                             2.0241
                                                                                                            2.0289
   2.2310
                  2.3309
                                 2.3916
                                                2.3948
                                                               2.3959
                                                                              2.4892
                                                                                             2.4911
                                                                                                             2.7318
   2.7359
                  2.7728
                                 2.7890
                                                2.9270
                                                               3.1740
                                                                              3.1794
                                                                                             3.1950
                                                                                                             3.2904
   3.2944
                  3.4052
           k = 0.2063 - 0.5774 \ 0.0000 \ (64806 \ PWs)
                                                                              bands (ev):
-21.1442 -21.1401 -21.0987 -21.0973 -20.8499 -20.8454 -20.0691 -19.8901
-21.1442 -21.1401 -21.0967 -21.0973 -20.0499 -20.0434 -20.0091 -19.0901 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19.0101 -19
                -9.5760
                               -9.5736
                                             -9.0772
  -9.5817
                                                             -9.0447
                                                                            -9.0357
                                                                                           -8.9130
                                                                                                          -8.9128
                -8.5679
                               -8.4899
                                                             -8.4413
                                                                            -8.4398
                                                                                           -8.4233
 -8.6812
                                              -8.4799
                                                                                                           -8.4225
                                              -8.1719
                                                             -8.0988
  -8.1869
                -8.1812
                               -8.1762
                                                                            -8.0117
                                                                                            -7.8238
                                                                                                           -7.8066
                               -7.5279
  -7.5758
                -7.5750
                                              -7.4542
                                                             -7.2983
                                                                            -7.2978
                                                                                           -7.1338
                                                                                                          -7.1336
                -7.0552
                               -7.0220
 -7.0570
                                              -6.8430
                                                             -6.8376
                                                                            -6.6086
                                                                                            -6.5438
                                                                                                           -6.3911
                                                                             -5.7630
                                                                                            -5.7524
 -6.3903
                -6.1515
                               -5.8638
                                              -5.8488
                                                             -5.8364
                                                                                                           -5.4730
  -5.4701
                -5.4503
                               -5.4495
                                              -5.4198
                                                             -5.4189
                                                                             -5.2664
                                                                                            -5.2249
                                                                                                           -5.2144
  -5.2008
                               -4.8728
                                              -4.8683
                                                             -4.7856
                                                                                            -4.7028
                -5.1997
                                                                             -4.7837
                                                                                                           -4.7010
  -3.6582
                -3.6570
                               -3.3904
                                              -3.3843
                                                              -3.3727
                                                                             -2.9284
                                                                                            -2.8976
                                                                                                           -1.7142
  -0.8121
                  0.1201
                                 0.4323
                                                0.4345
                                                               1.9515
                                                                              1.9677
                                                                                             2.0640
                                                                                                             2.0691
   2.2286
                  2.3311
                                 2.3715
                                                2.3860
                                                               2.3872
                                                                              2.4944
                                                                                             2.4963
                                                                                                             2.7371
   2.7412
                  2.7711
                                 2.7873
                                                2.9066
                                                               3.1562
                                                                              3.1828
                                                                                             3.1988
                                                                                                             3.2957
   3.2996
                  3.3711
           k = 0.2143 - 0.5774 \ 0.0000 \ (64814 \ PWs)
                                                                              bands (ev):
-21.1403 -21.1362 -21.0954 -21.0940 -20.8626 -20.8595 -20.0515 -19.8679
-19.6261 -19.6252 -19.3225 -19.3209 -18.9342 -18.9332 -18.7738 -18.7724
-18.4473 -18.4458 -18.3495 -18.3473 -18.0801 -18.0787 -17.7136 -17.7120
-17.5518 -17.5501 -17.5335 -17.2281 -15.7640 -15.7577 -15.2658 -14.5312
-14.5091 -14.5076 -14.4353 -13.9836 -12.7995 -12.7945 -12.4258 -12.2977
-12.2918 -12.1054 -12.1044 -12.0121 -11.7129 -11.6278 -11.6235 -11.3129
-11.3117 -10.9457 -10.9447 -10.4780 -10.4719 -10.4712 -10.1446
                                                                                                          -9.6052
                                                                                          -8.8891
 -9.5968
               -9.5497 -9.5455
                                             -9.0506 -9.0403
                                                                           -9.0308
                                                                                                          -8.8888
               -8.6051 -8.4683
                                             -8.4583
                                                            -8.4380
                                                                            -8.4373
                                                                                           -8.4368
 -8.6986
                                                                                                          -8.4353
               -8.1781
                              -8.1696
                                              -8.1655
                                                             -8.1155
                                                                            -8.0475
                                                                                           -7.8402
                                                                                                          -7.8230
 -8.1842
 -7.5585
                -7.5576
                              -7.5016
                                              -7.4875
                                                             -7.2986
                                                                            -7.2980
                                                                                           -7.1255
                                                                                                           -7.1253
 -7.0691
               -7.0673
                              -6.9976
                                              -6.8596
                                                             -6.8543
                                                                            -6.5721
                                                                                           -6.5699
                                                                                                           -6.4063
 -6.4055
                -6.1171
                               -5.8668
                                              -5.8537
                                                             -5.8093
                                                                            -5.7427
                                                                                            -5.7346
                                                                                                           -5.4689
 -5.4662
                -5.4301
                               -5.4293
                                              -5.4289
                                                             -5.4280
                                                                             -5.2443
                                                                                            -5.2353
                                                                                                           -5.2248
  -5.1971
                -5.1959
                               -4.9048
                                              -4.9004
                                                              -4.7937
                                                                             -4.7918
                                                                                            -4.7285
                                                                                                           -4.7268
                               -3.3826
                                              -3.3712
  -3.6467
                -3.6455
                                                              -3.3651
                                                                             -2.9237
                                                                                            -2.9157
                                                                                                           -1.6869
  -0.8379
                 0.1306
                                 0.4150
                                                0.4173
                                                               1.9569
                                                                              1.9731
                                                                                             2.1041
                                                                                                             2.1095
   2.2262
                  2.3312
                                 2.3518
                                                2.3779
                                                               2.3790
                                                                              2.4998
                                                                                             2.5017
                                                                                                             2.7426
                                 2.7855
                                                                              3.1880
                                                                                             3.2038
   2.7467
                  2.7693
                                                2.8864
                                                               3.1360
                                                                                                             3.3011
   3.3050
                  3.3324
           k = 0.2222 - 0.5774 \ 0.0000 \ (64840 \ PWs)
                                                                              bands (ev):
-21.1363 -21.1322 -21.0920 -21.0906 -20.8759 -20.8727 -20.0338 -19.8457
```

```
-19.6369 -19.6360 -19.3366 -19.3350 -18.9200 -18.9190 -18.7710 -18.7696
-18.4651 -18.4636 -18.3277 -18.3255 -18.0763 -18.0749 -17.7062 -17.7047
-17.5830 -17.5814 -17.5402 -17.2252 -15.7332 -15.7267 -15.2778 -14.5431
-14.5325 -14.5311 -14.4166 -13.9853 -12.7636 -12.7585 -12.4468 -12.2952 -12.2892 -12.1088 -12.1078 -12.0188 -11.7108 -11.6693 -11.6651 -11.2888
-11.2876 -10.9445 -10.9435 -10.5027 -10.5020 -10.4383 -10.1531 -9.6250
           -9.5201 -9.5159 -9.0359 -9.0259
                                                      -9.0239
                                                                            -8.8653
 -9.6166
                                                                 -8.8655
           -8.6422
                      -8.4527
                                 -8.4520
                                           -8.4468
                                                      -8.4367
 -8.7158
                                                                 -8.4322
                                                                            -8.4306
                                                                            -7.8400
           -8.1751 -8.1622 -8.1585
                                           -8.1320
                                                      -8.0832
                                                                 -7.8572
 -8.1814
                                                                 -7.1169
 -7.5412
           -7.5403
                      -7.5208
                                -7.4752
                                           -7.2987
                                                      -7.2982
                                                                            -7.1167
 -7.0817
           -7.0799
                      -6.9731
                                -6.8762
                                           -6.8709
                                                      -6.5960
                                                                 -6.5358
                                                                            -6.4213
                                -5.8607
 -6.4206
           -6.0829
                      -5.8721
                                           -5.7821
                                                      -5.7210
                                                                 -5.7149
                                                                            -5.4647
                                                      -5.2460
 -5.4621
           -5.4384
                      -5.4375
                                 -5.4098
                                           -5.4090
                                                                 -5.2355
                                                                            -5.2224
 -5.1931
           -5.1919
                      -4.9368
                                 -4.9324
                                           -4.8020
                                                      -4.8001
                                                                 -4.7544
                                                                            -4.7526
                                                                 -2.9192
                                                                            -1.6594
 -3.6356
           -3.6343
                      -3.3924
                                 -3.3527
                                           -3.3466
                                                      -2.9336
 -0.8640
            0.1408
                       0.3984
                                 0.4009
                                            1.9626
                                                       1.9787
                                                                   2.1442
                                                                             2.1500
  2.2239
             2.3312
                       2.3325
                                  2.3703
                                             2.3714
                                                        2.5054
                                                                   2.5073
                                                                              2.7483
  2.7523
             2.7675
                       2.7836
                                  2.8663
                                             3.1158
                                                        3.1935
                                                                   3.2091
                                                                              3.2926
  3.2986
             3.3072
        k = 0.2302 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                        bands (ev):
-21.1321 -21.1280 -21.0884 -21.0871 -20.8897 -20.8851 -20.0161 -19.8233 -19.6476 -19.6467 -19.3507 -19.3491 -18.9058 -18.9048 -18.7680 -18.7666 -18.4830 -18.4815 -18.3058 -18.3036 -18.0723 -18.0709 -17.6991 -17.6976 -17.6142 -17.6125 -17.5469 -17.2225 -15.7030 -15.6963 -15.2897 -14.5552 -14.5547 -14.5538 -14.3978 -13.9882 -12.7276 -12.7225 -12.4666 -12.2925 -12.2865 -12.1118 -12.1108 -12.0255 -11.7108 -11.7088 -11.7066 -11.2644 -11.2632 -10.9433 -10.9423 -10.5334 -10.5327 -10.3988 -10.1611 -9.6448 -9.6365 -9.4910 -9.4869 -9.0314 -9.0207 -8.9972 -8.8423 -8.8421
 -8.7328
           -8.6791
                      -8.4673
                                 -8.4666
                                           -8.4273
                                                      -8.4258
                                                                 -8.4251
                                                                            -8.4151
                      -8.1543
 -8.1786
           -8.1723
                                 -8.1521
                                           -8.1471
                                                      -8.1190
                                                                 -7.8747
                                                                            -7.8575
 -7.5542
           -7.5238
                      -7.5229
                                 -7.4487
                                            -7.2989
                                                      -7.2983
                                                                 -7.1080
                                                                            -7.1077
           -7.0927
 -7.0946
                      -6.9485
                                 -6.8925
                                                                 -6.4995
                                            -6.8873
                                                      -6.6222
                                                                            -6.4363
 -6.4355
                      -5.8791
                                 -5.8689
                                            -5.7550
           -6.0487
                                                       -5.6986
                                                                 -5.6939
                                                                            -5.4604
                                 -5.3895
 -5.4579
           -5.4482
                      -5.4474
                                            -5.3887
                                                       -5.2568
                                                                 -5.2463
                                                                            -5.2006
 -5.1890
                      -4.9688
                                 -4.9644
                                            -4.8104
                                                       -4.8086
                                                                 -4.7803
                                                                            -4.7785
           -5.1878
                                                                            -1.6318
 -3.6249
           -3.6236
                      -3.4022
                                 -3.3349
                                            -3.3288
                                                       -2.9514
                                                                 -2.9150
 -0.8903
             0.1508
                       0.3827
                                  0.3853
                                             1.9684
                                                        1.9844
                                                                   2.1840
                                                                              2.1905
  2.2219
             2.3140
                       2.3311
                                  2.3632
                                             2.3644
                                                        2.5112
                                                                   2.5131
                                                                              2.7542
                                                                              3.2532
  2.7579
             2.7658
                        2.7817
                                  2.8465
                                             3.0957
                                                        3.1992
                                                                   3.2148
  3.2591
             3.3128
        k = 0.2381 - 0.5774 \ 0.0000 \ (64812 \ PWs)
                                                        bands (ev):
-21.1277 -21.1236 -21.0848 -21.0834 -20.9037 -20.8971 -19.9982 -19.8008
-19.6583 -19.6573 -19.3646 -19.3630 -18.8915 -18.8905 -18.7649 -18.7636
-18.5009 -18.4994 -18.2837 -18.2815 -18.0682 -18.0668 -17.6923 -17.6907
-17.6452 -17.6436 -17.5536 -17.2200 -15.6736 -15.6667 -15.3015 -14.5766
-14.5755 -14.5666 -14.3789 -13.9923 -12.6915 -12.6864 -12.4849 -12.2897
-12.2837 -12.1144 -12.1133 -12.0321 -11.7524 -11.7482 -11.7071 -11.2397
-11.2386 -10.9420 -10.9410 -10.5641 -10.5634 -10.3593 -10.1685
                                                                            -9.6645
 -9.6563
           -9.4627
                      -9.4585
                                 -9.0269
                                           -9.0153
                                                      -8.9705
                                                                 -8.8194
                                                                            -8.8193
                                 -8.4811
           -8.7158
                                                       -8.4207
                                                                  -8.4036
 -8.7497
                      -8.4818
                                            -8.4223
                                                                            -8.3934
                                            -8.1457
                                                       -8.1420
 -8.1758
           -8.1694
                      -8.1652
                                 -8.1547
                                                                 -7.8928
                                                                            -7.8757
                                                       -7.2984
 -7.5876
           -7.5065
                      -7.5056
                                 -7.4220
                                            -7.2989
                                                                  -7.1080
                                                                            -7.1063
 -7.0987
           -7.0984
                      -6.9238
                                 -6.9087
                                            -6.9035
                                                       -6.6483
                                                                  -6.4634
                                                                            -6.4511
 -6.4503
           -6.0147
                      -5.8873
                                 -5.8779
                                            -5.7282
                                                       -5.6757
                                                                  -5.6723
                                                                            -5.4587
 -5.4578
           -5.4558
                      -5.4534
                                 -5.3692
                                            -5.3684
                                                       -5.2677
                                                                  -5.2572
                                                                            -5.1848
 -5.1836
           -5.1790
                      -5.0007
                                 -4.9964
                                           -4.8190
                                                      -4.8172
                                                                 -4.8063
                                                                            -4.8045
                      -3.4120
                                 -3.3177
                                           -3.3116
                                                      -2.9689
                                                                 -2.9110
 -3.6146
           -3.6134
                                                                            -1.6039
                                                       1.9904
 -0.9169
           0.1605
                      0.3678
                                 0.3706
                                            1.9744
                                                                 2.2186
                                                                            2.2224
```

```
2.2976
                     2.3309
                                                   2.5172
                                                             2.5192
                                                                       2.7603
  2.2324
                               2.3568
                                         2.3579
  2.7618
            2.7660
                      2.7796
                               2.8269
                                         3.0758
                                                   3.2051
                                                             3.2134
                                                                       3.2193
  3.2207
            3.3188
       k = 0.2460 - 0.5774 \ 0.0000 \ (64824 \ PWs)
                                                   bands (ev):
-21.1233 -21.1192 -21.0810 -21.0796 -20.9177 -20.9089 -19.9803 -19.7781
-19.6688 -19.6678 -19.3783 -19.3768 -18.8773 -18.8763 -18.7618 -18.7604
-18.5189 -18.5174 -18.2615 -18.2593 -18.0639 -18.0625 -17.6858 -17.6842
-17.6761 -17.6745 -17.5603 -17.2176 -15.6450 -15.6379 -15.3132 -14.5971
-14.5962 -14.5783 -14.3598 -13.9976 -12.6553 -12.6501 -12.5019 -12.2868 -12.2808 -12.1164 -12.1154 -12.0387 -11.7939 -11.7897 -11.7055 -11.2148
-11.2137 -10.9407 -10.9397 -10.5947 -10.5940 -10.3199 -10.1753
                                                                     -9.6843
 -9.6761 -9.4350 -9.4308 -9.0226 -9.0098 -8.9437
                                                           -8.7970
                                                                     -8.7968
                    -8.4963
                                       -8.4171
                                                            -8.3820
 -8.7663
          -8.7521
                              -8.4955
                                                 -8.4155
                                                                      -8.3718
                                                  -8.1332
                                                            -7.9114
                                                                      -7.8943
 -8.1903
          -8.1812
                    -8.1731
                              -8.1666 -8.1365
                                       -7.2990
          -7.4891
                              -7.3951
                                                                      -7.1200
 -7.6211
                    -7.4882
                                                 -7.2984
                                                            -7.1217
          -7.0889
                    -6.9248
                                        -6.8989
                                                            -6.4658
 -7.0892
                              -6.9196
                                                  -6.6745
                                                                     -6.4650
                                                            -5.6501
          -5.9808
                    -5.8965
                              -5.8877
                                        -5.7015
                                                  -5.6526
                                                                      -5.4693
 -6.4274
                              -5.3488
                                        -5.3480
                                                                      -5.1804
 -5.4685
          -5.4513
                    -5.4490
                                                  -5.2787
                                                            -5.2682
 -5.1792
          -5.1575
                    -5.0326
                              -5.0284
                                        -4.8323
                                                  -4.8306
                                                            -4.8277
                                                                      -4.8260
                                        -3.2951
 -3.6048
          -3.6036
                    -3.4218
                              -3.3012
                                                  -2.9863
                                                            -2.9074
                                                                      -1.5759
 -0.9438
                               0.3567
           0.1700
                     0.3538
                                         1.9806
                                                   1.9966
                                                             2.2173
                                                                       2.2496
                     2.3306
  2.2725
                               2.3508
                                                   2.5234
                                                                       2.7606
            2.2926
                                         2.3520
                                                             2.5254
  2.7666
            2.7713
                      2.7776
                               2.8075
                                         3.0561
                                                   3.1737
                                                             3.1794
                                                                       3.2113
  3.2267
            3.3251
       k = 0.2540 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                   bands (ev):
-21.1186 -21.1145 -21.0771 -21.0757 -20.9315 -20.9206 -19.9623 -19.7553
-19.6792 -19.6782 -19.3919 -19.3904 -18.8630 -18.8620 -18.7585 -18.7571
-18.5369 -18.5354 -18.2392 -18.2370 -18.0595 -18.0581 -17.7069 -17.7053 -17.6795 -17.6780 -17.5670 -17.2155 -15.6174 -15.6101 -15.3248 -14.6164 -14.6156 -14.5898 -14.3407 -14.0043 -12.6190 -12.6138 -12.5174 -12.2838 -12.2778 -12.1181 -12.1171 -12.0453 -11.8354 -11.8313 -11.7041 -11.1897
-11.1885 -10.9394 -10.9384 -10.6252 -10.6245 -10.2807 -10.1814
                                                                     -9.7039
 -9.6958
          -9.4081 -9.4039
                             -9.0186
                                       -9.0041
                                                 -8.9169
                                                           -8.7879
                                                                     -8.7828
 -8.7750
          -8.7748
                   -8.5106
                              -8.5098
                                        -8.4117
                                                  -8.4102
                                                            -8.3605
                                                                      -8.3502
 -8.2259
          -8.1972
                    -8.1703
                              -8.1637
                                        -8.1267
                                                  -8.1236
                                                            -7.9305
                                                                      -7.9135
 -7.6546
          -7.4717
                    -7.4708
                              -7.3681
                                        -7.2990
                                                  -7.2984
                                                            -7.1359
                                                                      -7.1341
                                                            -6.4803
 -7.0794
          -7.0791
                    -6.9407
                              -6.9356
                                        -6.8740
                                                  -6.7007
                                                                      -6.4795
                              -5.8981
                                                  -5.6294
                    -5.9065
 -6.3915
          -5.9471
                                        -5.6751
                                                            -5.6275
                                                                      -5.4805
          -5.4466
                    -5.4444
                                        -5.3277
 -5.4798
                              -5.3285
                                                  -5.2896
                                                            -5.2791
                                                                      -5.1758
                              -5.0603
                    -5.0645
                                        -4.8585
                                                  -4.8568
 -5.1746
          -5.1361
                                                            -4.8366
                                                                      -4.8349
                                                  -3.0035
 -3.5954
          -3.5942
                    -3.4315
                                        -3.2793
                                                            -2.9040
                              -3.2854
                                                                      -1.5478
 -0.9710
                     0.3406
           0.1793
                               0.3436
                                         1.9870
                                                  2.0030
                                                             2.2155
                                                                       2.2456
           2.3196
                     2.3303
                               2.3456
                                         2.3468
                                                   2.5298
                                                             2.5318
 2.3128
                                                                       2.7585
           2.7755
  2.7730
                     2.7776
                               2.7883
                                         3.0365
                                                   3.1339
                                                             3.1395
                                                                       3.2176
  3.2330
            3.3316
       k = 0.2619 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                   bands (ev):
-21.1138 -21.1097 -21.0730 -21.0717 -20.9452 -20.9321 -19.9442 -19.7324
-19.6895 -19.6886 -19.4054 -19.4038 -18.8488 -18.8478 -18.7552 -18.7538
-18.5550 -18.5535 -18.2168 -18.2145 -18.0550 -18.0536 -17.7376 -17.7360
-17.6736 -17.6720 -17.5736 -17.2135 -15.5910 -15.5835 -15.3362 -14.6344
-14.6337 -14.6013 -14.3214 -14.0122 -12.5826 -12.5773 -12.5314 -12.2808
-12.2747 -12.1192 -12.1182 -12.0519 -11.8770 -11.8728 -11.7029 -11.1643
-11.1631 -10.9380 -10.9370 -10.6556 -10.6549 -10.2415 -10.1870
                                                                     -9.7235
 -9.7154
         -9.3820 -9.3777 -9.0152 -8.9983 -8.8900 -8.8228
                                                                     -8.7991
                   -8.5249 -8.5241 -8.4062
                                                 -8.4046
 -8.7534
          -8.7532
                                                           -8.3389
                                                                      -8.3286
 -8.2614 -8.2130 -8.1674 -8.1609 -8.1163 -8.1134 -7.9502
                                                                     -7.9332
```

```
-7.6881
           -7.4543
                     -7.4534
                                -7.3409
                                          -7.2989
                                                     -7.2983
                                                               -7.1504
                                                                          -7.1486
                     -6.9564
                                -6.9514
 -7.0692
           -7.0689
                                          -6.8489
                                                     -6.7269
                                                               -6.4947
                                                                          -6.4939
           -5.9173
 -6.3558
                     -5.9134
                                -5.9092
                                          -5.6489
                                                     -5.6061
                                                               -5.6047
                                                                          -5.4922
                                                     -5.2993
 -5.4914
           -5.4418
                     -5.4397
                                -5.3090
                                          -5.3080
                                                               -5.2896
                                                                          -5.1711
 -5.1699
                     -5.0963
                                -5.0921
                                          -4.8847
                                                               -4.8457
           -5.1149
                                                     -4.8830
                                                                          -4.8440
 -3.5865
           -3.5853
                     -3.4411
                                -3.2704
                                          -3.2642
                                                     -3.0205
                                                               -2.9009
                                                                          -1.5194
 -0.9985
            0.1883
                      0.3283
                                0.3314
                                           1.9936
                                                     2.0095
                                                                 2.2138
                                                                           2.2299
  2.3299
            2.3400
                       2.3412
                                 2.3545
                                            2.3595
                                                      2.5365
                                                                 2.5384
                                                                           2.7562
  2.7693
            2.7729
                       2.7800
                                 2.7843
                                            3.0172
                                                      3.0940
                                                                 3.0996
                                                                           3.2242
  3.2395
            3.3383
        k = 0.2698 - 0.5774 \ 0.0000 \ (64842 \ PWs)
                                                      bands (ev):
-21.1089 -21.1048 -21.0689 -21.0675 -20.9587 -20.9435 -19.9260 -19.7093
-19.6998 \ -19.6988 \ -19.4187 \ -19.4172 \ -18.8345 \ -18.8335 \ -18.7517 \ -18.7503
-19.0990 -19.0900 -19.4107 -19.4172 -18.8345 -18.8335 -18.7517 -18.7503 -18.5732 -18.5717 -18.1942 -18.1919 -18.0503 -18.0489 -17.7681 -17.7666 -17.6679 -17.6663 -17.5803 -17.2117 -15.5660 -15.5582 -15.3475 -14.6508 -14.6501 -14.6127 -14.3020 -14.0215 -12.5470 -12.5433 -12.5405 -12.2776 -12.2716 -12.1199 -12.1189 -12.0584 -11.9185 -11.9143 -11.7018 -11.1386 -11.1374 -10.9367 -10.9356 -10.6859 -10.6852 -10.2025 -10.1920 -9.7430 -9.7350 -9.3567 -9.3523 -9.0130 -8.89922 -8.8632 -8.8562 -8.8552
                     -8.5390
                                                               -8.3174
                                                                          -8.3071
 -8.7322
           -8.7321
                                -8.5383
                                          -8.4005
                                                     -8.3989
                     -8.1646
                                                     -8.1025
 -8.2969
           -8.2286
                                -8.1580
                                          -8.1052
                                                               -7.9704
                                                                          -7.9534
                     -7.4359
                                          -7.2988
 -7.7217
                                -7.3136
                                                     -7.2982
                                                               -7.1653
           -7.4368
                                                                          -7.1635
                     -6.9720
                                -6.9670
                                          -6.8236
                                                     -6.7531
                                                               -6.5090
 -7.0588
           -7.0584
                                                                          -6.5082
 -6.3202
                     -5.9209
                                -5.8800
                                          -5.6230
                                                     -5.5830
                                                               -5.5815
                                                                          -5.5043
           -5.9288
 -5.5036
           -5.4369
                     -5.4350
                                -5.3124
                                          -5.3023
                                                     -5.2865
                                                                -5.2855
                                                                          -5.1663
                                          -4.9110
 -5.1651
           -5.1281
                     -5.1239
                                -5.0938
                                                     -4.9093
                                                                -4.8548
                                                                          -4.8532
           -3.5768
                     -3.4508
                                -3.2560
 -3.5781
                                          -3.2499
                                                     -3.0374
                                                                -2.8981
                                                                          -1.4910
 -1.0262
            0.1971
                       0.3168
                                 0.3201
                                            2.0004
                                                      2.0163
                                                                 2.2121
                                                                           2.2125
  2.3293
            2.3363
                       2.3373
                                 2.3952
                                            2.4003
                                                      2.5433
                                                                 2.5452
                                                                           2.7505
                                 2.7912
                                                      3.0542
                                                                 3.0596
  2.7539
            2.7705
                       2.7869
                                            2.9980
                                                                           3.2309
  3.2461
            3.3452
        k = 0.2778 - 0.5774 \ 0.0000 \ (64818 \ PWs)
                                                      bands (ev):
-21.1039 -21.0998 -21.0646 -21.0632 -20.9721 -20.9548 -19.9078 -19.7099
-19.7090 -19.6861 -19.4319 -19.4304 -18.8202 -18.8192 -18.7481 -18.7467
-18.5915 -18.5900 -18.1715 -18.1692 -18.0455 -18.0441 -17.7986 -17.7971
-17.6625 -17.6610 -17.5869 -17.2101 -15.5425 -15.5345 -15.3587 -14.6656
-14.6648 -14.6240 -14.2825 -14.0321 -12.5550 -12.5094 -12.5041 -12.2744
-12.2683 -12.1202 -12.1192 -12.0649 -11.9600 -11.9558 -11.7009 -11.1127
-11.1115 -10.9352 -10.9342 -10.7161 -10.7154 -10.1964 -10.1635
                                                                         -9.7625
                     -9.3277
                               -9.0133
                                          -8.9860
                                                    -8.8870
 -9.7545
          -9.3323
                                                               -8.8363
                                                                          -8.8311
          -8.7113
                     -8.5531 -8.5523
                                          -8.3946
                                                    -8.3930
 -8.7114
                                                               -8.3323
                                                                          -8.2959
 -8.2855
           -8.2441
                     -8.1617
                               -8.1551
                                          -8.0935
                                                     -8.0910
                                                               -7.9911
                                                                          -7.9742
                                                               -7.1806
          -7.4194
                     -7.4185
                               -7.2987
                                          -7.2981
                                                    -7.2861
 -7.7553
                                                                          -7.1788
 -7.0480
          -7.0477
                     -6.9874
                               -6.9825
                                          -6.7983
                                                    -6.7794
                                                               -6.5231
                                                                          -6.5223
 -6.2848
          -5.9409
                     -5.9332
                               -5.8466
                                          -5.5973
                                                    -5.5602
                                                               -5.5582
                                                                          -5.5168
 -5.5161
          -5.4320
                     -5.4302
                               -5.3228
                                          -5.3123
                                                     -5.2664
                                                               -5.2655
                                                                          -5.1613
 -5.1601
           -5.1597
                     -5.1556
                                -5.0729
                                          -4.9373
                                                     -4.9356
                                                               -4.8641
                                                                          -4.8625
 -3.5701
           -3.5688
                     -3.4604
                                -3.2424
                                          -3.2363
                                                     -3.0541
                                                               -2.8956
                                                                          -1.4623
 -1.0542
            0.2057
                       0.3063
                                 0.3097
                                            2.0074
                                                      2.0232
                                                                 2.1947
                                                                           2.2107
                                                                 2.5523
                                                      2.5503
  2.3287
            2.3327
                       2.3337
                                 2.4367
                                            2.4419
                                                                           2.7319
                                            2.9790
                                                      3.0143
  2.7513
            2.7681
                       2.7941
                                 2.7983
                                                                 3.0197
                                                                           3.2378
  3.2530
            3.3522
        k = 0.2857 - 0.5774 \ 0.0000 \ (64838 \ PWs)
                                                      bands (ev):
-21.0986 -21.0946 -21.0602 -21.0588 -20.9854 -20.9660 -19.8894 -19.7200
-19.7190 -19.6627 -19.4450 -19.4434 -18.8059 -18.8049 -18.7445 -18.7431
-18.6097 -18.6083 -18.1486 -18.1463 -18.0406 -18.0391 -17.8289 -17.8274
```

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-17.6575 -17.6559 -17.5934 -17.2087 -15.5207 -15.5125 -15.3697 -14.6784
-14.6775 -14.6353 -14.2628 -14.0441 -12.5645 -12.4727 -12.4673 -12.2711
-12.2650 -12.1200 -12.1190 -12.0713 -12.0014 -11.9973 -11.7002 -11.0865
-11.0853 -10.9338 -10.9328 -10.7462 -10.7455 -10.2002 -10.1247
                                                                           -9.7819
                      -9.3039
                                           -8.9797
                                                      -8.9128
                                                                            -8.8094
 -9.7739
           -9.3087
                                -9.0183
                                                                -8.8467
 -8.6911
           -8.6910
                      -8.5671
                                -8.5663
                                           -8.3885
                                                      -8.3870
                                                                 -8.3676
                                                                            -8.2744
                                -8.1522
 -8.2639
           -8.2594
                      -8.1588
                                           -8.0811
                                                                            -7.9954
                                                      -8.0787
                                                                 -8.0123
           -7.4019
                      -7.4010
                                -7.2985
                                           -7.2979
                                                      -7.2585
                                                                 -7.1963
 -7.7889
                                                                           -7.1945
 -7.0370
           -7.0366
                      -7.0026
                                -6.9977
                                           -6.8056
                                                      -6.7729
                                                                 -6.5371
                                                                            -6.5363
           -5.9538
 -6.2495
                      -5.9461
                                -5.8134
                                           -5.5721
                                                      -5.5377
                                                                 -5.5349
                                                                            -5.5297
 -5.5291
           -5.4272
                      -5.4253
                                 -5.3330
                                           -5.3224
                                                      -5.2459
                                                                 -5.2451
                                                                            -5.1913
                      -5.1550
 -5.1871
           -5.1562
                                 -5.0521
                                           -4.9637
                                                      -4.9620
                                                                 -4.8735
                                                                            -4.8719
 -3.5625
           -3.5612
                      -3.4699
                                 -3.2296
                                           -3.2235
                                                      -3.0705
                                                                 -2.8934
                                                                            -1.4335
                                  0.3002
 -1.0825
                       0.2966
                                             2.0146
                                                       2.0303
             0.2141
                                                                  2.1768
                                                                             2.2094
  2.3279
             2.3298
                       2.3306
                                  2.4785
                                             2.4838
                                                       2.5576
                                                                  2.5595
                                                                             2.7136
  2.7487
             2.7655
                       2.8014
                                  2.8057
                                             2.9602
                                                        2.9745
                                                                  2.9797
                                                                             3.2449
  3.2600
             3.3595
        k = 0.2936 - 0.5774 \ 0.0000 \ (64858 \ PWs)
                                                       bands (ev):
-21.0933 -21.0892 -21.0557 -21.0543 -20.9985 -20.9770 -19.8710 -19.7299 -19.7290 -19.6392 -19.4579 -19.4563 -18.7916 -18.7906 -18.7407 -18.7393 -18.6281 -18.6266 -18.1256 -18.1233 -18.0355 -18.0340 -17.8591 -17.8577 -17.6527 -17.6511 -17.6000 -17.2076 -15.5010 -15.4926 -15.3807 -14.6890 -14.6880 -14.6464 -14.2431 -14.0575 -12.5725 -12.4358 -12.4304 -12.2677 -12.2615 -12.1194 -12.1184 -12.0777 -12.0429 -12.0388 -11.6996 -11.0601 -11.0589 -10.9323 -10.9313 -10.7762 -10.7755 -10.2033 -10.0860 -9.8012 -9.7933 -9.2860 -9.2809 -9.0313 -8.9731 -8.9304 -8.8621 -8.7826
                      -8.5810
 -8.6712
                                -8.5802
                                           -8.4029
                                                      -8.3823
           -8.6711
                                                                 -8.3808
                                                                            -8.2746
 -8.2530
           -8.2424
                      -8.1559
                                 -8.1493
                                           -8.0681
                                                      -8.0658
                                                                 -8.0340
                                                                            -8.0171
 -7.8225
           -7.3844
                      -7.3835
                                 -7.2983
                                           -7.2977
                                                      -7.2307
                                                                 -7.2123
                                                                            -7.2105
                      -7.0171
                                                                 -6.5509
 -7.0262
           -7.0257
                                 -7.0125
                                            -6.8319
                                                      -6.7473
                                                                            -6.5501
                      -5.9596
                                 -5.7804
                                            -5.5473
                                                      -5.5433
                                                                 -5.5427
 -6.2145
           -5.9672
                                                                            -5.5157
 -5.5116
           -5.4225
                      -5.4204
                                            -5.3318
                                                      -5.2256
                                 -5.3426
                                                                 -5.2249
                                                                            -5.2224
                                 -5.0315
                                            -4.9901
                                                      -4.9884
 -5.2182
           -5.1509
                      -5.1497
                                                                 -4.8830
                                                                            -4.8814
 -3.5554
           -3.5541
                      -3.4794
                                 -3.2175
                                            -3.2114
                                                      -3.0868
                                                                 -2.8916
                                                                            -1.4045
 -1.1110
            0.2222
                       0.2879
                                  0.2917
                                             2.0219
                                                                  2.1592
                                                                             2.2083
                                                       2.0375
  2.3265
             2.3279
                       2.3282
                                  2.5204
                                             2.5260
                                                        2.5650
                                                                  2.5669
                                                                             2.6955
  2.7460
             2.7628
                       2.8090
                                  2.8132
                                             2.9343
                                                        2.9396
                                                                  2.9422
                                                                             3.2523
  3.2671
             3.3667
        k = 0.3016 - 0.5774 \ 0.0000 \ (64820 \ PWs)
                                                       bands (ev):
-21.0878 -21.0837 -21.0510 -21.0497 -21.0115 -20.9880 -19.8525 -19.7398
-19.7388 -19.6156 -19.4706 -19.4691 -18.7773 -18.7763 -18.7368 -18.7354
-18.6465 -18.6450 -18.1025 -18.1002 -18.0302 -18.0288 -17.8892 -17.8878
-17.6482 -17.6466 -17.6065 -17.2066 -15.4835 -15.4749 -15.3915 -14.6971
-14.6960 -14.6574 -14.2232 -14.0722 -12.5789 -12.3989 -12.3935 -12.2642
-12.2580 -12.1183 -12.1173 -12.0843 -12.0840 -12.0802 -11.6991 -11.0335
-11.0323 -10.9308 -10.9298 -10.8061 -10.8054 -10.2059 -10.0475
                                                                           -9.8205
 -9.8126
           -9.2642
                      -9.2588
                                -9.0533
                                           -8.9664
                                                      -8.9386
                                                                 -8.8773
                                                                            -8.7557
 -8.6518
           -8.6516
                      -8.5948
                                 -8.5940
                                           -8.4381
                                                      -8.3760
                                                                 -8.3744
                                                                            -8.2896
 -8.2317
            -8.2209
                      -8.1529
                                 -8.1464
                                            -8.0562
                                                      -8.0544
                                                                 -8.0521
                                                                            -8.0392
                      -7.3661
                                 -7.2980
                                            -7.2975
                                                      -7.2286
 -7.8562
            -7.3670
                                                                 -7.2268
                                                                            -7.2028
                      -7.0132
                                                      -6.7216
                                                                 -6.5646
 -7.0334
            -7.0286
                                 -7.0128
                                            -6.8582
                                                                            -6.5638
 -6.1796
            -5.9813
                      -5.9737
                                 -5.7475
                                            -5.5572
                                                      -5.5566
                                                                 -5.5231
                                                                            -5.4948
 -5.4890
            -5.4181
                      -5.4152
                                 -5.3511
                                            -5.3403
                                                       -5.2541
                                                                 -5.2493
                                                                            -5.2048
 -5.2039
            -5.1456
                      -5.1443
                                 -5.0166
                                            -5.0149
                                                                 -4.8925
                                                       -5.0111
                                                                            -4.8910
                      -3.4888
                                                                 -2.8900
 -3.5488
            -3.5475
                                 -3.2062
                                            -3.2001
                                                       -3.1029
                                                                            -1.3753
 -1.1398
            0.2301
                      0.2800
                                 0.2840
                                            2.0295
                                                       2.0448
                                                                 2.1417
                                                                            2.2075
                                                                  2.5748
  2.3247
             2.3260
                       2.3271
                                  2.5620
                                             2.5680
                                                       2.5730
                                                                             2.6779
                                  2.8210
                                             2.8946
                                                       2.8998
                                                                  2.9236
  2.7432
             2.7600
                       2.8168
                                                                             3.2598
```

```
3.2744
            3.3689
        k = 0.3095 - 0.5774 \ 0.0000 \ (64832 \ PWs)
                                                      bands (ev):
-21.0821 -21.0781 -21.0462 -21.0449 -21.0243 -20.9988 -19.8339 -19.7495
-19.7486 -19.5918 -19.4832 -19.4817 -18.7630 -18.7620 -18.7329 -18.7315
-18.6649 -18.6634 -18.0793 -18.0769 -18.0249 -18.0234 -17.9192 -17.9178
-17.6440 -17.6424 -17.6130 -17.2058 -15.4685 -15.4597 -15.4021 -14.7026 -14.7013 -14.6683 -14.2032 -14.0882 -12.5839 -12.3619 -12.3564 -12.2606 -12.2544 -12.1257 -12.1216 -12.1168 -12.1158 -12.0904 -11.6988 -11.0066
-11.0054 \ -10.9292 \ -10.9282 \ -10.8358 \ -10.8351 \ -10.2079 \ -10.0091 \ -9.8397
 -9.8318
           -9.2434 -9.2375 -9.0818 -8.9596 -8.9402
                                                               -8.8921
                                                                         -8.7289
                                                                         -8.3044
                                                               -8.3679
 -8.6328
           -8.6326 -8.6085
                               -8.6077
                                          -8.4733
                                                    -8.3694
                                                                         -8.0377
 -8.2105
           -8.1995
                     -8.1498
                               -8.1433
                                          -8.0788
                                                    -8.0624
                                                               -8.0396
                               -7.2978
                                                                         -7.1747
 -7.8899
           -7.3495
                     -7.3486
                                          -7.2972
                                                    -7.2453
                                                               -7.2436
 -7.0480
           -7.0431
                     -7.0014
                               -7.0010
                                          -6.8844
                                                    -6.6958
                                                               -6.5782
                                                                         -6.5774
                     -5.9885
                                                    -5.5711
                                                               -5.4999
                                                                         -5.4760
 -6.1450
           -5.9961
                               -5.7147
                                          -5.5716
                                                               -5.2794
                     -5.4093
                                -5.3580
                                                                         -5.1842
 -5.4677
           -5.4138
                                          -5.3472
                                                    -5.2853
 -5.1834
           -5.1400
                     -5.1388
                                -5.0431
                                          -5.0414
                                                     -4.9907
                                                               -4.9021
                                                                         -4.9007
                                                               -2.8888
                                                                         -1.3460
 -3.5426
           -3.5413
                     -3.4982
                                -3.1957
                                          -3.1897
                                                     -3.1188
 -1.1688
            0.2378
                      0.2732
                                 0.2773
                                           2.0372
                                                      2.0521
                                                                2.1247
                                                                           2.2067
  2.3234
            2.3246
                       2.3262
                                 2.5802
                                           2.5821
                                                      2.6046
                                                                2.6104
                                                                           2.6612
  2.7403
            2.7571
                                 2.8289
                                           2.8549
                       2.8247
                                                      2.8600
                                                                2.9055
                                                                           3.2674
  3.2817
            3.3534
        k = 0.3175 - 0.5774 \ 0.0000 \ (64832 \ PWs)
                                                      bands (ev):
-21.0764 -21.0723 -21.0414 -21.0400 -21.0368 -21.0095 -19.8153 -19.7592 -19.7582 -19.5680 -19.4957 -19.4942 -18.7488 -18.7477 -18.7288 -18.7274 -18.6834 -18.6819 -18.0559 -18.0536 -18.0194 -18.0179 -17.9491 -17.9476 -17.6401 -17.6385 -17.6194 -17.2053 -15.4562 -15.4472 -15.4126 -14.7052 -14.7038 -14.6791 -14.1832 -14.1055 -12.5874 -12.3247 -12.3193 -12.2569 -12.2507 -12.1670 -12.1629 -12.1148 -12.1138 -12.0966 -11.6985 -10.9795
-8.6221
           -8.6214
                     -8.6142
                               -8.6140
                                          -8.5083
                                                    -8.3627
                                                               -8.3611
                                                                         -8.3191
 -8.1895
           -8.1782
                     -8.1464
                               -8.1402
                                          -8.1019
                                                    -8.0855
                                                               -8.0246
                                                                         -8.0226
 -7.9237
                               -7.2975
                                          -7.2969
           -7.3320
                     -7.3311
                                                    -7.2624
                                                               -7.2606
                                                                         -7.1466
 -7.0626
           -7.0577
                     -6.9891
                               -6.9887
                                          -6.9107
                                                    -6.6699
                                                               -6.5917
                                                                         -6.5909
 -6.1106
           -6.0115
                     -6.0038
                               -5.6821
                                          -5.5865
                                                    -5.5860
                                                               -5.4784
                                                                         -5.4612
                     -5.4014
                                                               -5.3080
 -5.4502
           -5.4079
                                -5.3623
                                          -5.3518
                                                    -5.3163
                                                                         -5.1637
                                          -5.0680
                                -5.0696
 -5.1628
           -5.1344
                     -5.1331
                                                    -4.9706
                                                               -4.9118
                                                                         -4.9105
                     -3.5076
           -3.5356
                                                               -2.8879
 -3.5369
                                -3.1861
                                          -3.1801
                                                    -3.1345
                                                                         -1.3165
 -1.1981
            0.2452
                      0.2673
                                 0.2716
                                           2.0451
                                                      2.0591
                                                                2.1084
                                                                           2.2062
                      2.3253
                                 2.5882
                                           2.5902
                                                      2.6342
                                                                2.6508
  2.3225
            2.3238
                                                                           2.6587
  2.7372
            2.7542
                      2.8150
                                 2.8201
                                           2.8330
                                                      2.8372
                                                                2.8876
                                                                           3.2752
  3.2887
            3.3372
        k = 0.3254 - 0.5774 \ 0.0000 \ (64802 \ PWs)
                                                      bands (ev):
-21.0706 -21.0665 -21.0491 -21.0363 -21.0350 -21.0200 -19.7966 -19.7688
-19.7678 -19.5439 -19.5080 -19.5065 -18.7346 -18.7335 -18.7246 -18.7232
-18.7019 -18.7003 -18.0325 -18.0301 -18.0137 -18.0123 -17.9788 -17.9773
-17.6365 -17.6349 -17.6258 -17.2049 -15.4468 -15.4377 -15.4226 -14.7048
-14.7032 -14.6899 -14.1631 -14.1240 -12.5895 -12.2876 -12.2821 -12.2532
-12.2470 -12.2083 -12.2042 -12.1124 -12.1114 -12.1028 -11.6984 -10.9522
-10.9510 -10.9261 -10.9251 -10.8949 -10.8942 -10.2102
                                                               -9.9328
                                                                         -9.8778
                               -9.1471 -8.9456
 -9.8700
          -9.2051
                     -9.1977
                                                    -8.9339
                                                               -8.9205
                                                                         -8.6754
                     -8.5961 -8.5959
 -8.6356
          -8.6348
                                          -8.5433
                                                    -8.3558
                                                               -8.3542
                                                                         -8.3335
 -8.1694
          -8.1574 -8.1423 -8.1367
                                          -8.1253
                                                    -8.1091
                                                               -8.0088
                                                                         -8.0068
          -7.3145 -7.3136 -7.2971
                                          -7.2966
                                                    -7.2797
                                                               -7.2780
 -7.9574
                                                                         -7.1182
 -7.0771 -7.0722 -6.9765 -6.9760 -6.9369 -6.6439 -6.6050
                                                                         -6.6042
```

```
-6.0765
          -6.0275
                    -6.0197
                              -5.6497
                                        -5.6018
                                                  -5.6014
                                                           -5.4606
                                                                     -5.4525
 -5.4408
          -5.3968
                    -5.3904
                              -5.3635
                                        -5.3533
                                                 -5.3469
                                                           -5.3334
                                                                     -5.1431
                    -5.1273
                                                                     -4.9203
 -5.1422
          -5.1285
                              -5.0962
                                        -5.0945
                                                 -4.9506
                                                           -4.9216
                                                  -3.1498
                                                           -2.8874
          -3.5303
                    -3.5168
 -3.5316
                              -3.1773
                                        -3.1713
                                                                     -1.2869
 -1.2276
                                         2.0528
                                                  2.0647
                                                            2.0943
           0.2521
                    0.2625
                               0.2670
                                                                      2.2059
 2.3221
           2.3234
                     2.3245
                               2.5964
                                         2.5984
                                                   2.6224
                                                             2.6916
                                                                      2.6971
                                                   2.8453
                                                                      3.2829
  2.7341
           2.7511
                     2.7756
                               2.7808
                                         2.8413
                                                             2.8701
  3.2944
           3.3230
       k = 0.3333 - 0.5774 \ 0.0000 \ (64770 \ PWs)
                                                   bands (ev):
-21.0663 -21.0620 -21.0581 -21.0316 -21.0304 -21.0295 -19.7787 -19.7776
-19.7770 \ -19.5210 \ -19.5193 \ -19.5183 \ -18.7212 \ -18.7206 \ -18.7202 \ -18.7195
-18.7190 -18.7175 -18.0097 -18.0087 -18.0082 -18.0067 -18.0063 -18.0055 -17.6336 -17.6322 -17.6311 -17.2048 -15.4411 -15.4337 -15.4293 -14.7012 -14.7005 -14.6994 -14.1467 -14.1398 -12.5902 -12.2523 -12.2499 -12.2484 -12.2448 -12.2443 -12.2398 -12.1099 -12.1088 -12.1084 -11.6983 -10.9253
-10.9246 -10.9243 -10.9240 -10.9234 -10.9223 -10.2105
                                                                     -9.8946
                                                           -9.8973
                             -9.1744
                                                           -8.9271
                                                                     -8.6491
 -9.8885
          -9.1923
                    -9.1816
                                       -8.9396
                                                 -8.9343
                    -8.5786
                             -8.5783
                                       -8.5779
                                                 -8.3495
 -8.6488
          -8.6480
                                                           -8.3473
                                                                     -8.3471
 -8.1527
          -8.1499
                    -8.1404
                              -8.1351
                                       -8.1324
                                                  -8.1293
                                                           -7.9925
                                                                     -7.9912
                    -7.2975
 -7.9902
          -7.2980
                              -7.2968
                                        -7.2962
                                                  -7.2954
                                                           -7.2952
                                                                     -7.0921
 -7.0899
                    -6.9642
                              -6.9633
          -7.0858
                                        -6.9623
                                                  -6.6186
                                                           -6.6177
                                                                     -6.6170
                    -6.0350
                              -5.6179
                                        -5.6174
          -6.0421
                                                  -5.6171
                                                           -5.4532
 -6.0461
                                                                     -5.4480
                    -5.3795
                              -5.3754
 -5.4402
          -5.3814
                                        -5.3606
                                                           -5.3488
                                                  -5.3512
                                                                     -5.1233
 -5.1230
          -5.1228
                    -5.1216
                              -5.1213
                                        -5.1200
                                                  -4.9319
                                                            -4.9304
                                                                     -4.9300
 -3.5272
          -3.5260
                    -3.5251
                              -3.1707
                                        -3.1657
                                                  -3.1613
                                                            -2.8872
                                                                     -1.2587
 -1.2558
                     0.2600
           0.2562
                               0.2646
                                                   2.0661
                                                             2.0876
                                         2.0577
                                                                      2.2058
  2.3222
           2.3235
                     2.3239
                               2.6035
                                         2.6062
                                                   2.6076
                                                             2.7274
                                                                       2.7308
  2.7322
           2.7419
                               2.7509
                                         2.8488
                     2.7468
                                                   2.8511
                                                             2.8565
                                                                      3.2879
  3.2960
           3.3161
       k = 0.3294 - 0.5705 \ 0.0000 \ (64806 \ PWs)
                                                   bands (ev):
-21.0749 -21.0586 -21.0527 -21.0409 -21.0260 -21.0245 -19.7873 -19.7869
-19.7589 -19.5320 -19.5309 -19.4956 -18.7391 -18.7375 -18.7161 -18.7146
-18.7056 -18.7052 -18.0387 -18.0366 -18.0018 -17.9998 -17.9847 -17.9830
-17.6387 -17.6301 -17.6284 -17.2049 -15.4436 -15.4354 -15.4280 -14.7117
-14.6938 -14.6926 -14.1668 -14.1202 -12.5895 -12.2915 -12.2885 -12.2447
-12.2378 -12.2122 -12.2076 -12.1152 -12.1063 -12.1052 -11.6984 -10.9534
-10.9530 -10.9229 -10.9218 -10.8969 -10.8955 -10.2102
                                                                     -9.9078
                                                           -9.9142
 -9.8585
          -9.2205
                   -9.1673
                             -9.1606 -8.9515
                                                 -8.9283
                                                           -8.9214
                                                                     -8.6623
                                                           -8.3415
 -8.6615
          -8.6220
                   -8.6131
                             -8.5612
                                       -8.5609
                                                 -8.3622
                                                                     -8.3400
                                       -8.1179
                                                           -8.0257
 -8.1769
          -8.1594
                    -8.1408
                             -8.1333
                                                 -8.1121
                                                                     -7.9744
          -7.3156
                    -7.3136
                             -7.2964
                                       -7.2959
                                                 -7.2795
                                                           -7.2784
 -7.9733
                                                                     -7.1046
                             -6.9501
                                                 -6.6309
 -7.1014
          -7.0616
                    -6.9895
                                       -6.9499
                                                           -6.6306
                                                                     -6.5915
 -6.0616
          -6.0534
                    -6.0095
                             -5.6340
                                       -5.6335
                                                 -5.5855
                                                           -5.4563
                                                                     -5.4521
 -5.4447
          -5.4083
                    -5.3716
                              -5.3661
                                       -5.3541
                                                 -5.3458
                                                           -5.3385
                                                                     -5.1494
          -5.1166
 -5.1478
                    -5.1154
                              -5.1015
                                       -5.1012
                                                 -4.9414
                                                           -4.9400
                                                                     -4.9110
 -3.5353
          -3.5224
                    -3.5210
                              -3.1809
                                       -3.1618
                                                 -3.1557
                                                           -2.8874
                                                                     -1.2884
 -1.2261
           0.2543
                     0.2598
                               0.2675
                                         2.0483
                                                   2.0727
                                                            2.0907
                                                                      2.2059
 2.3218
           2.3237
                     2.3245
                               2.5888
                                         2.6135
                                                   2.6149
                                                             2.6949
                                                                      2,6984
  2.7277
           2.7462
                     2.7789
                               2.7841
                                         2.8344
                                                   2.8592
                                                             2.8631
                                                                       3.2784
  3.3026
           3.3193
       k = 0.3254 - 0.5636 \ 0.0000 \ (64824 \ PWs)
                                                   bands (ev):
-21.0868 -21.0524 -21.0511 -21.0464 -21.0206 -21.0191 -19.7966 -19.7962
-19.7400 -19.5439 -19.5428 -19.4712 -18.7577 -18.7561 -18.7116 -18.7101
-18.6914 -18.6910 -18.0681 -18.0659 -17.9958 -17.9938 -17.9609 -17.9591
-17.6450 -17.6274 -17.6256 -17.2053 -15.4529 -15.4352 -15.4274 -14.7221
-14.6839 -14.6827 -14.1889 -14.0996 -12.5875 -12.3327 -12.3296 -12.2407
```

```
-12.2337 -12.1748 -12.1702 -12.1213 -12.1025 -12.1015 -11.6985 -10.9825
-10.9821 -10.9212 -10.9201 -10.8689 -10.8675 -10.2094
                                                                  -9.9330
                                                                             -9.9266
 -9.8210
            -9.2556
                      -9.1518
                                 -9.1437
                                            -8.9646
                                                       -8.9207
                                                                   -8.9147
                                                                              -8.6755
                      -8.5954
                                 -8.5444
                                            -8.5441
 -8.6747
            -8.6480
                                                       -8.3762
                                                                   -8.3341
                                                                              -8.3326
                                 -8.1297
                                            -8.0982
 -8.2018
            -8.1844
                      -8.1364
                                                       -8.0913
                                                                   -8.0594
                                                                             -7.9566
 -7.9555
            -7.3339
                      -7.3320
                                 -7.2960
                                            -7.2955
                                                       -7.2620
                                                                   -7.2610
                                                                             -7.1186
 -7.1153
            -7.0332
                      -7.0155
                                 -6.9365
                                            -6.9363
                                                       -6.6438
                                                                  -6.6435
                                                                              -6.5652
 -6.0796
            -6.0713
                      -5.9766
                                 -5.6508
                                            -5.6503
                                                       -5.5536
                                                                   -5.4726
                                                                              -5.4600
            -5.4385
 -5.4522
                      -5.3644
                                 -5.3588
                                            -5.3434
                                                       -5.3262
                                                                   -5.3200
                                                                              -5.1761
 -5.1744
                                                       -4.9513
                                                                   -4.9500
            -5.1104
                      -5.1091
                                 -5.0809
                                            -5.0806
                                                                              -4.8916
 -3.5444
            -3.5185
                      -3.5171
                                 -3.1957
                                            -3.1555
                                                       -3.1494
                                                                   -2.8880
                                                                              -1.3186
 -1.1959
             0.2522
                        0.2582
                                   0.2738
                                              2.0338
                                                         2.0811
                                                                   2.0977
                                                                               2.2062
                                   2.5722
  2.3209
             2.3248
                        2.3258
                                              2.6211
                                                         2.6226
                                                                    2.6570
                                                                               2.6600
  2.7242
             2.7428
                                   2.8223
                                              2.8271
                                                         2.8682
                                                                    2.8720
                        2.8169
                                                                               3.2638
             3.3263
  3.3110
        k = 0.3214 - 0.5567 \ 0.0000 \ (64846 \ PWs)
                                                         bands (ev):
-21.0987 -21.0612 -21.0459 -21.0399 -21.0151 -21.0136 -19.8058 -19.8054 -19.7209 -19.5556 -19.5546 -19.4466 -18.7763 -18.7747 -18.7071 -18.7056 -18.6772 -18.6768 -18.0973 -18.0951 -17.9896 -17.9876 -17.9368 -17.9350 -17.6513 -17.6249 -17.6232 -17.2058 -15.4626 -15.4373 -15.4295 -14.7324 -14.6709 -14.6697 -14.2121 -14.0790 -12.5843 -12.3738 -12.3708 -12.2366 -12.2296 -12.1372 -12.1326 -12.1273 -12.0984 -12.0973 -11.6986 -11.0114 -11.0110 -10.9196 -10.9184 -10.8407 -10.8393 -10.2080 -9.9517 -9.9454 -9.7836 -9.2914 -9.1372 -9.1274 -8.9772 -8.9130 -8.9075 -8.6886 -8.6878 -8.6878 -8.6876 -8.5680 -8.5281 -8.5278 -8.3001 -8.3266 -8.3350
                                 -8.5281
                      -8.5689
                                            -8.5278
                                                       -8.3901
 -8.6878
            -8.6826
                                                                  -8.3266
                                                                             -8.3250
                                 -8.1266
            -8.2098
                                            -8.0933
                                                       -8.0774
                                                                             -7.9382
 -8.2272
                      -8.1330
                                                                   -8.0701
                                 -7.2956
 -7.9370
            -7.3526
                      -7.3506
                                            -7.2951
                                                       -7.2445
                                                                   -7.2435
                                                                              -7.1325
 -7.1292
            -7.0423
                      -7.0037
                                 -6.9227
                                            -6.9224
                                                        -6.6566
                                                                   -6.6562
                                                                              -6.5387
 -6.0982
            -6.0898
                      -5.9440
                                 -5.6680
                                             -5.6675
                                                        -5.5219
                                                                   -5.4971
                                                                              -5.4714
 -5.4663
            -5.4608
                      -5.3576
                                  -5.3522
                                             -5.3262
                                                        -5.3037
                                                                   -5.2986
                                                                              -5.2027
                                                        -4.9613
 -5.2011
            -5.1040
                       -5.1027
                                  -5.0603
                                             -5.0600
                                                                   -4.9600
                                                                              -4.8723
 -3.5534
                                                        -3.1439
            -3.5151
                       -3.5136
                                  -3.2105
                                                                   -2.8889
                                             -3.1500
                                                                              -1.3491
 -1.1656
             0.2510
                        0.2572
                                                         2.0899
                                   0.2802
                                              2.0182
                                                                    2.1059
                                                                               2.2068
  2.3198
             2.3266
                        2.3277
                                   2.5557
                                              2.6113
                                                         2.6155
                                                                    2.6358
                                                                               2.6370
  2.7206
             2.7392
                                   2.8650
                                              2.8702
                                                         2.8775
                                                                    2.8812
                        2.8006
                                                                               3.2483
  3.3198
             3.3343
        k = 0.3175 - 0.5499 \ 0.0000 \ (64838 \ PWs)
                                                         bands (ev):
-21.1106 -21.0712 -21.0392 -21.0332 -21.0095 -21.0080 -19.8148 -19.8144
-19.7019 -19.5672 -19.5662 -19.4219 -18.7950 -18.7934 -18.7025 -18.7009
-18.6630 -18.6626 -18.1265 -18.1242 -17.9832 -17.9812 -17.9127 -17.9109
-17.6575 -17.6227 -17.6210 -17.2066 -15.4724 -15.4420 -15.4343 -14.7426
-14.6552 -14.6539 -14.2363 -14.0581 -12.5798 -12.4149 -12.4119 -12.2324
-12.2254 -12.1332 -12.0995 -12.0949 -12.0938 -12.0927 -11.6988 -11.0401
-11.0398 -10.9179 -10.9167 -10.8123 -10.8109 -10.2061
                                                                  -9.9703
                                                                             -9.9640
 -9.7463
           -9.3274
                      -9.1241
                                 -9.1118
                                            -8.9890
                                                       -8.9050
                                                                  -8.8999
                                                                             -8.7173
 -8.7015
            -8.7007
                      -8.5424
                                 -8.5122
                                            -8.5119
                                                       -8.4038
                                                                  -8.3188
                                                                              -8.3173
 -8.2530
            -8.2357
                      -8.1307
                                 -8.1270
                                            -8.1229
                                                        -8.0563
                                                                   -8.0488
                                                                              -7.9191
 -7.9180
            -7.3715
                       -7.3696
                                 -7.2951
                                            -7.2946
                                                        -7.2270
                                                                   -7.2260
                                                                              -7.1462
 -7.1429
            -7.0685
                       -6.9747
                                  -6.9085
                                             -6.9083
                                                        -6.6692
                                                                   -6.6688
                                                                              -6.5122
                                  -5.6858
                                             -5.6853
                                                        -5.5250
                                                                   -5.4989
 -6.1176
            -6.1091
                       -5.9121
                                                                              -5.4903
 -5.4780
            -5.4706
                       -5.3506
                                  -5.3455
                                             -5.3061
                                                        -5.2802
                                                                   -5.2759
                                                                              -5.2293
 -5.2277
            -5.0975
                       -5.0962
                                  -5.0398
                                             -5.0394
                                                        -4.9713
                                                                   -4.9700
                                                                              -4.8531
            -3.5120
                       -3.5106
                                  -3.2251
                                             -3.1452
                                                        -3.1391
                                                                   -2.8901
 -3.5624
                                                                              -1.3798
 -1.1352
             0.2507
                       0.2571
                                  0.2866
                                             2.0024
                                                        2.0990
                                                                   2.1147
                                                                               2.2076
             2.3290
                        2.3301
                                   2.5392
                                              2.5745
                                                         2.5784
                                                                    2.6424
                                                                               2.6439
  2.3186
  2.7169
             2.7356
                        2.7839
                                   2.8867
                                              2.8905
                                                         2.9087
                                                                    2.9138
                                                                               3.2326
  3.3287
             3.3396
```

```
k = 0.3135 - 0.5430 \ 0.0000 \ (64840 \ PWs)
                                                        bands (ev):
-21.1222 -21.0810 -21.0324 -21.0264 -21.0037 -21.0022 -19.8238 -19.8234
-17.6637 -17.6209 -17.6191 -17.2077 -15.4821 -15.4490 -15.4414 -14.7527 -14.6368 -14.6355 -14.2615 -14.0372 -12.5743 -12.4560 -12.4530 -12.2282 -12.2212 -12.1392 -12.0888 -12.0877 -12.0617 -12.0570 -11.6991 -11.0688 -11.0684 -10.9162 -10.9150 -10.7836 -10.7823 -10.2036 -9.9888 -9.9826
                                                                             -8.7518
 -9.7093
           -9.3635 -9.1129
                                -9.0969 -8.9994 -8.8969
                                                                  -8.8921
 -8.7144
           -8.7136 -8.5160
                                 -8.4968
                                            -8.4965
                                                       -8.4173
                                                                  -8.3109
                                                                             -8.3094
           -8.2621
                                                                             -7.8994
 -8.2793
                      -8.1612
                                 -8.1267
                                            -8.1205
                                                       -8.0352
                                                                  -8.0275
                                                                  -7.2085
                                 -7.2946
                                                                             -7.1597
 -7.8982
           -7.3908
                      -7.3888
                                            -7.2942
                                                       -7.2095
                                                                  -6.6812
                                                                             -6.4855
 -7.1564
           -7.0947
                      -6.9456
                                -6.8941
                                            -6.8938
                                                       -6.6816
           -6.1289
                                 -5.7040
                                            -5.7035
                                                                             -5.4885
 -6.1375
                      -5.8811
                                                       -5.5542
                                                                  -5.5276
 -5.4810
           -5.4590
                      -5.3434
                                 -5.3385
                                            -5.2851
                                                       -5.2568
                                                                  -5.2559
                                                                             -5.2539
                      -5.0896
 -5.2521
           -5.0909
                                 -5.0192
                                            -5.0189
                                                       -4.9813
                                                                  -4.9801
                                                                             -4.8341
           -3.5095
                                                                  -2.8918
                                                                             -1.4108
 -3.5713
                      -3.5080
                                 -3.2396
                                            -3.1412
                                                       -3.1352
 -1.1045
             0.2513
                        0.2579
                                  0.2928
                                             1.9866
                                                        2.1083
                                                                   2.1238
                                                                              2.2088
                                              2.5359
  2.3174
             2.3319
                        2.3330
                                   2.5226
                                                        2.5393
                                                                   2.6514
                                                                              2.6528
  2.7131
             2.7318
                        2.7675
                                   2.8964
                                              2.9001
                                                        2.9522
                                                                   2.9575
                                                                              3.2169
  3.3253
             3.3383
        k = 0.3095 - 0.5361 \ 0.0000 \ (64836 \ PWs)
                                                        bands (ev):
-21.1338 -21.0908 -21.0254 -21.0194 -20.9979 -20.9964 -19.8327 -19.8322 -19.6635 -19.5900 -19.5890 -19.3721 -18.8323 -18.8307 -18.6929 -18.6913 -18.6347 -18.6344 -18.1844 -18.1821 -17.9701 -17.9681 -17.8640 -17.8622 -17.6698 -17.6192 -17.6175 -17.2090 -15.4917 -15.4582 -15.4508 -14.7627 -14.6161 -14.6147 -14.2877 -14.0161 -12.5676 -12.4971 -12.4941 -12.2239 -12.2168 -12.1450 -12.0834 -12.0823 -12.0238 -12.0191 -11.6993 -11.0972 -11.0969 -10.9144 -10.9133 -10.7548 -10.7535 -10.2007 -10.0073 -10.0011
           -9.3998
                     -9.1042
                                 -9.0829
                                           -9.0080
                                                      -8.8886
                                                                 -8.8840
 -9.6725
                                                                            -8.7863
           -8.7263
                      -8.4897
                                 -8.4818
                                            -8.4815
 -8.7271
                                                       -8.4307
                                                                  -8.3059
                                                                             -8.3029
            -8.2888
                      -8.1949
                                 -8.1238
                                                       -8.0140
                                                                  -8.0062
 -8.3014
                                            -8.1177
                                                                             -7.8792
            -7.4103
                                 -7.2942
                                            -7.2937
 -7.8779
                      -7.4084
                                                       -7.1920
                                                                  -7.1909
                                                                             -7.1731
                                 -6.8794
                                                       -6.6939
 -7.1698
           -7.1210
                      -6.9162
                                            -6.8791
                                                                  -6.6935
                                                                             -6.4587
 -6.1581
           -6.1494
                      -5.8515
                                 -5.7227
                                            -5.7222
                                                       -5.5842
                                                                  -5.5551
                                                                             -5.4993
            -5.4279
                                 -5.3312
                                            -5.2837
 -5.4916
                      -5.3359
                                                       -5.2816
                                                                  -5.2613
                                                                             -5.2320
           -5.0841
 -5.2285
                      -5.0829
                                 -4.9987
                                            -4.9983
                                                       -4.9913
                                                                  -4.9901
                                                                             -4.8153
                      -3.5059
                                 -3.2539
 -3.5801
           -3.5073
                                            -3.1381
                                                       -3.1321
                                                                  -2.8938
                                                                             -1.4419
 -1.0737
             0.2529
                       0.2597
                                  0.2988
                                             1.9708
                                                        2.1178
                                                                   2.1331
                                                                              2.2101
             2.3354
                                                        2.5081
                                                                   2.6608
  2.3161
                        2.3364
                                   2.4955
                                              2.4998
                                                                              2.6621
             2.7280
                                              2.9099
                                                        2.9959
                                                                   3.0013
  2.7092
                        2.7512
                                   2.9062
                                                                              3.2013
  3.3094
             3.3477
        k = 0.3056 - 0.5292 \ 0.0000 \ (64844 \ PWs)
                                                        bands (ev):
-21.1452 -21.1004 -21.0183 -21.0123 -20.9919 -20.9904 -19.8414 -19.8410
-19.6442 -19.6012 -19.6002 -19.3470 -18.8510 -18.8494 -18.6880 -18.6864
-18.6206 -18.6202 -18.2132 -18.2108 -17.9634 -17.9614 -17.8395 -17.8376
-17.6759 -17.6179 -17.6162 -17.2105 -15.5012 -15.4694 -15.4621 -14.7725
-14.5933 -14.5917 -14.3147 -13.9949 -12.5601 -12.5379 -12.5350 -12.2195
-12.2124 -12.1508 -12.0775 -12.0764 -11.9858 -11.9811 -11.6996 -11.1255
-11.1251 -10.9127 -10.9116 -10.7258 -10.7244 -10.1972 -10.0256 -10.0195
                      -9.0990
 -9.6359
           -9.4360
                                -9.0695
                                            -9.0136
                                                       -8.8802
                                                                 -8.8757
                                                                             -8.8206
                                                       -8.4439
 -8.7397
           -8.7389
                      -8.4672
                                 -8.4670
                                            -8.4634
                                                                  -8.3330
                                                                             -8.3160
                                                       -7.9927
                                                                  -7.9849
 -8.2947
           -8.2932
                      -8.2287
                                 -8.1209
                                            -8.1148
                                                                             -7.8584
           -7.4301
                      -7.4282
                                 -7.2936
                                            -7.2932
                                                       -7.1863
                                                                  -7.1830
                                                                             -7.1745
 -7.8571
 -7.1734
           -7.1472
                      -6.8868
                                 -6.8644
                                            -6.8642
                                                       -6.7061
                                                                  -6.7057
                                                                             -6.4319
                                 -5.7418
                                            -5.7414
                                                                  -5.5806
                      -5.8240
                                                       -5.6145
 -6.1793
           -6.1705
                                                                             -5.5103
 -5.5026 -5.3970 -5.3282 -5.3237
                                            -5.3098 -5.3081 -5.2398
                                                                             -5.2075
```

```
-5.2044
           -5.0772
                      -5.0760
                                -5.0014
                                           -5.0002
                                                     -4.9782
                                                                -4.9778
                                                                          -4.7967
           -3.5057
 -3.5889
                      -3.5042
                                -3.2681
                                           -3.1357
                                                     -3.1298
                                                                -2.8963
                                                                          -1.4733
                                                                            2.2119
 -1.0427
            0.2554
                      0.2624
                                 0.3047
                                            1.9552
                                                      2.1275
                                                                 2.1427
            2.3393
  2.3148
                       2.3404
                                 2.4568
                                            2.4607
                                                       2.4918
                                                                 2.6705
                                                                            2.6716
  2.7053
            2.7240
                       2.7352
                                 2.9163
                                            2.9200
                                                       3.0398
                                                                 3.0453
                                                                            3.1858
  3.2935
            3.3574
        k = 0.3016 - 0.5224 \ 0.0000 \ (64832 \ PWs)
                                                      bands (ev):
-21.1564 -21.1099 -21.0110 -21.0050 -20.9857 -20.9843 -19.8501 -19.8497
-21.1304 -21.1099 -21.0110 -21.0030 -20.9637 -20.9643 -19.6301 -19.6497 -19.6249 -19.6123 -19.6112 -19.3217 -18.8698 -18.8682 -18.6829 -18.6814 -18.6065 -18.6062 -18.2419 -18.2394 -17.9565 -17.9545 -17.8148 -17.8130 -17.6819 -17.6169 -17.6151 -17.2123 -15.5106 -15.4822 -15.4752 -14.7823 -14.5685 -14.5668 -14.3425 -13.9736 -12.5791 -12.5762 -12.5508 -12.2150 -12.2079 -12.1566 -12.0712 -12.0702 -11.9477 -11.9430 -11.6998 -11.1536 -11.1532 -10.9109 -10.9098 -10.6965 -10.6952 -10.1932 -10.0439 -10.0378 -0.5005 -0.0473 -0.0668 -0.0668 -0.0156 -0.88715 -0.88672 -0.88540
                                                     -8.8715
                                                               -8.8672
 -9.5995
           -9.4723 -9.0979
                               -9.0568 -9.0156
                                                                          -8.8549
                                                               -8.3605
                                                                          -8.3435
 -8.7522
           -8.7514
                     -8.4570
                                -8.4531
                                          -8.4528
                                                     -8.4374
                     -8.2624
                                          -8.1119
                                                     -7.9715
                                                                -7.9636
                                                                          -7.8371
 -8.2864
           -8.2848
                                -8.1181
                                          -7.2927
           -7.4502
                                -7.2931
                                                                          -7.1734
 -7.8357
                     -7.4483
                                                     -7.1994
                                                                -7.1961
                                                                -6.7177
 -7.1569
           -7.1559
                     -6.8572
                                -6.8492
                                          -6.8490
                                                     -6.7181
                                                                          -6.4049
 -6.2011
                                -5.7614
                                                                -5.6026
                                                                          -5.5214
           -6.1922
                     -5.8002
                                           -5.7610
                                                     -5.6450
                      -5.3365
                                -5.3348
                                           -5.3202
 -5.5136
           -5.3663
                                                     -5.3159
                                                                -5.2176
                                                                          -5.1829
 -5.1801
           -5.0702
                     -5.0689
                                -5.0115
                                           -5.0104
                                                     -4.9577
                                                                -4.9573
                                                                          -4.7783
                                -3.2820
           -3.5044
                      -3.5029
 -3.5975
                                           -3.1342
                                                     -3.1283
                                                                -2.8991
                                                                          -1.5049
            0.2588
                       0.2660
                                 0.3105
                                            1.9398
 -1.0116
                                                      2.1373
                                                                 2.1524
                                                                            2.2138
  2.3134
            2.3438
                       2.3448
                                 2.4180
                                            2.4216
                                                       2.4761
                                                                 2.6801
                                                                            2.6811
  2.7017
            2.7193
                       2.7201
                                 2.9265
                                            2.9302
                                                       3.0837
                                                                 3.0894
                                                                            3.1705
  3.2778
            3.3674
        k = 0.2976 - 0.5155 \ 0.0000 \ (64828 \ PWs)
                                                      bands (ev):
-21.1675 -21.1193 -21.0036 -20.9976 -20.9795 -20.9780 -19.8586 -19.8582
-19.6232 -19.6221 -19.6054 -19.2963 -18.8885 -18.8869 -18.6778 -18.6763
-18.5925 -18.5922 -18.2704 -18.2679 -17.9495 -17.9474 -17.7900 -17.7882
-17.6879 -17.6161 -17.6144 -17.2143 -15.5199 -15.4965 -15.4897 -14.7919
-14.5422 -14.5403 -14.3711 -13.9522 -12.6199 -12.6170 -12.5413 -12.2104
-12.2033 -12.1623 -12.0646 -12.0635 -11.9096 -11.9048 -11.7000 -11.1815
-11.1811 -10.9092 -10.9080 -10.6671 -10.6658 -10.1888 -10.0621 -10.0560
 -9.5633
           -9.5085 -9.1011 -9.0448 -9.0138
                                                     -8.8891
                                                               -8.8627
                                                                          -8.8586
                    -8.4699
                               -8.4394 -8.4391
                                                                          -8.3715
 -8.7646
           -8.7638
                                                     -8.4114
                                                               -8.3883
                     -8.2761
 -8.2966
           -8.2776
                                -8.1153
                                          -8.1091
                                                     -7.9503
                                                               -7.9423
                                                                          -7.8152
           -7.4705
                                                     -7.2123
                     -7.4686
                                -7.2926 -7.2921
                                                               -7.2090
 -7.8138
                                                                          -7.1996
           -7.1384
                     -6.8338
                                -6.8335
                                          -6.8274
                                                     -6.7300
                                                                -6.7296
 -7.1394
                                                                          -6.3779
           -6.2145
                                -5.7815
                                          -5.7810
                                                     -5.6757
                                                                -5.6181
 -6.2235
                     -5.7831
                                                                          -5.5326
           -5.3631
 -5.5247
                     -5.3614
                                -5.3359
                                          -5.3120
                                                     -5.3078
                                                               -5.1954
                                                                          -5.1583
           -5.0630
                     -5.0618
                                -5.0216
                                          -5.0205
                                                     -4.9372
                                                                -4.9369
 -5.1557
                                                                          -4.7601
           -3.5036
                     -3.5021
                                -3.2958
                                                     -3.1277
                                                                -2.9023
 -3.6061
                                          -3.1335
                                                                          -1.5367
                                 0.3160
 -0.9803
            0.2631
                      0.2705
                                            1.9245
                                                      2.1473
                                                                 2.1623
                                                                            2.2160
  2.3119
            2.3486
                       2.3496
                                 2.3793
                                            2.3828
                                                       2.4607
                                                                 2.6881
                                                                            2.6906
  2.6997
            2.7037
                       2.7162
                                 2.9370
                                            2.9407
                                                       3.1278
                                                                 3.1336
                                                                            3.1555
  3.2623
            3.3775
        k = 0.2936 - 0.5086 \ 0.0000 \ (64836 \ PWs)
                                                      bands (ev):
-21.1785 -21.1286 -20.9960 -20.9901 -20.9732 -20.9717 -19.8671 -19.8667
-19.6339 -19.6329 -19.5859 -19.2708 -18.9072 -18.9056 -18.6726 -18.6711
-18.5785 -18.5782 -18.2988 -18.2963 -17.9423 -17.9402 -17.7651 -17.7632
-17.6939 -17.6156 -17.6139 -17.2166 -15.5292 -15.5120 -15.5054 -14.8015
-14.5143 -14.5122 -14.4003 -13.9307 -12.6608 -12.6578 -12.5308 -12.2058
-12.1986 -12.1679 -12.0575 -12.0564 -11.8713 -11.8666 -11.7002 -11.2092
-11.2089 -10.9074 -10.9063 -10.6375 -10.6361 -10.1838 -10.0802 -10.0741
```

```
-9.5448
            -9.5274
                      -9.1076
                                 -9.0334
                                            -9.0092
                                                       -8.9232
                                                                  -8.8538
                                                                            -8.8497
                                                       -8.4165
 -8.7769
           -8.7761
                      -8.4826
                                 -8.4261
                                            -8.4258
                                                                  -8.3998
                                                                            -8.3856
                                                       -7.9291
 -8.3303
           -8.2689
                      -8.2674
                                 -8.1125
                                            -8.1063
                                                                  -7.9211
                                                                             -7.7929
 -7.7915
                                                                  -7.2250
            -7.4911
                      -7.4892
                                 -7.2921
                                            -7.2916
                                                       -7.2258
                                                                            -7.2217
                                            -6.7976
                                                       -6.7417
 -7.1219
            -7.1209
                      -6.8181
                                 -6.8178
                                                                  -6.7413
                                                                             -6.3507
 -6.2464
            -6.2374
                      -5.8020
                                 -5.8016
                                            -5.7768
                                                       -5.7063
                                                                  -5.6229
                                                                             -5.5439
 -5.5359
            -5.3898
                      -5.3881
                                 -5.3056
                                            -5.3037
                                                       -5.2995
                                                                  -5.1733
                                                                             -5.1336
                                                                  -4.9165
 -5.1311
           -5.0557
                      -5.0545
                                 -5.0317
                                            -5.0307
                                                       -4.9168
                                                                             -4.7420
 -3.6147
           -3.5032
                      -3.5017
                                 -3.3094
                                            -3.1336
                                                       -3.1278
                                                                  -2.9059
                                                                             -1.5687
 -0.9488
             0.2682
                       0.2759
                                  0.3214
                                            1.9094
                                                       2.1573
                                                                   2.1722
                                                                              2.2185
  2.3105
             2.3399
                        2.3426
                                   2.3551
                                             2.3562
                                                        2.4454
                                                                   2.6881
                                                                              2.6888
             2.7046
  2.6995
                        2.7136
                                   2.9477
                                             2.9513
                                                        3.1405
                                                                   3.1719
                                                                              3.1779
  3.2470
             3.3878
        k = 0.2897 - 0.5017 \ 0.0000 \ (64852 \ PWs)
                                                        bands (ev):
-21.1893 -21.1377 -20.9883 -20.9824 -20.9667 -20.9652 -19.8754 -19.8750
-21.1893 -21.1377 -20.9883 -20.9824 -20.9667 -20.9652 -19.8754 -19.8750 -19.6446 -19.6435 -19.5664 -19.2452 -18.9260 -18.9244 -18.6673 -18.6657 -18.5645 -18.5642 -18.3271 -18.3245 -17.9350 -17.9329 -17.7401 -17.7382 -17.6998 -17.6154 -17.6137 -17.2191 -15.5387 -15.5284 -15.5223 -14.8109 -14.4851 -14.4829 -14.4303 -13.9090 -12.7015 -12.6986 -12.5194 -12.2011 -12.1939 -12.1735 -12.0500 -12.0490 -11.8330 -11.8282 -11.7003 -11.2367 -11.2364 -10.9056 -10.9045 -10.6077 -10.6063 -10.1784 -10.0982 -10.0921 -9.5810 -9.4917 -9.1163 -9.0227 -9.0029 -8.9572 -8.8447 -8.8408
 -8.7890
           -8.7882
                      -8.4951
                                 -8.4451
                                            -8.4285
                                                       -8.4132
                                                                  -8.4129
                                                                            -8.3640
                                                       -7.9080
                                                                  -7.8999
 -8.3599
            -8.2600
                      -8.2585
                                 -8.1097
                                            -8.1035
                                                                            -7.7702
                      -7.5100
                                 -7.2915
 -7.7687
                                                       -7.2520
            -7.5120
                                            -7.2910
                                                                  -7.2375
                                                                             -7.2342
                      -6.8022
                                                                  -6.7529
 -7.1044
           -7.1034
                                 -6.8019
                                            -6.7676
                                                       -6.7533
                                                                             -6.3235
 -6.2700
           -6.2608
                      -5.8230
                                 -5.8225
                                                       -5.7371
                                            -5.7833
                                                                  -5.6151
                                                                             -5.5551
 -5.5471
                      -5.4148
                                 -5.2951
            -5.4164
                                            -5.2911
                                                       -5.2755
                                                                  -5.1513
                                                                             -5.1088
 -5.1065
            -5.0483
                      -5.0470
                                 -5.0419
                                            -5.0409
                                                       -4.8964
                                                                  -4.8961
                                                                             -4.7241
 -3.6231
           -3.5033
                      -3.5018
                                 -3.3229
                                            -3.1344
                                                       -3.1287
                                                                  -2.9099
                                                                             -1.6010
 -0.9172
             0.2743
                        0.2822
                                  0.3267
                                             1.8945
                                                        2.1673
                                                                   2.1820
                                                                              2.2213
  2.3022
             2.3050
                        2.3090
                                   2.3605
                                                        2.4304
                                             2.3616
                                                                   2.6729
                                                                              2.6852
                                                        3.1258
                                                                   3.2158
  2.7025
             2.7136
                                   2.9585
                        2.7172
                                             2.9621
                                                                              3.2219
  3.2325
             3.3983
        k = 0.2857 - 0.4949 \ 0.0000 \ (64842 \ PWs)
                                                        bands (ev):
-21.2000 -21.1467 -20.9805 -20.9745 -20.9601 -20.9586 -19.8837 -19.8833
-19.6550 -19.6540 -19.5468 -19.2194 -18.9447 -18.9431 -18.6619 -18.6603
-18.5506 -18.5503 -18.3552 -18.3527 -17.9275 -17.9255 -17.7149 -17.7130
-17.7056 -17.6155 -17.6137 -17.2219 -15.5497 -15.5444 -15.5397 -14.8202
-14.4609 -14.4548 -14.4523 -13.8873 -12.7422 -12.7393 -12.5073 -12.1963
-12.1891 -12.1790 -12.0422 -12.0411 -11.7946 -11.7897 -11.7004 -11.2641
-11.2637 -10.9038 -10.9027 -10.5777 -10.5763 -10.1725 -10.1161 -10.1101
           -9.4562
                      -9.1262 -9.0125
                                           -8.9958
                                                      -8.9911
                                                                 -8.8354
 -9.6172
                                                                            -8.8317
           -8.8002
                      -8.5075
                                 -8.4741
                                           -8.4575
                                                       -8.4008
                                                                 -8.4005
 -8.8010
                                                                            -8.3977
 -8.3343
           -8.2510
                      -8.2495
                                -8.1069
                                            -8.1007
                                                       -7.8868
                                                                 -7.8787
                                                                             -7.7471
 -7.7455
           -7.5330
                      -7.5311
                                 -7.2909
                                            -7.2905
                                                       -7.2781
                                                                  -7.2499
                                                                            -7.2466
 -7.0870
           -7.0859
                      -6.7861
                                 -6.7858
                                            -6.7647
                                                       -6.7644
                                                                  -6.7375
                                                                             -6.2962
 -6.2941
           -6.2848
                      -5.8444
                                 -5.8440
                                            -5.7997
                                                       -5.7678
                                                                  -5.5975
                                                                             -5.5663
 -5.5583
            -5.4431
                       -5.4414
                                 -5.2863
                                            -5.2824
                                                       -5.2457
                                                                  -5.1295
                                                                             -5.0840
                       -5.0510
            -5.0520
                                            -5.0394
                                                                  -4.8758
 -5.0818
                                 -5.0407
                                                       -4.8761
                                                                             -4.7064
            -3.5037
                       -3.5022
                                 -3.3361
                                                                  -2.9143
 -3.6315
                                            -3.1361
                                                       -3.1304
                                                                             -1.6334
 -0.8855
             0.2812
                       0.2893
                                  0.3318
                                             1.8798
                                                        2.1767
                                                                   2.1910
                                                                              2.2245
                                             2.3679
                                                        2.4156
                                                                   2.6579
  2.2652
             2.2676
                        2.3074
                                   2.3669
                                                                              2.6808
             2.7239
                        2.7265
                                   2.9696
                                             2.9732
                                                        3.1113
                                                                   3.2164
  2.6995
                                                                              3.2607
  3.2669
             3.4091
        k = 0.2817 - 0.4880 \ 0.0000 \ (64834 \ PWs)
                                                        bands (ev):
```

```
-21.2105 -21.1557 -20.9725 -20.9665 -20.9533 -20.9519 -19.8918 -19.8914
-19.6654 -19.6643 -19.5271 -19.1934 -18.9635 -18.9619 -18.6564 -18.6549
-18.5368 -18.5365 -18.3833 -18.3806 -17.9200 -17.9179 -17.7114 -17.6896
-17.6877 -17.6158 -17.6140 -17.2250 -15.5662 -15.5598 -15.5538 -14.8294 -14.4920 -14.4236 -14.4209 -13.8654 -12.7829 -12.7800 -12.4943 -12.1914
-12.1845 -12.1842 -12.0339 -12.0329 -11.7561 -11.7512 -11.7004 -11.2912
-11.2909 -10.9021 -10.9009 -10.5475 -10.5462 -10.1662 -10.1339 -10.1279
           -9.4210 -9.1368 -9.0248 -9.0029
                                                      -8.9884 -8.8260
 -9.6533
                                                                           -8.8224
 -8.8129
           -8.8121
                     -8.5198
                                -8.5034
                                           -8.4870
                                                      -8.4315
                                                                 -8.3887
                                                                            -8.3884
                                -8.1041
 -8.3088
           -8.2418
                      -8.2402
                                           -8.0979
                                                      -7.8657
                                                                 -7.8575
                                                                           -7.7235
 -7.7219
           -7.5543
                     -7.5524
                                -7.3044
                                           -7.2903
                                                      -7.2897
                                                                 -7.2621
                                                                           -7.2588
                                                                            -6.3189
 -7.0695
           -7.0684
                      -6.7760
                                -6.7756
                                           -6.7698
                                                      -6.7695
                                                                 -6.7073
                                           -5.8220
 -6.3095
           -6.2686
                      -5.8663
                                -5.8658
                                                      -5.7984
                                                                 -5.5784
                                                                            -5.5738
                                                      -5.2161
                                                                            -5.0622
 -5.5692
           -5.4697
                      -5.4680
                                 -5.2774
                                           -5.2735
                                                                 -5.1078
 -5.0613
           -5.0591
                      -5.0571
                                -5.0330
                                           -5.0317
                                                      -4.8558
                                                                 -4.8555
                                                                            -4.6889
 -3.6397
           -3.5046
                      -3.5031
                                -3.3492
                                           -3.1384
                                                      -3.1328
                                                                 -2.9192
                                                                            -1.6660
 -0.8535
             0.2890
                       0.2973
                                  0.3367
                                             1.8653
                                                       2.1832
                                                                  2.1955
                                                                             2.2269
  2.2321
             2.2352
                       2.3058
                                  2.3737
                                             2.3748
                                                        2.4010
                                                                  2.6431
                                                                             2.6760
  2.6951
             2.7348
                       2.7370
                                  2.9809
                                             2.9844
                                                        3.0969
                                                                  3.2018
                                                                             3.3049
  3.3114
             3.4200
        k = 0.2778 - 0.4811 \ 0.0000 \ (64838 \ PWs)
                                                       bands (ev):
-21.2209 -21.1644 -20.9643 -20.9584 -20.9465 -20.9450 -19.8998 -19.8994 -19.6755 -19.6745 -19.5074 -19.1674 -18.9822 -18.9806 -18.6508 -18.6493 -18.5230 -18.5227 -18.4112 -18.4085 -17.9122 -17.9102 -17.7171 -17.6642 -17.6623 -17.6164 -17.6146 -17.2283 -15.5851 -15.5787 -15.5632 -14.8385 -14.5237 -14.3914 -14.3885 -13.8434 -12.8234 -12.8206 -12.4807 -12.1899 -12.1865 -12.1793 -12.0253 -12.0242 -11.7175 -11.7126 -11.7003 -11.3181 -11.3178 -10.9003 -10.8991 -10.5172 -10.5158 -10.1595 -10.1516 -10.1457 -9.6894 -9.3861 -9.1478 -9.0586 -8.8939 -8.89809 -8.8246 -8.8239
 -9.6894
           -9.3861
                     -9.1478
                                -9.0586
                                           -8.9939
                                                      -8.9809
                                                                 -8.8246
                                                                           -8.8239
                      -8.5331
                                           -8.5167
 -8.8164
           -8.8131
                                -8.5318
                                                      -8.4651
                                                                 -8.3770
                                                                           -8.3767
                      -8.2308
                                           -8.0952
                                                      -7.8447
 -8.2835
           -8.2324
                                 -8.1014
                                                                 -7.8364
                                                                           -7.6997
           -7.5758
                      -7.5739
                                 -7.3305
                                           -7.2897
 -7.6980
                                                      -7.2892
                                                                 -7.2742
                                                                            -7.2708
                      -6.7871
                                 -6.7868
                                           -6.7533
                                                      -6.7530
 -7.0520
           -7.0509
                                                                 -6.6770
                                                                            -6.3441
 -6.3345
           -6.2411
                      -5.8886
                                 -5.8881
                                            -5.8474
                                                      -5.8291
                                                                 -5.5890
                                                                            -5.5808
 -5.5481
           -5.4962
                      -5.4943
                                 -5.2683
                                            -5.2645
                                                                 -5.0863
                                                      -5.1868
                                                                            -5.0724
 -5.0715
           -5.0345
                      -5.0325
                                 -5.0250
                                           -5.0237
                                                      -4.8356
                                                                 -4.8353
                                                                            -4.6716
 -3.6479
           -3.5059
                      -3.5044
                                 -3.3621
                                           -3.1416
                                                      -3.1360
                                                                 -2.9244
                                                                            -1.6988
 -0.8214
            0.2976
                      0.3062
                                  0.3415
                                             1.8510
                                                       2.1719
                                                                  2.1791
                                                                             2.2131
                                             2.3822
  2.2257
             2.2320
                       2.3042
                                  2.3811
                                                       2.3866
                                                                  2.6284
                                                                             2.6710
  2.6902
             2.7459
                       2.7481
                                  2.9924
                                             2.9958
                                                       3.0829
                                                                  3.1873
                                                                             3.3491
  3.3559
             3.4311
        k = 0.2738 - 0.4743 \ 0.0000 \ (64838 \ PWs)
                                                       bands (ev):
-21.2311 -21.1731 -20.9560 -20.9501 -20.9395 -20.9381 -19.9078 -19.9074
-19.6856 -19.6846 -19.4876 -19.1412 -19.0009 -18.9993 -18.6452 -18.6436
-18.5093 -18.5089 -18.4389 -18.4362 -17.9044 -17.9023 -17.7228 -17.6387
-17.6367 -17.6172 -17.6155 -17.2319 -15.6048 -15.5986 -15.5720 -14.8474
-14.5559 -14.3585 -14.3554 -13.8212 -12.8640 -12.8611 -12.4663 -12.1952
-12.1815 -12.1742 -12.0163 -12.0152 -11.7001 -11.6788 -11.6739 -11.3448
-11.3445 -10.8985 -10.8974 -10.4866 -10.4853 -10.1692 -10.1633 -10.1523
           -9.3514
                                           -8.9854
 -9.7255
                      -9.1590
                                -9.0921
                                                      -8.9736
                                                                 -8.8362
                                                                           -8.8355
                      -8.5631
                                 -8.5468
                                            -8.5437
                                                      -8.4987
                                                                 -8.3658
 -8.8066
           -8.8036
                                                                            -8.3655
 -8.2583
           -8.2228
                      -8.2213
                                 -8.0987
                                            -8.0924
                                                      -7.8237
                                                                 -7.8154
                                                                            -7.6756
           -7.5976
                      -7.5957
                                 -7.3566
                                            -7.2891
                                                      -7.2886
                                                                 -7.2861
 -7.6738
                                                                            -7.2827
 -7.0345
           -7.0335
                      -6.7981
                                 -6.7978
                                            -6.7367
                                                      -6.7364
                                                                 -6.6467
                                                                            -6.3699
                                                                 -5.6002
 -6.3601
           -6.2135
                      -5.9114
                                 -5.9108
                                            -5.8746
                                                      -5.8596
                                                                            -5.5920
 -5.5275
           -5.5224
                      -5.5141
                                -5.2590
                                           -5.2552
                                                      -5.1577
                                                                 -5.0826
                                                                            -5.0817
 -5.0651
           -5.0176
                     -5.0163 -5.0089
                                           -5.0073
                                                      -4.8155
                                                                 -4.8152
                                                                            -4.6545
 -3.6561 -3.5076 -3.5061 -3.3748 -3.1455
                                                      -3.1400
                                                                 -2.9301
                                                                           -1.7319
```

```
-0.7892
           0.3070
                    0.3158
                              0.3462
                                       1.8368
                                                          2.1450
                                                                   2.2183
                                                2.1396
                              2.3724
  2.2328
           2.2361
                    2.3026
                                       2.3889
                                                2.3900
                                                          2.6140
                                                                   2.6657
  2.6852
           2.7573
                    2.7594
                              3.0040
                                       3.0074
                                                3.0691
                                                          3.1730
                                                                   3.3928
  3.4001
           3.4425
       k = 0.2698 - 0.4674 \ 0.0000 \ (64830 \ PWs)
                                                bands (ev):
-21.2412 -21.1817 -20.9476 -20.9417 -20.9324 -20.9310 -19.9156 -19.9152
-19.6955 -19.6945 -19.4678 -19.1149 -19.0197 -19.0181 -18.6394 -18.6379
-18.4956 -18.4953 -18.4666 -18.4638 -17.8964 -17.8943 -17.7284 -17.6183
-17.6166 -17.6131 -17.6111 -17.2357 -15.6250 -15.6190 -15.5805 -14.8563 -14.5885 -14.3250 -14.3216 -13.7990 -12.9044 -12.9016 -12.4514 -12.2005 -12.1765 -12.1691 -12.0069 -12.0058 -11.6998 -11.6401 -11.6351 -11.3713
-11.3710 -10.8967 -10.8956 -10.4559 -10.4545 -10.1867 -10.1808 -10.1447
                   -9.1703 -9.1256 -8.9774
-8.5934 -8.5773 -8.5554
 -9.7614
          -9.3169
                                               -8.9666
                                                        -8.8477
                                                                  -8.8469
 -8.7968
         -8.7940
                   -8.5934
                                               -8.5321
                                                        -8.3549
                                                                  -8.3545
                                                        -7.7944
                                                                  -7.6511
          -8.2131
                                               -7.8028
 -8.2333
                   -8.2116 -8.0960 -8.0897
                   -7.6177
                            -7.3827
 -7.6494
          -7.6196
                                      -7.2978
                                               -7.2943
                                                        -7.2884
                                                                  -7.2880
                                               -6.7196
                            -6.8086
                                                        -6.6163
                                                                  -6.3963
 -7.0171
         -7.0160
                   -6.8090
                                      -6.7198
          -6.1858
                   -5.9345
                            -5.9339
                                      -5.9027
                                                         -5.6114
                                                                  -5.6031
 -6.3861
                                               -5.8902
 -5.5500
          -5.5484
                   -5.4900
                            -5.2495
                                      -5.2458
                                               -5.1288
                                                         -5.0929
                                                                  -5.0920
                                               -4.7954
 -5.0440
          -5.0094
                   -5.0081
                            -4.9843
                                      -4.9826
                                                         -4.7951
                                                                  -4.6375
                             -3.3873
          -3.5097
                   -3.5082
                                                                  -1.7651
 -3.6641
                                      -3.1501
                                               -3.1446
                                                         -2.9362
                    0.3263
 -0.7568
                              0.3507
           0.3173
                                       1.8229
                                                2.1031
                                                          2.1078
                                                                   2.2282
                                       2.3972
  2.2405
           2.2430
                    2.3010
                              2.3584
                                                2.3983
                                                          2.5998
                                                                   2.6603
  2.6799
           2.7690
                    2.7710
                              3.0158
                                       3.0189
                                                3.0558
                                                          3.1588
                                                                   3.4322
  3.4403
           3.4539
       k = 0.2659 - 0.4605 \ 0.0000 \ (64854 \ PWs)
                                                bands (ev):
-14.6215 -14.2908 -14.2873 -13.7767 -12.9448 -12.9420 -12.4358 -12.2057 -12.1713 -12.1640 -11.9972 -11.9961 -11.6993 -11.6012 -11.5962 -11.3976
-11.3973 -10.8949 -10.8938 -10.4250 -10.4237 -10.2041 -10.1983 -10.1367
 -9.7974
         -9.2828
                  -9.1817
                            -9.1590
                                     -8.9699
                                               -8.9598
                                                        -8.8591
                                                                 -8.8583
 -8.7868
          -8.7843
                   -8.6241 -8.6080
                                      -8.5670
                                               -8.5653
                                                        -8.3443
                                                                  -8.3440
 -8.2085
          -8.2032
                   -8.2017
                            -8.0933
                                      -8.0870
                                               -7.7819
                                                         -7.7734
                                                                  -7.6417
                            -7.4087
 -7.6398
          -7.6265
                   -7.6247
                                      -7.3093
                                               -7.3058
                                                         -7.2878
                                                                  -7.2874
                            -6.8193
 -6.9997
          -6.9986
                   -6.8197
                                      -6.7029
                                               -6.7026
                                                         -6.5860
                                                                  -6.4231
                            -5.9575
                                      -5.9314
                                               -5.9206
 -6.4124
          -6.1580
                   -5.9581
                                                         -5.6227
                                                                  -5.6142
          -5.5748
                   -5.4611
                            -5.2399
                                      -5.2362
 -5.5764
                                               -5.1032
                                                         -5.1025
                                                                  -5.0999
                                                         -4.7750
         -5.0011
                   -4.9998
                            -4.9595
                                      -4.9579
                                               -4.7754
 -5.0232
                                                                  -4.6208
                                                        -2.9427
 -3.6720
         -3.5122
                   -3.5107
                            -3.3996
                                     -3.1553
                                               -3.1500
                                                                  -1.7984
           0.3283
                    0.3375
                                       1.8091
                                                2.0658
 -0.7242
                              0.3551
                                                         2.0702
                                                                   2.2393
 2.2453
                                       2.4059
           2.2542
                    2.2993
                              2.3447
                                                2.4070
                                                          2.5858
                                                                   2.6548
  2.6744
           2.7808
                              3.0270
                                       3.0296
                                                3.0445
                                                          3.1449
                    2.7828
                                                                   3.4263
  3.4281
           3.4653
       k = 0.2619 - 0.4536 \ 0.0000 \ (64842 \ PWs)
                                                bands (ev):
-21.2609 -21.1984 -20.9303 -20.9245 -20.9178 -20.9165 -19.9309 -19.9305
-19.7149 -19.7139 -19.4279 -19.0619 -19.0571 -19.0555 -18.6276 -18.6261
-18.5215 -18.5187 -18.4684 -18.4681 -17.8800 -17.8779 -17.7395 -17.6213
-17.6196 -17.5614 -17.5594 -17.2442 -15.6669 -15.6611 -15.5970 -14.8736
-14.6550 -14.2561 -14.2524 -13.7542 -12.9851 -12.9823 -12.4196 -12.2108
-12.1661 -12.1588 -11.9871 -11.9860 -11.6987 -11.5623 -11.5573 -11.4236
-11.4233 -10.8932 -10.8920 -10.3940 -10.3926 -10.2214 -10.2156 -10.1283
 -9.8333 -9.2490 -9.1929 -9.1923 -8.9628 -8.9534 -8.8702
                                                                  -8.8695
 -8.7770 -8.7745 -8.6550 -8.6391 -8.5984 -8.5783 -8.3342 -8.3339
```

```
-8.1932
           -8.1916
                      -8.1838
                                 -8.0906
                                            -8.0843
                                                                 -7.7525
                                                                            -7.6640
                                                      -7.7610
                      -7.5998
 -7.6621
           -7.6016
                                 -7.4348
                                           -7.3206
                                                      -7.3171
                                                                 -7.2872
                                                                            -7.2867
           -6.9812
 -6.9822
                      -6.8302
                                -6.8298
                                           -6.6859
                                                      -6.6856
                                                                 -6.5560
                                                                            -6.4504
                      -5.9821
                                           -5.9605
 -6.4388
           -6.1301
                                 -5.9814
                                                      -5.9510
                                                                 -5.6339
                                                                            -5.6254
 -5.6028
           -5.6013
                      -5.4319
                                 -5.2300
                                           -5.2265
                                                      -5.1134
                                                                 -5.1126
                                                                            -5.0718
 -5.0026
           -4.9928
                      -4.9915
                                 -4.9346
                                           -4.9331
                                                      -4.7554
                                                                 -4.7551
                                                                            -4.6043
 -3.6799
           -3.5151
                      -3.5136
                                -3.4118
                                           -3.1613
                                                      -3.1560
                                                                 -2.9496
                                                                            -1.8320
 -0.6914
            0.3400
                      0.3494
                                 0.3595
                                            1.7956
                                                       2.0283
                                                                  2.0324
                                                                             2.2503
                                                        2.4161
  2.2510
             2.2658
                       2.2976
                                  2.3311
                                             2.4151
                                                                  2.5720
                                                                             2.6490
  2.6688
             2.7929
                       2.7948
                                  3.0250
                                             3.0408
                                                        3.0465
                                                                  3.1312
                                                                             3.3984
  3.3993
             3.4774
        k = 0.2579 - 0.4468 \ 0.0000 \ (64830 \ PWs)
                                                        bands (ev):
-21.2706 -21.2066 -20.9214 -20.9157 -20.9103 -20.9090 -19.9384 -19.9380
-21.2700 -21.2000 -20.9214 -20.9157 -20.9103 -20.9090 -19.9384 -19.9380 -19.7243 -19.7233 -19.4079 -19.0758 -19.0742 -19.0351 -18.6216 -18.6200 -18.5487 -18.5459 -18.4549 -18.4546 -17.8715 -17.8694 -17.7449 -17.6232 -17.6215 -17.5354 -17.5333 -17.2489 -15.6883 -15.6826 -15.6050 -14.8821 -14.6887 -14.2209 -14.2170 -13.7316 -13.0253 -13.0226 -12.4029 -12.2159 -12.1609 -12.1535 -11.9766 -11.9756 -11.6979 -11.5233 -11.5183 -11.4495 -11.4492 -10.8914 -10.8903 -10.3628 -10.3614 -10.2386 -10.2328 -10.1195 -9.8691 -9.2254 -9.2154 -9.2041 -8.9562 -8.9473 -8.8813 -8.8805
            -8.7645
                                                      -8.5896
                                                                 -8.3244
 -8.7677
                      -8.6863
                                 -8.6705
                                            -8.6307
                                                                            -8.3240
                                                      -7.7402
                                                                 -7.7316
 -8.1829
                      -8.1594
                                 -8.0880
                                           -8.0817
                                                                            -7.6865
           -8.1814
                                 -7.4608
                                           -7.3318
                                                      -7.3282
 -7.6846
           -7.5766
                      -7.5748
                                                                 -7.2865
                                                                            -7.2861
 -6.9648
           -6.9637
                      -6.8406
                                 -6.8402
                                            -6.6687
                                                       -6.6684
                                                                 -6.5278
                                                                            -6.4782
                      -6.0064
 -6.4638
           -6.1022
                                 -6.0058
                                            -5.9898
                                                      -5.9813
                                                                 -5.6451
                                                                            -5.6364
 -5.6293
            -5.6277
                      -5.4026
                                 -5.2201
                                            -5.2165
                                                       -5.1237
                                                                 -5.1229
                                                                            -5.0437
                                 -4.9098
                                                       -4.7356
                                                                 -4.7352
 -4.9843
            -4.9830
                      -4.9823
                                            -4.9083
                                                                            -4.5880
                      -3.5168
 -3.6876
            -3.5184
                                 -3.4238
                                            -3.1680
                                                       -3.1627
                                                                 -2.9569
                                                                            -1.8657
 -0.6586
             0.3524
                       0.3614
                                  0.3644
                                             1.7822
                                                        1.9907
                                                                  1.9947
                                                                             2.2560
  2.2628
             2.2776
                       2.2958
                                  2.3178
                                             2.4247
                                                        2.4257
                                                                  2.5584
                                                                             2.6431
  2.6629
             2.8052
                       2.8071
                                  3.0132
                                             3.0532
                                                        3.0578
                                                                  3.1177
                                                                             3.3692
  3.3699
             3.4895
        k = 0.2540 - 0.4399 \ 0.0000 \ (64852 \ PWs)
                                                        bands (ev):
-21.2801 -21.2146 -20.9124 -20.9069 -20.9026 -20.9014 -19.9458 -19.9454
-19.7336 -19.7327 -19.3879 -19.0945 -19.0929 -19.0083 -18.6155 -18.6139
-18.5759 -18.5730 -18.4415 -18.4412 -17.8630 -17.8609 -17.7503 -17.6253
-17.6236 -17.5092 -17.5072 -17.2538 -15.7099 -15.7044 -15.6129 -14.8905
-14.7228 -14.1853 -14.1812 -13.7089 -13.0655 -13.0627 -12.3857 -12.2209
-12.1556 -12.1481 -11.9658 -11.9648 -11.6970 -11.4843 -11.4792 -11.4750
-11.4747 -10.8897 -10.8885 -10.3314 -10.3300 -10.2556 -10.2499 -10.1104
                     -9.2153
                                -9.1821
                                           -8.9500
                                                      -8.9415
                                                                 -8.8922
 -9.9048
          -9.2584
                                                                           -8.8914
                                                      -8.6006
 -8.7597
           -8.7541
                      -8.7178
                                -8.7022
                                           -8.6616
                                                                 -8.3149
                                                                            -8.3146
 -8.1726
           -8.1710
                      -8.1351
                                -8.0854
                                           -8.0790
                                                      -7.7196
                                                                 -7.7108
                                                                            -7.7092
 -7.7073
           -7.5514
                      -7.5496
                                -7.4868
                                           -7.3427
                                                      -7.3391
                                                                 -7.2859
                                                                            -7.2854
 -6.9474
           -6.9464
                                                                            -6.5062
                      -6.8508
                                -6.8505
                                           -6.6514
                                                      -6.6511
                                                                 -6.5131
 -6.4759
           -6.0741
                      -6.0312
                                 -6.0305
                                           -6.0192
                                                      -6.0115
                                                                 -5.6563
                                                                            -5.6557
 -5.6542
           -5.6475
                      -5.3732
                                 -5.2099
                                            -5.2064
                                                      -5.1340
                                                                 -5.1332
                                                                            -5.0160
 -4.9757
           -4.9744
                      -4.9622
                                 -4.8850
                                            -4.8836
                                                       -4.7158
                                                                 -4.7155
                                                                            -4.5719
 -3.6953
           -3.5220
                      -3.5205
                                 -3.4356
                                            -3.1753
                                                       -3.1701
                                                                 -2.9647
                                                                            -1.8996
 -0.6255
            0.3648
                       0.3680
                                  0.3760
                                             1.7691
                                                        1.9533
                                                                  1.9572
                                                                             2.2619
                                                                  2.5450
  2.2750
             2.2896
                       2.2941
                                  2.3048
                                             2.4346
                                                        2.4357
                                                                             2.6370
  2.6569
             2.8177
                        2.8196
                                  3.0006
                                             3.0659
                                                        3.0701
                                                                  3.1044
                                                                             3.3398
  3.3404
             3.5018
        k = 0.2500 - 0.4330 \ 0.0000 \ (64834 \ PWs)
                                                        bands (ev):
-21.2894 -21.2226 -20.9032 -20.8980 -20.8947 -20.8937 -19.9531 -19.9527
-19.7428 -19.7418 -19.3678 -19.1131 -19.1115 -18.9813 -18.6093 -18.6077
```

```
-18.6029 -18.5999 -18.4282 -18.4279 -17.8543 -17.8522 -17.7556 -17.6277
-17.6259 -17.4830 -17.4809 -17.2590 -15.7318 -15.7264 -15.6207 -14.8987
-14.7573 -14.1494 -14.1451 -13.6861 -13.1056 -13.1028 -12.3680 -12.2258
-12.1502 -12.1427 -11.9547 -11.9537 -11.6959 -11.5004 -11.5001 -11.4451 -11.4400 -10.8880 -10.8868 -10.2999 -10.2985 -10.2726 -10.2669 -10.1008
 -9.9405
           -9.2913
                     -9.2263 -9.1492 -8.9442 -8.9361 -8.9029
                                                                           -8.9022
                      -8.7427
                                -8.7340 -8.6886
                                                                 -8.3058
 -8.7555
           -8.7504
                                                      -8.6115
                                                                            -8.3054
                                                                            -7.6989
                      -8.1110 -8.0828 -8.0764
                                                      -7.7320
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 -8.1620
           -8.1605
 -7.6901
           -7.5261
                      -7.5243
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                                                                            -6.5309
 -6.9301
           -6.9290
                                -6.8606
                                           -6.6341
                                                      -6.6338
                                                                 -5.6821
 -6.4551
           -6.0563
                      -6.0556
                                -6.0487
                                           -6.0460
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                                                                            -5.6806
                                                                            -4.9884
 -5.6674
           -5.6585
                      -5.3440
                                 -5.1996
                                           -5.1961
                                                      -5.1444
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                                                      -4.6961
 -4.9670
           -4.9657
                      -4.9424
                                 -4.8603
                                           -4.8589
                                                                 -4.6958
                                                                            -4.5560
 -3.7028
           -3.5260
                      -3.5245
                                 -3.4472
                                                      -3.1781
                                                                 -2.9729
                                                                            -1.9337
                                           -3.1832
 -0.5923
            0.3707
                       0.3800
                                  0.3900
                                            1.7561
                                                       1.9160
                                                                  1.9198
                                                                             2.2681
  2.2873
             2.2912
                       2.2923
                                  2.3030
                                             2.4450
                                                        2.4460
                                                                  2.5319
                                                                             2,6308
  2.6508
             2.8303
                       2.8322
                                  2.9880
                                             3.0788
                                                        3.0827
                                                                  3.0915
                                                                             3.3105
  3.3111
             3.5144
        k = 0.2460 - 0.4261 \ 0.0000 \ (64858 \ PWs)
                                                        bands (ev):
-21.2986 -21.2304 -20.8940 -20.8892 -20.8866 -20.8857 -19.9603 -19.9599 -19.7519 -19.7509 -19.3476 -19.1318 -19.1302 -18.9542 -18.6297 -18.6268 -18.6030 -18.6014 -18.4150 -18.4147 -17.8455 -17.8433 -17.7608 -17.6303 -17.6285 -17.4566 -17.4545 -17.2645 -15.7539 -15.7485 -15.6284 -14.9069 -14.7920 -14.1131 -14.1086 -13.6631 -13.1456 -13.1429 -12.3499 -12.2307 -12.1448 -12.1373 -11.9433 -11.9422 -11.6946 -11.5255 -11.5252 -11.4059 -11.4007 -10.8863 -10.8851 -10.2894 -10.2838 -10.2682 -10.2668 -10.0910 -0.9761 -0.3241 -0.2372 -0.1165 -8.9388 -8.9310 -8.9135 -8.9137
                                -9.1165
                                           -8.9388
                                                      -8.9310
                                                                 -8.9135
 -9.9761
           -9.3241
                      -9.2372
                                                                           -8.9127
 -8.7820
           -8.7664
                      -8.7624
                                -8.7322
                                           -8.7044
                                                      -8.6222
                                                                 -8.2970
                                                                            -8.2966
                                -8.0802
                                                      -7.7551
                                                                 -7.7532
 -8.1513
           -8.1498
                      -8.0871
                                           -8.0738
                                                                            -7.6784
           -7.5386
                      -7.5008
                                 -7.4989
                                                                            -7.2841
 -7.6694
                                           -7.3641
                                                      -7.3602
                                                                 -7.2846
 -6.9127
                                                                 -6.5647
           -6.9116
                      -6.8709
                                -6.8705
                                           -6.6167
                                                      -6.6164
                                                                            -6.5581
           -6.0819
                                 -6.0782
                                                                 -5.7085
 -6.4258
                      -6.0811
                                           -6.0716
                                                      -6.0178
                                                                            -5.7069
 -5.6786
           -5.6695
                      -5.3149
                                 -5.1891
                                            -5.1857
                                                                 -5.1540
                                                                            -4.9611
                                                       -5.1547
           -4.9569
 -4.9581
                      -4.9228
                                 -4.8356
                                            -4.8342
                                                       -4.6765
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                                                                            -4.5403
                                                                            -1.9679
 -3.7103
           -3.5304
                      -3.5289
                                 -3.4586
                                            -3.1917
                                                      -3.1867
                                                                 -2.9816
 -0.5589
            0.3746
                      0.3945
                                 0.4048
                                            1.7433
                                                       1.8788
                                                                  1.8825
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                                             2.4557
  2.2785
             2.2905
                       2.3002
                                  2.3153
                                                        2.4568
                                                                  2.5189
                                                                             2.6243
  2.6444
             2.8432
                       2.8451
                                  2.9755
                                             3.0781
                                                        3.0920
                                                                  3.0962
                                                                             3.2814
  3.2819
             3.5271
        k = 0.2421 - 0.4193 \ 0.0000 \ (64846 \ PWs)
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-21.3077 -21.2381 -20.8846 -20.8806 -20.8783 -20.8772 -19.9673 -19.9669
-19.7608 -19.7598 -19.3274 -19.1504 -19.1488 -18.9270 -18.6565 -18.6535
-18.5966 -18.5951 -18.4018 -18.4015 -17.8365 -17.8344 -17.7660 -17.6331
-17.6314 -17.4301 -17.4280 -17.2703 -15.7761 -15.7708 -15.6359 -14.9149
-14.8269 -14.0765 -14.0719 -13.6401 -13.1855 -13.1828 -12.3312 -12.2355
-12.1393 -12.1317 -11.9315 -11.9304 -11.6931 -11.5503 -11.5500 -11.3666
-11.3614 -10.8846 -10.8834 -10.3061 -10.3005 -10.2363 -10.2349 -10.0807
-10.0117
           -9.3568
                      -9.2479
                                -9.0842
                                           -8.9337
                                                      -8.9262
                                                                 -8.9239
                                                                            -8.9231
                                                                 -8.2885
 -8.8143
           -8.7989
                      -8.7844
                                 -8.7211
                                           -8.7050
                                                      -8.6327
                                                                            -8.2882
                      -8.0777
                                                       -7.7782
                                                                 -7.7764
 -8.1404
           -8.1389
                                 -8.0712
                                            -8.0633
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                                            -7.3744
                                                                 -7.2839
 -7.6488
                                                       -7.3705
                                                                            -7.2834
 -6.8953
           -6.8942
                      -6.8807
                                 -6.8803
                                            -6.5992
                                                       -6.5989
                                                                 -6.5943
                                                                            -6.5870
 -6.3951
           -6.1078
                      -6.1077
                                 -6.1070
                                            -6.1016
                                                       -5.9895
                                                                  -5.7348
                                                                            -5.7333
 -5.6898
            -5.6805
                      -5.2860
                                 -5.1785
                                            -5.1751
                                                       -5.1652
                                                                  -5.1644
                                                                            -4.9492
 -4.9479
            -4.9342
                      -4.9034
                                 -4.8109
                                            -4.8096
                                                       -4.6570
                                                                  -4.6567
                                                                            -4.5248
 -3.7177
           -3.5352
                      -3.5336
                                -3.4699
                                           -3.2009
                                                      -3.1959
                                                                 -2.9906
                                                                            -2.0023
                                 0.4202
 -0.5254
            0.3782
                      0.4097
                                            1.7308
                                                       1.8419
                                                                  1.8455
                                                                            2.2660
                       2.3131
                                                       2.4680
                                                                  2.5062
  2.2818
            2.2888
                                 2.3281
                                            2.4669
                                                                             2.6177
```

```
2.6379
             2.8563
                       2.8582
                                  2.9631
                                             3.0655
                                                       3.1053
                                                                  3.1094
                                                                             3.2524
  3.2529
             3.5399
        k = 0.2381 - 0.4124 \ 0.0000 \ (64854 \ PWs)
                                                       bands (ev):
-21.3166 -21.2457 -20.8750 -20.8723 -20.8700 -20.8680 -19.9743 -19.9739
-19.7695 -19.7685 -19.3072 -19.1690 -19.1674 -18.8996 -18.6831 -18.6801
-18.5902 -18.5886 -18.3888 -18.3885 -17.8274 -17.8252 -17.7711 -17.6362 -17.6344 -17.4035 -17.4014 -17.2763 -15.7984 -15.7932 -15.6434 -14.9228 -14.8621 -14.0396 -14.0348 -13.6169 -13.2253 -13.2227 -12.3122 -12.2402 -12.1338 -12.1262 -11.9194 -11.9184 -11.6913 -11.5749 -11.5746 -11.3273
-11.3220 \ -10.8829 \ -10.8818 \ -10.3227 \ -10.3172 \ -10.2043 \ -10.2029 \ -10.0702
-10.0471
           -9.3893
                      -9.2585
                                -9.0523
                                           -8.9342
                                                     -8.9334
                                                                -8.9289
                                                                           -8.9217
           -8.8317
                                                                -8.2803
                                                                           -8.2800
 -8.8470
                      -8.8136
                                -8.7097
                                           -8.6982
                                                      -8.6431
           -8.1279
                      -8.0752
                                -8.0687
                                                      -7.8015
                                                                 -7.7997
 -8.1294
                                           -8.0399
                                                                           -7.6377
                                           -7.3845
 -7.6284
           -7.5904
                      -7.4499
                                -7.4481
                                                      -7.3804
                                                                -7.2832
                                                                           -7.2827
           -6.8899
                                           -6.6244
                                                      -6.6166
                                                                 -6.5817
                                                                           -6.5813
 -6.8903
                      -6.8780
                                -6.8769
           -6.1372
                                                                 -5.7611
                                                                           -5.7595
 -6.3640
                      -6.1340
                                -6.1332
                                           -6.1314
                                                      -5.9612
                      -5.2573
                                                      -5.1677
                                                                            -4.9401
 -5.7010
           -5.6915
                                 -5.1756
                                           -5.1748
                                                                 -5.1643
                                           -4.7851
 -4.9388
           -4.9075
                      -4.8843
                                 -4.7864
                                                      -4.6376
                                                                 -4.6373
                                                                            -4.5095
 -3.7249
           -3.5403
                      -3.5387
                                 -3.4809
                                           -3.2106
                                                      -3.2056
                                                                 -3.0001
                                                                            -2.0368
 -0.4917
            0.3817
                       0.4255
                                  0.4363
                                            1.7184
                                                       1.8051
                                                                  1.8086
                                                                             2.2536
  2.2870
             2.2892
                                             2.4784
                                                       2.4795
                                                                  2.4936
                       2.3262
                                  2.3412
                                                                             2.6109
                                  2.9510
  2.6312
             2.8696
                       2.8715
                                             3.0531
                                                       3.1189
                                                                  3.1229
                                                                             3.2235
  3.2240
             3.5530
        k = 0.2341 - 0.4055 \ 0.0000 \ (64854 \ PWs)
                                                       bands (ev):
-21.3254 -21.2531 -20.8655 -20.8640 -20.8616 -20.8585 -19.9812 -19.9807
-19.7781 -19.7771 -19.2869 -19.1875 -19.1860 -18.8721 -18.7096 -18.7065
-19.7761 -19.7771 -19.2809 -19.1873 -19.1808 -18.8721 -18.7896 -18.7803 -18.5836 -18.5821 -18.3758 -18.3755 -17.8182 -17.8160 -17.7762 -17.6394 -17.6377 -17.3768 -17.3746 -17.2826 -15.8209 -15.8157 -15.6507 -14.9305 -14.8975 -14.0025 -13.9975 -13.5936 -13.2651 -13.2625 -12.2928 -12.2449 -12.1282 -12.1205 -11.9070 -11.9060 -11.6894 -11.5992 -11.5989 -11.2878
-11.2825 -10.8813 -10.8802 -10.3392 -10.3337 -10.1722 -10.1708 -10.0826
-10.0593
           -9.4217
                     -9.2690
                                -9.0207
                                           -8.9442
                                                      -8.9435
                                                                -8.9245
                                                                           -8.9175
                                           -8.6889
 -8.8798
           -8.8647
                      -8.8452
                                -8.6982
                                                      -8.6532
                                                                 -8.2725
                                                                           -8.2721
                                                      -7.8249
 -8.1182
           -8.1167
                      -8.0727
                                -8.0662
                                           -8.0167
                                                                 -7.8231
                                                                           -7.6177
                                -7.4226
 -7.6162
           -7.6080
                      -7.4245
                                           -7.3944
                                                      -7.3901
                                                                 -7.2826
                                                                           -7.2821
 -6.8998
           -6.8994
                      -6.8607
                                -6.8596
                                           -6.6548
                                                      -6.6469
                                                                 -6.5641
                                                                           -6.5638
 -6.3326
           -6.1666
                      -6.1612
                                -6.1606
                                           -6.1598
                                                      -5.9328
                                                                 -5.7873
                                                                           -5.7858
 -5.7122
           -5.7024
                      -5.2289
                                -5.1860
                                           -5.1853
                                                      -5.1567
                                                                 -5.1533
                                                                           -4.9309
           -4.8811
                                -4.7619
                                                                 -4.6181
 -4.9296
                      -4.8655
                                           -4.7606
                                                      -4.6184
                                                                           -4.4945
                                           -3.2208
                                -3.4918
 -3.7321
           -3.5457
                      -3.5441
                                                      -3.2160
                                                                 -3.0100
                                                                           -2.0715
 -0.4579
                       0.4419
            0.3851
                                  0.4530
                                            1.7062
                                                       1.7685
                                                                  1.7720
                                                                             2.2415
  2.2852
             2.2970
                       2.3395
                                  2.3545
                                             2.4813
                                                       2.4903
                                                                  2.4914
                                                                             2.6040
                       2.8849
                                  2.9390
                                             3.0408
                                                       3.1326
                                                                  3.1366
  2.6243
             2.8831
                                                                             3.1949
  3.1954
             3.5663
        k = 0.2302 - 0.3987 \ 0.0000 \ (64836 \ PWs)
                                                       bands (ev):
-21.3340 -21.2604 -20.8561 -20.8555 -20.8530 -20.8487 -19.9879 -19.9875
-19.7866 -19.7856 -19.2666 -19.2061 -19.2045 -18.8445 -18.7359 -18.7328
-18.5770 -18.5754 -18.3629 -18.3627 -17.8088 -17.8066 -17.7812 -17.6429
-17.6412 -17.3499 -17.3478 -17.2892 -15.8434 -15.8383 -15.6578 -14.9384
-14.9329 -13.9652 -13.9601 -13.5702 -13.3048 -13.3021 -12.2729 -12.2495
-12.1225 -12.1149 -11.8943 -11.8933 -11.6872 -11.6232 -11.6230 -11.2483
-11.2430 -10.8797 -10.8786 -10.3555 -10.3500 -10.1399 -10.1385 -10.1179
-10.0481
          -9.4540
                     -9.2792
                                -8.9895
                                          -8.9541
                                                      -8.9534
                                                                -8.9205
                                                                           -8.9145
 -8.9121
           -8.8978
                     -8.8776
                                -8.6865
                                           -8.6787
                                                      -8.6628
                                                                -8.2649
                                                                           -8.2645
                                           -7.9937
                                                      -7.8485
 -8.1068
           -8.1053
                     -8.0702
                                -8.0637
                                                                -7.8466
                                                                           -7.6420
                     -7.4039 -7.3995 -7.3989
 -7.5978 -7.5879
                                                      -7.3972 -7.2819
                                                                           -7.2814
```

```
-6.6857
 -6.9091
          -6.9088
                    -6.8434
                               -6.8423
                                                             -6.5465
                                                                       -6.5462
                                                   -6.6776
 -6.3011
          -6.1960
                    -6.1908
                               -6.1875
                                         -6.1867
                                                   -5.9043
                                                             -5.8135
                                                                       -5.8120
                               -5.1965
                                         -5.1958
                                                             -5.1422
 -5.7234
          -5.7133
                    -5.2007
                                                   -5.1455
                                                                       -4.9215
           -4.8550
 -4.9203
                               -4.7374
                                                   -4.5992
                    -4.8469
                                                             -4.5989
                                         -4.7362
                                                                       -4.4796
 -3.7392
          -3.5515
                     -3.5499
                               -3.5025
                                         -3.2316
                                                   -3.2268
                                                             -3.0204
                                                                       -2.1063
 -0.4239
           0.3884
                     0.4590
                               0.4703
                                         1.6942
                                                   1.7322
                                                              1.7356
                                                                        2.2295
  2.2834
            2.3052
                      2.3530
                                2.3679
                                          2.4692
                                                    2.5026
                                                              2.5036
                                                                        2.5968
  2.6172
            2.8967
                      2.8986
                                2.9272
                                          3.0287
                                                    3.1466
                                                              3.1506
                                                                         3.1665
  3.1669
            3.5798
       k = 0.2262 - 0.3918 \ 0.0000 \ (64824 \ PWs)
                                                    bands (ev):
-21.3425 -21.2676 -20.8473 -20.8465 -20.8438 -20.8387 -19.9945 -19.9941
-19.7949 \ -19.7939 \ -19.2462 \ -19.2246 \ -19.2230 \ -18.8167 \ -18.7622 \ -18.7590
-18.5703 -18.5687 -18.3502 -18.3499 -17.7993 -17.7971 -17.7861 -17.6467 -17.6449 -17.3230 -17.3208 -17.2960 -15.8659 -15.8609 -15.6649 -14.9689 -14.9456 -13.9277 -13.9224 -13.5467 -13.3443 -13.3417 -12.2540 -12.2528 -12.1168 -12.1091 -11.8814 -11.8803 -11.6848 -11.6470 -11.6467 -11.2088 -11.2034 -10.8782 -10.8770 -10.3717 -10.3663 -10.1531 -10.1075 -10.1061
                    -9.2894
                              -8.9639
                                         -8.9631
                                                  -8.9595
-10.0366
          -9.4862
                                                             -8.9459
                                                                       -8.9317
                                                                       -8.2572
 -8.9169
           -8.9118
                    -8.9076
                              -8.6757
                                         -8.6735
                                                   -8.6655
                                                             -8.2576
           -8.0938
                                                             -7.8703
                                                                       -7.6677
 -8.0953
                    -8.0677
                               -8.0612
                                         -7.9709
                                                   -7.8721
                              -7.4082
 -7.5784
          -7.5680
                                         -7.3737
                                                   -7.3719
                                                             -7.2812
                    -7.4131
                                                                       -7.2807
                                         -6.7170
 -6.9183
          -6.9179
                              -6.8250
                                                   -6.7087
                                                             -6.5290
                    -6.8261
                                                                       -6.5286
                    -6.2203
                               -6.2148
 -6.2695
           -6.2253
                                         -6.2139
                                                   -5.8758
                                                             -5.8396
                                                                       -5.8381
 -5.7347
           -5.7242
                     -5.2071
                               -5.2063
                                         -5.1729
                                                   -5.1342
                                                             -5.1309
                                                                       -4.9121
                                         -4.7119
 -4.9108
           -4.8293
                     -4.8286
                               -4.7131
                                                   -4.5802
                                                             -4.5799
                                                                       -4.4650
 -3.7462
           -3.5576
                     -3.5560
                               -3.5130
                                         -3.2429
                                                   -3.2382
                                                             -3.0312
                                                                       -2.1413
 -0.3898
            0.3915
                      0.4766
                                0.4881
                                                                        2.2177
                                          1.6824
                                                    1.6962
                                                              1.6995
  2.2816
            2.3137
                      2.3667
                                2.3816
                                          2.4574
                                                    2.5151
                                                              2.5162
                                                                         2.5895
  2.6100
            2.9103
                      2.9124
                                2.9160
                                          3.0169
                                                    3.1383
                                                              3.1387
                                                                         3.1608
  3.1647
            3.5934
       k = 0.2222 - 0.3849 \ 0.0000 \ (64820 \ PWs)
                                                    bands (ev):
-21.3508 -21.2747 -20.8387 -20.8376 -20.8341 -20.8286 -20.0010 -20.0006
-19.8031 -19.8021 -19.2431 -19.2415 -19.2258 -18.7890 -18.7881 -18.7850
-18.5635 -18.5619 -18.3375 -18.3373 -17.7909 -17.7896 -17.7874 -17.6506
-17.6489 -17.3031 -17.2959 -17.2937 -15.8885 -15.8836 -15.6718 -15.0048
-14.9530 -13.8900 -13.8845 -13.5230 -13.3838 -13.3812 -12.2585 -12.2322
-12.1111 -12.1034 -11.8681 -11.8671 -11.6822 -11.6704 -11.6702 -11.1691
-11.1637 -10.8766 -10.8755 -10.3877 -10.3824 -10.1883 -10.0749 -10.0735
                                        -8.9734
-10.0247
          -9.5182
                    -9.2993
                              -8.9803
                                                  -8.9727
                                                             -8.9656
                                                                      -8.9445
                              -8.6836
                                                   -8.6548
                                        -8.6622
 -8.9285
          -8.9114
                    -8.9060
                                                             -8.2505
                                                                       -8.2502
                    -8.0653
          -8.0821
                              -8.0588
                                        -7.9484
                                                   -7.8958
                                                             -7.8940
 -8.0836
                                                                       -7.6934
 -7.5594
                                                  -7.3466
                                                             -7.2806
          -7.5485
                    -7.4217
                              -7.4163
                                        -7.3484
                                                                       -7.2801
          -6.9270
                    -6.8089
                              -6.8078
                                        -6.7487
                                                   -6.7403
                                                             -6.5114
 -6.9273
                                                                       -6.5111
 -6.2546
          -6.2498
                    -6.2425
                              -6.2415
                                         -6.2376
                                                   -5.8657
                                                             -5.8641
                                                                       -5.8472
 -5.7460
          -5.7349
                    -5.2176
                              -5.2169
                                         -5.1454
                                                   -5.1227
                                                             -5.1194
                                                                       -4.9025
 -4.9012
          -4.8106
                    -4.8038
                               -4.6889
                                         -4.6877
                                                   -4.5613
                                                             -4.5610
                                                                       -4.4506
 -3.7530
          -3.5640
                    -3.5624
                               -3.5234
                                         -3.2547
                                                   -3.2500
                                                             -3.0423
                                                                       -2.1764
 -0.3555
           0.3946
                      0.4947
                                0.5064
                                          1.6602
                                                    1.6635
                                                              1.6711
                                                                        2.2062
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                                                              2.5291
                                                                        2.5820
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                                                    3.1103
  2.6025
            2.9040
                                2.9266
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                                                                        3.1752
  3.1791
            3.6072
       k = 0.2183 - 0.3780 \ 0.0000 \ (64820 \ PWs)
                                                    bands (ev):
-21.3590 -21.2817 -20.8301 -20.8288 -20.8239 -20.8183 -20.0075 -20.0070
-19.8111 -19.8101 -19.2615 -19.2600 -19.2054 -18.8142 -18.8110 -18.7608
-18.5566 -18.5551 -18.3250 -18.3247 -17.7957 -17.7798 -17.7776 -17.6548
-17.6530 -17.3105 -17.2687 -17.2665 -15.9111 -15.9063 -15.6786 -15.0409
```

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-14.9603 -13.8522 -13.8465 -13.4993 -13.4232 -13.4206 -12.2629 -12.2113
-12.1054 -12.0976 -11.8546 -11.8536 -11.6938 -11.6934 -11.6791 -11.1294
-11.1239 -10.8752 -10.8740 -10.4037 -10.3984 -10.2234 -10.0422 -10.0408
          -9.5501
                     -9.3092 -9.0140 -8.9994
                                                      -8.9828
                                                                -8.9821
-10.0126
                                                                           -8.9776
           -8.9034
                                                                           -8.2434
 -8.9111
                      -8.8950
                                -8.6930
                                           -8.6499
                                                      -8.6431
                                                                 -8.2438
 -8.0717
           -8.0702
                      -8.0629
                                -8.0563
                                           -7.9262
                                                      -7.9196
                                                                 -7.9178
                                                                           -7.7191
 -7.5413
                      -7.4295
                                -7.4235
                                           -7.3232
           -7.5297
                                                      -7.3214
                                                                 -7.2799
                                                                           -7.2794
           -6.9358
                     -6.7917
                                -6.7906
                                           -6.7807
                                                                 -6.4940
 -6.9362
                                                      -6.7722
                                                                           -6.4936
           -6.2791
                     -6.2704
                                                                 -5.8902
 -6.2838
                                -6.2694
                                           -6.2060
                                                      -5.8917
                                                                           -5.8186
           -5.7456
 -5.7573
                      -5.2283
                                 -5.2275
                                           -5.1185
                                                      -5.1109
                                                                 -5.1076
                                                                           -4.8928
                                 -4.6647
 -4.8916
           -4.7929
                      -4.7787
                                           -4.6636
                                                      -4.5425
                                                                 -4.5422
                                                                            -4.4364
 -3.7598
           -3.5708
                      -3.5692
                                 -3.5335
                                           -3.2670
                                                      -3.2623
                                                                 -3.0540
                                                                            -2.2117
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            0.3975
                       0.5133
                                  0.5253
                                             1.6246
                                                       1.6279
                                                                  1.6596
                                                                             2.1948
             2.3321
  2.2779
                       2.3947
                                  2.4089
                                             2.4349
                                                       2.5412
                                                                  2.5422
                                                                             2.5743
  2.5949
             2.8929
                       2.9390
                                  2.9409
                                             2.9938
                                                       3.0826
                                                                  3.0831
                                                                             3.1898
  3.1937
             3.6213
        k = 0.2143 - 0.3712 \ 0.0000 \ (64816 \ PWs)
                                                       bands (ev):
-21.3670 -21.2885 -20.8213 -20.8200 -20.8135 -20.8079 -20.0138 -20.0133 -19.8190 -19.8180 -19.2799 -19.2784 -19.1849 -18.8400 -18.8367 -18.7327 -18.5497 -18.5481 -18.3125 -18.3123 -17.8004 -17.7699 -17.7677 -17.6591 -17.6574 -17.3182 -17.2415 -17.2392 -15.9337 -15.9289 -15.6853 -15.0771 -14.9674 -13.8142 -13.8084 -13.4754 -13.4625 -13.4600 -12.2672 -12.1901 -12.0996 -12.0917 -11.8408 -11.8398 -11.7167 -11.7164 -11.6760 -11.0896 -11.0841 -10.8738 -10.8726 -10.4195 -10.4142 -10.2584 -10.0094 -10.0080 -10.0002 -9.5819 -9.3188 -9.0481 -9.0336 -9.0109 -8.9920 -8.9913
           -8.9002
                      -8.8664
                                -8.7022
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 -8.9070
                                           -8.6374
                                                                 -8.2373
                                                                           -8.2369
           -8.0597
                                           -7.9436
 -8.0606
                                 -8.0540
                                                      -7.9418
                                                                 -7.9040
                                                                           -7.7447
                      -8.0582
 -7.5247
                      -7.4359
                                 -7.4292
                                           -7.2981
                                                      -7.2964
                                                                 -7.2792
           -7.5123
                                                                            -7.2787
                                           -6.7745
 -6.9449
           -6.9446
                      -6.8131
                                -6.8046
                                                      -6.7734
                                                                 -6.4765
                                                                            -6.4762
                                 -6.2976
                      -6.2986
                                                      -5.9176
                                                                            -5.7903
 -6.3128
           -6.3083
                                           -6.1743
                                                                 -5.9161
                                           -5.0999
 -5.7686
           -5.7558
                      -5.2389
                                 -5.2382
                                                      -5.0969
                                                                 -5.0896
                                                                            -4.8830
                                 -4.6407
                      -4.7539
 -4.8817
            -4.7754
                                           -4.6397
                                                      -4.5238
                                                                 -4.5235
                                                                            -4.4224
                      -3.5762
                                 -3.5435
                                                                 -3.0660
           -3.5778
                                           -3.2797
                                                      -3.2751
                                                                            -2.2470
 -3.7665
 -0.2864
             0.4003
                       0.5324
                                  0.5446
                                             1.5893
                                                       1.5926
                                                                  1.6484
                                                                             2.1837
             2.3419
                       2.4088
                                  2.4184
                                             2.4286
                                                       2.5547
                                                                  2.5557
  2.2761
                                                                             2.5664
  2.5871
             2.8819
                       2.9534
                                  2.9553
                                             2.9827
                                                       3.0552
                                                                  3.0556
                                                                             3.2045
  3.2085
             3.6355
        k = 0.2103 - 0.3643 \ 0.0000 \ (64826 \ PWs)
                                                       bands (ev):
-21.3749 -21.2952 -20.8124 -20.8110 -20.8030 -20.7973 -20.0200 -20.0195
-19.8267 -19.8258 -19.2983 -19.2967 -19.1644 -18.8657 -18.8624 -18.7044
-18.5427 -18.5411 -18.3002 -18.3000 -17.8050 -17.7598 -17.7576 -17.6637
-17.6620 -17.3262 -17.2141 -17.2118 -15.9563 -15.9516 -15.6918 -15.1134
-14.9745 -13.7761 -13.7702 -13.5017 -13.4992 -13.4514 -12.2714 -12.1686
-12.0937 -12.0859 -11.8268 -11.8258 -11.7393 -11.7390 -11.6725 -11.0498
-11.0442 -10.8724 -10.8712 -10.4351 -10.4299 -10.2934
                                                                -9.9875
                                                                           -9.9764
 -9.9750
           -9.6135
                      -9.3283
                                -9.0823
                                           -9.0679
                                                      -9.0443
                                                                 -9.0010
                                                                           -9.0003
 -8.9039
           -8.8974
                      -8.8372
                                -8.7114
                                           -8.6247
                                                      -8.6185
                                                                 -8.2310
                                                                            -8.2307
 -8.0583
           -8.0516
                      -8.0475
                                -8.0460
                                           -7.9676
                                                      -7.9657
                                                                 -7.8823
                                                                            -7.7703
                      -7.4393
                                -7.4320
 -7.5107
            -7.4978
                                           -7.2785
                                                      -7.2780
                                                                 -7.2732
                                                                            -7.2715
 -6.9535
           -6.9531
                      -6.8458
                                 -6.8373
                                           -6.7573
                                                      -6.7562
                                                                 -6.4591
                                                                            -6.4588
                      -6.3271
 -6.3418
           -6.3374
                                 -6.3261
                                            -6.1426
                                                       -5.9435
                                                                 -5.9420
                                                                            -5.7800
 -5.7698
           -5.7579
                      -5.2496
                                 -5.2489
                                            -5.0877
                                                       -5.0846
                                                                 -5.0636
                                                                            -4.8731
                      -4.7294
                                 -4.6168
                                            -4.6158
                                                       -4.5053
                                                                 -4.5050
 -4.8718
            -4.7582
                                                                            -4.4087
 -3.7730
            -3.5852
                      -3.5836
                                 -3.5533
                                            -3.2929
                                                       -3.2883
                                                                 -3.0785
                                                                            -2.2825
 -0.2516
            0.4030
                                            1.5543
                       0.5520
                                 0.5644
                                                       1.5575
                                                                  1.6374
                                                                            2.1727
  2.2743
             2.3520
                                  2.4239
                                             2.4397
                                                       2.5583
                                                                  2.5684
                                                                             2.5695
                       2.4101
  2.5790
             2.8711
                       2.9665
                                  2.9698
                                             2.9735
                                                       3.0280
                                                                  3.0284
                                                                             3.2195
  3.2235
             3.6498
```

```
k = 0.2063 - 0.3574 \ 0.0000 \ (64820 \ PWs)
                                                     bands (ev):
-18.5355 -18.5340 -18.2881 -18.2878 -17.8095 -17.7496 -17.7474 -17.6685 -17.6668 -17.3344 -17.1866 -17.1843 -15.9789 -15.9743 -15.6983 -15.1498
-14.9813 -13.7380 -13.7318 -13.5408 -13.5383 -13.4273 -12.2756 -12.1468
-12.0879 -12.0799 -11.8125 -11.8115 -11.7616 -11.7613 -11.6688 -11.0099
-11.0043 -10.8711 -10.8699 -10.4506 -10.4454 -10.3282 -9.9745
                                                                        -9.9433
 -9.9419
           -9.6450
                     -9.3376
                              -9.1167
                                         -9.1025
                                                    -9.0777
                                                              -9.0098
                                                                        -9.0091
                                                              -8.2250
 -8.9012
           -8.8948
                     -8.8082
                               -8.7204
                                         -8.6118
                                                    -8.6058
                                                                        -8.2246
 -8.0559
           -8.0493
                     -8.0352
                               -8.0337
                                         -7.9916
                                                    -7.9898
                                                              -7.8609
                                                                        -7.7958
                                                              -7.2484
 -7.5013
           -7.4892
                     -7.4366
                               -7.4302
                                         -7.2778
                                                    -7.2774
                                                                        -7.2468
                                                                        -6.4415
 -6.9619
           -6.9615
                     -6.8789
                               -6.8703
                                         -6.7402
                                                    -6.7391
                                                              -6.4418
 -6.3707
           -6.3663
                     -6.3560
                               -6.3550
                                         -6.1110
                                                    -5.9694
                                                              -5.9678
                                                                        -5.7914
                                                    -5.0725
                                                              -5.0373
 -5.7779
           -5.7312
                     -5.2603
                               -5.2596
                                         -5.0756
                                                                        -4.8631
 -4.8618
           -4.7413
                     -4.7052
                               -4.5931
                                          -4.5921
                                                    -4.4870
                                                              -4.4867
                                                                         -4.3952
                                          -3.3064
                                                    -3.3019
                                                              -3.0914
                                                                        -2.3181
 -3.7795
           -3.5928
                     -3.5912
                               -3.5629
 -0.2167
            0.4057
                      0.5720
                                0.5847
                                           1.5196
                                                     1.5227
                                                               1.6267
                                                                          2.1620
  2.2724
            2.3626
                      2.3998
                                 2.4384
                                           2.4539
                                                     2.5500
                                                               2.5708
                                                                          2.5825
  2.5835
            2.8605
                       2.9600
                                 2.9834
                                           2.9849
                                                     3.0012
                                                               3.0016
                                                                          3.2348
  3.2387
            3.6643
        k = 0.2024 - 0.3505 \ 0.0000 \ (64812 \ PWs)
                                                     bands (ev):
-21.3902 -21.3083 -20.7944 -20.7929 -20.7813 -20.7756 -20.0320 -20.0316 -19.8418 -19.8409 -19.3350 -19.3334 -19.1233 -18.9167 -18.9133 -18.6475 -18.5284 -18.5268 -18.2760 -18.2757 -17.8140 -17.7393 -17.7370 -17.6734 -17.6717 -17.3429 -17.1590 -17.1567 -16.0015 -15.9969 -15.7046 -15.1863 -14.9881 -13.6997 -13.6934 -13.5798 -13.5773 -13.4031 -12.2797 -12.1247 -12.0820 -12.0740 -11.7980 -11.7970 -11.7836 -11.7833 -11.6648 -10.9699
-10.9643 -10.8698 -10.8686 -10.4660 -10.4608 -10.3630
                                                             -9.9613 -9.9100
                               -9.1513
 -9.9086
           -9.6763
                    -9.3467
                                         -9.1372
                                                   -9.1111
                                                              -9.0184
                                                                        -9.0177
                     -8.7796
                               -8.7293
                                         -8.5988
                                                    -8.5929
 -8.8987
           -8.8924
                                                              -8.2193
                                                                        -8.2189
                                                              -7.8397
 -8.0537
           -8.0470
                     -8.0227
                               -8.0212
                                         -8.0157
                                                    -8.0139
                                                                        -7.8213
 -7.4977
           -7.4881
                     -7.4264
                               -7.4224
                                         -7.2772
                                                    -7.2767
                                                              -7.2239
                                                                        -7.2223
 -6.9702
           -6.9698
                     -6.9123
                               -6.9037
                                         -6.7231
                                                    -6.7220
                                                              -6.4246
                                                                        -6.4242
                                         -6.0797
 -6.3995
           -6.3952
                     -6.3851
                               -6.3841
                                                    -5.9951
                                                              -5.9936
                                                                        -5.8029
 -5.7876
           -5.7025
                     -5.2711
                               -5.2704
                                          -5.0634
                                                    -5.0602
                                                              -5.0112
                                                                        -4.8529
                               -4.5695
 -4.8516
           -4.7246
                     -4.6813
                                         -4.5685
                                                    -4.4687
                                                              -4.4684
                                                                        -4.3818
 -3.7858
           -3.6008
                     -3.5992
                               -3.5723
                                          -3.3204
                                                    -3.3160
                                                              -3.1047
                                                                        -2.3539
 -0.1816
            0.4082
                      0.5924
                                0.6053
                                           1.4851
                                                     1.4882
                                                               1.6161
                                                                          2.1514
                                                     2.5416
  2.2706
            2.3736
                      2.3893
                                 2.4531
                                           2.4686
                                                               2.5624
                                                                          2.5968
  2.5978
                                                     2.9986
            2.8501
                      2.9496
                                 2.9743
                                           2.9747
                                                               3.0003
                                                                          3.2502
  3.2541
            3.6790
        k = 0.1984 - 0.3437 \ 0.0000 \ (64802 \ PWs)
                                                     bands (ev):
-21.3977 -21.3146 -20.7852 -20.7837 -20.7703 -20.7645 -20.0379 -20.0374
-19.8491 -19.8482 -19.3532 -19.3516 -19.1026 -18.9420 -18.9386 -18.6188
-18.5211 -18.5195 -18.2640 -18.2638 -17.8184 -17.7288 -17.7266 -17.6786
-17.6769 -17.3517 -17.1312 -17.1289 -16.0240 -16.0195 -15.7108 -15.2230
-14.9948 -13.6615 -13.6549 -13.6186 -13.6162 -13.3787 -12.2837 -12.1023
-12.0761 -12.0680 -11.8053 -11.8051 -11.7833 -11.7822 -11.6604 -10.9299
-10.9242 -10.8686 -10.8674 -10.4812 -10.4761 -10.3977
                                                              -9.9478
                                                                        -9.8767
 -9.8753
           -9.7075
                     -9.3556
                               -9.1861
                                         -9.1721
                                                    -9.1445
                                                              -9.0268
                                                                        -9.0260
           -8.8902
                     -8.7513
                               -8.7380
                                          -8.5855
                                                    -8.5798
                                                              -8.2137
 -8.8963
                                                                        -8.2133
 -8.0514
           -8.0447
                     -8.0398
                               -8.0380
                                         -8.0100
                                                    -8.0085
                                                              -7.8468
                                                                        -7.8187
 -7.4990
          -7.4919
                     -7.4114
                               -7.4092
                                         -7.2765
                                                    -7.2760
                                                              -7.1995
                                                                        -7.1979
          -6.9779
 -6.9783
                    -6.9460
                               -6.9373
                                         -6.7060
                                                    -6.7049
                                                              -6.4281
                                                                        -6.4239
 -6.4146
          -6.4136 -6.4074 -6.4070
                                        -6.0489
                                                   -6.0208
                                                              -6.0192
                                                                        -5.8144
```

```
-5.7970
          -5.6736
                    -5.2820
                              -5.2812
                                        -5.0510
                                                  -5.0479
                                                            -4.9856
                                                                      -4.8426
 -4.8414
          -4.7083
                    -4.6579
                              -4.5461
                                        -4.5452
                                                  -4.4506
                                                            -4.4504
                                                                      -4.3688
 -3.7920
          -3.6090
                    -3.6074
                              -3.5816
                                        -3.3347
                                                  -3.3303
                                                            -3.1184
                                                                      -2.3897
           0.4106
                                         1.4510
                                                             1.6057
 -0.1464
                     0.6133
                               0.6264
                                                   1.4541
                                                                       2.1411
           2.3789
                                2.4680
                                         2.4835
                                                   2.5332
 2.2688
                     2.3850
                                                             2.5538
                                                                       2.6114
  2.6124
           2.8399
                      2.9392
                                2.9480
                                          2.9484
                                                    3.0138
                                                             3.0155
                                                                       3.2658
  3.2697
            3.6941
       k = 0.1944 - 0.3368 \ 0.0000 \ (64806 \ PWs)
                                                   bands (ev):
-21.4050 -21.3209 -20.7758 -20.7744 -20.7591 -20.7533 -20.0436 -20.0432
-19.8563 -19.8553 -19.3714 -19.3699 -19.0820 -18.9672 -18.9637 -18.5900
-18.5137 -18.5122 -18.2523 -18.2520 -17.8227 -17.7182 -17.7159 -17.6839 -17.6822 -17.3607 -17.1034 -17.1011 -16.0465 -16.0420 -15.7168 -15.2596 -15.0013 -13.6576 -13.6552 -13.6226 -13.6163 -13.3543 -12.2876 -12.0797 -12.0701 -12.0621 -11.8267 -11.8265 -11.7683 -11.7673 -11.6558 -10.8898 -10.8841 -10.8675 -10.8663 -10.4962 -10.4911 -10.4322 -9.9340 -9.8432
                                                  -9.1780
                    -9.3644
                              -9.2210
                                        -9.2071
                                                                      -9.0342
 -9.8418
          -9.7385
                                                            -9.0349
                                                  -8.5665
                    -8.7465
                              -8.7234
                                        -8.5721
                                                            -8.2084
                                                                      -8.2080
 -8.8942
          -8.8882
                    -8.0492
          -8.0621
                              -8.0425
                                        -7.9972
                                                  -7.9957
                                                            -7.8723
                                                                      -7.7981
 -8.0639
                    -7.3948
 -7.5032
          -7.4978
                              -7.3925
                                        -7.2759
                                                  -7.2754
                                                            -7.1753
                                                                      -7.1738
 -6.9863
          -6.9859
                    -6.9799
                              -6.9713
                                        -6.6889
                                                  -6.6878
                                                            -6.4567
                                                                      -6.4525
                              -6.3901
          -6.4432
                    -6.3905
                                        -6.0464
                                                  -6.0448
 -6.4443
                                                            -6.0188
                                                                      -5.8259
                    -5.2929
 -5.8056
          -5.6446
                              -5.2921
                                                  -5.0353
                                                            -4.9602
                                        -5.0384
                                                                      -4.8322
          -4.6922
                    -4.6348
                              -4.5229
                                        -4.5220
                                                  -4.4327
 -4.8310
                                                            -4.4325
                                                                      -4.3560
 -3.7982
                    -3.6159
                              -3.5906
                                        -3.3494
          -3.6175
                                                  -3.3451
                                                            -3.1325
                                                                      -2.4257
 -0.1110
           0.4130
                     0.6344
                               0.6478
                                         1.4173
                                                   1.4202
                                                             1.5955
                                                                       2.1310
  2.2670
            2.3687
                      2.3967
                                2.4830
                                          2.4983
                                                    2.5249
                                                             2.5451
                                                                        2.6262
  2.6272
            2.8299
                                2.9224
                                          2.9290
                                                    3.0292
                                                             3.0309
                      2.9220
                                                                        3.2816
  3.2855
            3.7077
       k = 0.1905 - 0.3299 \ 0.0000 \ (64806 \ PWs)
                                                   bands (ev):
-21.4122 -21.3270 -20.7664 -20.7649 -20.7477 -20.7420 -20.0492 -20.0488
-19.8633 -19.8624 -19.3896 -19.3880 -19.0614 -18.9922 -18.9887 -18.5611
-18.5063 -18.5048 -18.2406 -18.2404 -17.8270 -17.7075 -17.7052 -17.6894
-17.6877 -17.3701 -17.0755 -17.0732 -16.0690 -16.0645 -15.7228 -15.2964
-15.0076 -13.6962 -13.6938 -13.5843 -13.5776 -13.3297 -12.2915 -12.0643
-12.0572 -12.0556 -11.8478 -11.8475 -11.7532 -11.7522 -11.6509 -10.8664
-10.8653 -10.8497 -10.8439 -10.5112 -10.5061 -10.4666 -9.9200
                                                                      -9.8096
                                                  -9.2113
                             -9.2560
 -9.8082
          -9.7694
                   -9.3730
                                       -9.2423
                                                            -9.0429
                                                                      -9.0422
                             -8.6959
          -8.8863
 -8.8922
                    -8.7548
                                        -8.5585
                                                  -8.5529
                                                            -8.2032
                                                                      -8.2028
                              -8.0403
                                        -7.9842
                                                  -7.9827
                                                            -7.8976
 -8.0881
          -8.0863
                    -8.0471
                                                                      -7.7778
                              -7.3741
          -7.5047
                    -7.3771
                                        -7.2752
                                                  -7.2747
 -7.5089
                                                            -7.1514
                                                                      -7.1500
          -7.0058
                    -6.9939
                              -6.9935
                                        -6.6719
                                                  -6.6708
                                                            -6.4851
 -7.0144
                                                                      -6.4809
                    -6.3736
                              -6.3732
          -6.4731
                                                            -5.9901
 -6.4742
                                        -6.0719
                                                  -6.0704
                                                                      -5.8375
                                                  -5.0227
 -5.8127
          -5.6156
                    -5.3038
                              -5.3030
                                        -5.0257
                                                            -4.9352
                                                                      -4.8217
 -4.8205
          -4.6765
                    -4.6121
                              -4.4999
                                        -4.4990
                                                  -4.4150
                                                            -4.4147
                                                                      -4.3434
 -3.8042
          -3.6263
                    -3.6246
                              -3.5995
                                        -3.3645
                                                  -3.3602
                                                            -3.1470
                                                                      -2.4618
 -0.0755
           0.4153
                     0.6560
                               0.6696
                                         1.3838
                                                   1.3868
                                                             1.5856
                                                                       2.1210
 2.2652
           2.3586
                     2.4089
                                2.4971
                                          2.5107
                                                    2.5198
                                                             2.5366
                                                                       2.6413
  2.6423
            2.8201
                      2.8963
                                2.8967
                                          2.9190
                                                   3.0449
                                                             3.0466
                                                                       3.2976
  3.3016
            3.7148
       k = 0.1865 - 0.3230 \ 0.0000 \ (64798 \ PWs)
                                                    bands (ev):
-21.4192 -21.3329 -20.7569 -20.7554 -20.7362 -20.7305 -20.0547 -20.0543
-19.8702 -19.8692 -19.4077 -19.4062 -19.0407 -19.0171 -19.0136 -18.5321
-18.4988 -18.4973 -18.2291 -18.2289 -17.8312 -17.6966 -17.6951 -17.6943
-17.6934 -17.3796 -17.0475 -17.0452 -16.0914 -16.0870 -15.7286 -15.3332
-15.0139 -13.7347 -13.7324 -13.5458 -13.5390 -13.3050 -12.2953 -12.0583
-12.0501 -12.0335 -11.8685 -11.8683 -11.7379 -11.7368 -11.6457 -10.8654
```

```
-10.8643 -10.8095 -10.8036 -10.5263 -10.5210 -10.5004
                                                                 -9.9058
                                                                            -9.8002
                                           -9.2777
                                                      -9.2447
                                                                 -9.0507
 -9.7759
           -9.7744
                     -9.3815
                                -9.2912
                                                                            -9.0499
                                 -8.6688
                                                                            -8.1979
 -8.8903
           -8.8845
                      -8.7630
                                            -8.5447
                                                      -8.5392
                                                                 -8.1983
 -8.1123
           -8.1105
                      -8.0449
                                 -8.0382
                                            -7.9711
                                                      -7.9696
                                                                 -7.9229
                                                                            -7.7577
 -7.5155
           -7.5118
                      -7.3588
                                 -7.3551
                                            -7.2746
                                                      -7.2741
                                                                 -7.1277
                                                                            -7.1264
 -7.0490
           -7.0403
                      -7.0016
                                 -7.0012
                                            -6.6549
                                                      -6.6538
                                                                 -6.5134
                                                                            -6.5093
 -6.5044
           -6.5033
                      -6.3569
                                 -6.3565
                                            -6.0974
                                                      -6.0958
                                                                 -5.9639
                                                                            -5.8492
 -5.8173
           -5.5865
                      -5.3148
                                 -5.3140
                                            -5.0129
                                                      -5.0098
                                                                 -4.9106
                                                                            -4.8111
 -4.8099
           -4.6610
                      -4.5897
                                 -4.4771
                                            -4.4762
                                                       -4.3973
                                                                 -4.3971
                                                                            -4.3310
                                                                            -2.4979
 -3.8101
           -3.6353
                      -3.6336
                                 -3.6082
                                            -3.3798
                                                      -3.3756
                                                                 -3.1620
 -0.0398
            0.4175
                       0.6779
                                  0.6917
                                             1.3507
                                                        1.3536
                                                                   1.5758
                                                                              2.1113
  2.2634
             2.3488
                       2.4214
                                  2.5015
                                             2.5155
                                                        2.5265
                                                                   2.5332
                                                                              2.6565
             2.8105
                                             2.9092
                                                        3.0608
  2.6575
                        2.8709
                                  2.8713
                                                                   3.0625
                                                                              3.3139
             3.7079
  3.3178
        k = 0.1825 - 0.3162 \ 0.0000 \ (64790 \ PWs)
                                                        bands (ev):
-21.4260 -21.3388 -20.7472 -20.7457 -20.7246 -20.7189 -20.0601 -20.0597
-21.4200 -21.3388 -20.7472 -20.7457 -20.7246 -20.7189 -20.0601 -20.0597 -19.8769 -19.8760 -19.4258 -19.4242 -19.0418 -19.0383 -19.0200 -18.5029 -18.4913 -18.4897 -18.2178 -18.2175 -17.8353 -17.7009 -17.6992 -17.6855 -17.6832 -17.3895 -17.0194 -17.0170 -16.1137 -16.1094 -15.7343 -15.3700 -15.0200 -13.7732 -13.7708 -13.5073 -13.5003 -13.2802 -12.2990 -12.0523 -12.0441 -12.0101 -11.8889 -11.8887 -11.7223 -11.7213 -11.6402 -10.8645 -10.8634 -10.7693 -10.7633 -10.5432 -10.5367 -10.5312 -9.8913 -9.8308 -9.7420 -9.7406 -9.3897 -9.3266 -9.3131 -9.2780 -9.0582 -9.0574
                      -8.7710
 -8.8886
           -8.8829
                                 -8.6422
                                            -8.5307
                                                       -8.5253
                                                                 -8.1936
                                                                            -8.1932
                      -8.0428
                                                      -7.9563
 -8.1365
            -8.1347
                                 -8.0361
                                            -7.9578
                                                                 -7.9482
                                                                            -7.7380
           -7.5192
                      -7.3400
                                 -7.3358
                                            -7.2739
 -7.5224
                                                       -7.2735
                                                                 -7.1044
                                                                            -7.1032
                      -7.0090
                                                                 -6.5416
 -7.0838
           -7.0751
                                 -7.0087
                                            -6.6380
                                                       -6.6369
                                                                            -6.5374
                      -6.3403
                                            -6.1228
                                                                  -5.9422
 -6.5349
           -6.5338
                                 -6.3399
                                                       -6.1212
                                                                            -5.8609
 -5.8174
           -5.5573
                      -5.3258
                                 -5.3251
                                            -4.9999
                                                       -4.9969
                                                                  -4.8864
                                                                            -4.8004
           -4.6458
                      -4.5677
 -4.7992
                                 -4.4545
                                            -4.4536
                                                       -4.3799
                                                                  -4.3796
                                                                            -4.3189
 -3.8159
           -3.6445
                      -3.6429
                                 -3.6167
                                            -3.3955
                                                       -3.3913
                                                                  -3.1773
                                                                            -2.5342
 -0.0040
                                             1.3180
                                                        1.3208
                                                                   1.5662
             0.4196
                       0.7000
                                  0.7141
                                                                              2.1018
                       2.4344
                                  2.4939
                                             2.5149
                                                        2.5334
                                                                   2.5472
  2.2617
             2.3391
                                                                              2.6720
  2.6730
             2.8011
                        2.8459
                                  2.8463
                                             2.8996
                                                        3.0769
                                                                   3.0786
                                                                              3.3303
  3.3342
             3,6990
        k = 0.1786 - 0.3093 \ 0.0000 \ (64764 \ PWs)
                                                        bands (ev):
-21.4327 -21.3445 -20.7374 -20.7359 -20.7128 -20.7071 -20.0654 -20.0650
-19.8835 -19.8826 -19.4438 -19.4423 -19.0665 -19.0629 -18.9993 -18.4836
-18.4820 -18.4736 -18.2066 -18.2063 -17.8393 -17.7070 -17.7053 -17.6744
-17.6721 -17.3996 -16.9912 -16.9888 -16.1360 -16.1317 -15.7399 -15.4069
-15.0260 -13.8115 -13.8092 -13.4688 -13.4616 -13.2553 -12.3027 -12.0464
-12.0381 -11.9865 -11.9090 -11.9088 -11.7067 -11.7056 -11.6343 -10.8637
-10.8626 -10.7290 -10.7230 -10.5720 -10.5532 -10.5489
                                                                 -9.8766
                                                                            -9.8612
           -9.7067
                     -9.3978
                                -9.3620
                                           -9.3487
                                                      -9.3113
                                                                 -9.0655
 -9.7081
                                                                            -9.0647
           -8.8814
                      -8.7788
                                 -8.6160
                                            -8.5165
                                                      -8.5112
                                                                 -8.1890
 -8.8871
                                                                            -8.1886
           -8.1589
                      -8.0408
                                 -8.0340
                                            -7.9734
                                                      -7.9443
                                                                 -7.9428
                                                                            -7.7186
 -8.1606
 -7.5295
           -7.5265
                      -7.3210
                                 -7.3163
                                            -7.2733
                                                      -7.2728
                                                                 -7.1190
                                                                            -7.1103
 -7.0812
           -7.0801
                      -7.0164
                                 -7.0160
                                            -6.6211
                                                      -6.6200
                                                                 -6.5696
                                                                            -6.5656
 -6.5654
            -6.5645
                      -6.3239
                                 -6.3235
                                            -6.1481
                                                       -6.1465
                                                                  -5.9277
                                                                             -5.8727
                                            -4.9868
                                                       -4.9837
 -5.8102
            -5.5281
                      -5.3369
                                 -5.3361
                                                                  -4.8626
                                                                             -4.7896
                                            -4.4314
                                                       -4.3625
                                                                  -4.3623
 -4.7883
            -4.6309
                      -4.5461
                                 -4.4322
                                                                             -4.3070
 -3.8216
            -3.6540
                      -3.6524
                                 -3.6251
                                            -3.4115
                                                       -3.4073
                                                                  -3.1930
                                                                             -2.5706
  0.0320
             0.4216
                       0.7225
                                  0.7367
                                             1.2856
                                                        1.2885
                                                                   1.5569
                                                                              2.0925
  2.2599
                                                        2.5484
             2.3297
                        2.4476
                                  2.4848
                                             2.5061
                                                                   2.5630
                                                                              2.6877
                        2.8212
                                  2.8216
                                             2.8902
                                                        3.0931
                                                                   3.0949
  2.6887
             2.7919
                                                                              3.3469
  3.3509
             3.6900
        k = 0.1746 - 0.3024 \ 0.0000 \ (64760 \ PWs)
                                                        bands (ev):
```

```
-21.4393 -21.3501 -20.7275 -20.7260 -20.7009 -20.6952 -20.0706 -20.0702
-19.8899 -19.8890 -19.4618 -19.4602 -19.0910 -19.0873 -18.9785 -18.4759
-15.0319 -13.8497 -13.8474 -13.4302 -13.4229 -13.2303 -12.3062 -12.0404
-12.0321 -11.9626 -11.9287 -11.9285 -11.6908 -11.6898 -11.6281 -10.8630
-10.8619 -10.6887 -10.6826 -10.6054 -10.5678 -10.5633 -9.8914
                                                                      -9.8616
          -9.6726
                    -9.4059
                              -9.3974
                                        -9.3843
                                                  -9.3446
                                                            -9.0725
 -9.6741
                                                                       -9.0718
                                                            -8.1849
 -8.8856
          -8.8800
                    -8.7865
                              -8.5902
                                        -8.5022
                                                  -8.4970
                                                                       -8.1846
 -8.1843
          -8.1829
                    -8.0387
                              -8.0319
                                        -7.9985
                                                  -7.9307
                                                             -7.9292
                                                                       -7.6995
 -7.5366
          -7.5338
                    -7.3018
                              -7.2969
                                        -7.2727
                                                  -7.2722
                                                             -7.1543
                                                                       -7.1456
                    -7.0235
                                                                       -6.5965
 -7.0585
          -7.0575
                              -7.0232
                                        -6.6043
                                                  -6.6033
                                                             -6.5974
                                                                       -5.8845
 -6.5954
          -6.5932
                    -6.3077
                              -6.3072
                                        -6.1733
                                                  -6.1718
                                                             -5.9218
 -5.7945
          -5.4988
                    -5.3481
                              -5.3473
                                        -4.9735
                                                   -4.9705
                                                             -4.8391
                                                                       -4.7786
 -4.7774
          -4.6163
                     -4.5248
                              -4.4102
                                        -4.4094
                                                   -4.3453
                                                             -4.3451
                                                                       -4.2954
                                        -3.4277
                                                             -3.2092
                                                                       -2.6070
 -3.8271
          -3.6638
                    -3.6621
                              -3.6332
                                                   -3.4236
  0.0681
            0.4235
                      0.7452
                                0.7597
                                          1.2537
                                                    1.2565
                                                              1.5477
                                                                        2.0833
  2.2582
            2.3205
                      2.4606
                                2.4758
                                          2.4964
                                                    2.5644
                                                              2.5791
                                                                        2.7035
  2.7045
            2.7830
                      2.7968
                                2.7972
                                          2.8810
                                                    3.1096
                                                              3.1113
                                                                        3.3638
  3.3677
            3.6809
       k = 0.1706 - 0.2956 \ 0.0000 \ (64764 \ PWs)
                                                    bands (ev):
-21.4457 -21.3556 -20.7175 -20.7160 -20.6888 -20.6831 -20.0757 -20.0753 -19.8962 -19.8953 -19.4797 -19.4782 -19.1153 -19.1116 -18.9578 -18.4681 -18.4665 -18.4147 -18.1846 -18.1844 -17.8471 -17.7195 -17.7178 -17.6517 -17.6493 -17.4207 -16.9346 -16.9321 -16.1803 -16.1761 -15.7507 -15.4807 -15.0376 -13.8878 -13.8855 -13.3917 -13.3842 -13.2052 -12.3097 -12.0345 -12.0261 -11.9481 -11.9479 -11.9385 -11.6748 -11.6738 -11.6216 -10.8624
-10.8612 -10.6485 -10.6424 -10.6388 -10.5818 -10.5774
                                                            -9.9215
                                                                      -9.8465
                              -9.4205
                                        -9.4130
                                                  -9.3778
                                                            -9.0793
 -9.6399
          -9.6385
                    -9.4333
                                                                       -9.0786
                    -8.7940
                              -8.5649
 -8.8843
          -8.8787
                                        -8.4877
                                                   -8.4825
                                                             -8.2088
                                                                       -8.2071
                                                             -7.9154
                    -8.0368
                              -8.0299
                                         -8.0236
                                                  -7.9169
 -8.1805
           -8.1801
                                                                       -7.6808
                     -7.2825
                              -7.2774
 -7.5437
           -7.5411
                                        -7.2721
                                                  -7.2716
                                                             -7.1900
                                                                       -7.1812
 -7.0361
          -7.0353
                     -7.0305
                              -7.0301
                                        -6.6278
                                                   -6.6266
                                                             -6.6253
                                                                       -6.6210
 -6.5873
           -6.5862
                    -6.2916
                              -6.2912
                                         -6.1984
                                                   -6.1969
                                                             -5.9229
                                                                       -5.8964
 -5.7717
           -5.4695
                     -5.3593
                              -5.3585
                                         -4.9600
                                                   -4.9571
                                                             -4.8161
                                                                       -4.7676
 -4.7663
          -4.6020
                     -4.5040
                              -4.3885
                                        -4.3877
                                                   -4.3282
                                                             -4.3281
                                                                       -4.2840
 -3.8326
          -3.6737
                     -3.6721
                              -3.6412
                                        -3.4443
                                                   -3.4402
                                                             -3.2257
                                                                       -2.6435
  0.1044
           0.4254
                      0.7682
                                0.7829
                                          1.2221
                                                    1.2249
                                                              1.5388
                                                                        2.0744
  2.2565
            2.3114
                      2.4628
                                2.4775
                                          2.4864
                                                    2.5807
                                                              2.5955
                                                                        2.7195
  2.7205
            2.7728
                      2.7732
                                2.7742
                                          2.8720
                                                    3.1263
                                                              3.1280
                                                                        3.3808
  3.3848
            3.6721
       k = 0.1667 - 0.2887 \ 0.0000 \ (64766 \ PWs)
                                                    bands (ev):
-21.4520 -21.3609 -20.7074 -20.7059 -20.6765 -20.6709 -20.0806 -20.0802
-19.9024 -19.9015 -19.4976 -19.4960 -19.1395 -19.1358 -18.9370 -18.4603
-18.4587 -18.3850 -18.1739 -18.1737 -17.8508 -17.7260 -17.7243 -17.6401
-17.6377 -17.4316 -16.9061 -16.9036 -16.2024 -16.1982 -15.7559 -15.5177
-15.0433 -13.9257 -13.9235 -13.3532 -13.3455 -13.1799 -12.3131 -12.0286
-12.0202 -11.9672 -11.9669 -11.9142 -11.6587 -11.6577 -11.6148 -10.8619
-10.8607 -10.6733 -10.6080 -10.6021 -10.5951 -10.5910
                                                            -9.9515
                                                                      -9.8311
 -9.6056
          -9.6042
                    -9.4690
                              -9.4562
                                        -9.4210
                                                   -9.4107
                                                             -9.0859
                                                                       -9.0851
 -8.8830
          -8.8776
                     -8.8013
                               -8.5401
                                         -8.4730
                                                   -8.4679
                                                             -8.2329
                                                                       -8.2311
                     -8.0487
                               -8.0348
                                         -8.0279
                                                   -7.9030
                                                             -7.9015
 -8.1765
           -8.1760
                                                                       -7.6623
           -7.5482
                     -7.2715
                               -7.2710
                                         -7.2633
                                                   -7.2579
                                                             -7.2257
 -7.5508
                                                                       -7.2170
          -7.0370
                     -7.0140
                              -7.0134
                                         -6.6592
                                                   -6.6580
                                                             -6.6528
                                                                       -6.6484
 -7.0374
 -6.5705
          -6.5694
                    -6.2758
                              -6.2754
                                        -6.2235
                                                  -6.2220
                                                             -5.9283
                                                                       -5.9084
                                                             -4.7934
 -5.7445
          -5.4401
                    -5.3706
                              -5.3698
                                        -4.9465
                                                  -4.9435
                                                                       -4.7564
 -4.7552
          -4.5880
                    -4.4835
                              -4.3671
                                        -4.3664
                                                  -4.3112
                                                            -4.3111
                                                                      -4.2728
```

```
-3.8379
          -3.6840
                    -3.6823
                             -3.6490
                                       -3.4610
                                                 -3.4570
                                                          -3.2426
                                                                   -2.6802
                    0.7914
                                                 1.1937
  0.1408
           0.4272
                              0.8063
                                        1.1910
                                                           1.5300
                                                                    2.0657
  2.2548
           2.3026
                     2.4533
                              2.4757
                                        2.4915
                                                  2.5973
                                                           2.6121
                                                                     2.7356
           2.7493
                     2.7496
                              2.7657
                                        2.8633
                                                  3.1432
                                                           3.1449
  2.7366
                                                                     3.3981
  3.4020
           3.6631
       k = 0.1627 - 0.2818 \ 0.0000 \ (64782 \ PWs)
                                                 bands (ev):
-21.4581 -21.3662 -20.6972 -20.6957 -20.6642 -20.6585 -20.0855 -20.0850
-19.9084 \ -19.9075 \ -19.5154 \ -19.5139 \ -19.1636 \ -19.1599 \ -18.9162 \ -18.4524
-18.4508 \ -18.3552 \ -18.1634 \ -18.1632 \ -17.8545 \ -17.7327 \ -17.7310 \ -17.6284
-17.6260 -17.4427 -16.8776 -16.8750 -16.2244 -16.2202 -15.7610 -15.5547
-15.0488 -13.9635 -13.9613 -13.3147 -13.3068 -13.1545 -12.3165 -12.0227
-12.0142 -11.9858 -11.9856 -11.8897 -11.6425 -11.6415 -11.6076 -10.8615
-10.8603 -10.7072 -10.6092 -10.6048 -10.5672 -10.5609
                                                         -9.9813
                                                                   -9.8155
 -9.5713
          -9.5698 -9.5048 -9.4921 -9.4445 -9.4278
                                                          -9.0922
                                                                   -9.0914
                                      -8.4581 -8.4531
                                                          -8.2569
 -8.8819
          -8.8765
                   -8.8085 -8.5157
                                                                   -8.2551
                                                          -7.8874
                             -8.0329 -8.0260
                                                -7.8889
                                                                   -7.6443
 -8.1726
          -8.1722 -8.0737
                   -7.2709
-6.9924
                            -7.2704
-6.9920
                                                          -7.2435
                                      -7.2622
                                                                   -7.2381
 -7.5578
          -7.5553
                                                -7.2535
                                      -6.6908
                                                -6.6896
                                                          -6.6802
                                                                   -6.6756
 -7.0441
          -7.0437
 -6.5537
          -6.5526
                   -6.2602
                             -6.2598
                                      -6.2485
                                                -6.2469
                                                          -5.9362
                                                                    -5.9204
                                       -4.9327
                                                -4.9298
 -5.7148
          -5.4107
                   -5.3820
                             -5.3812
                                                          -4.7712
                                                                    -4.7452
                             -4.3462
          -4.5743
                                       -4.3455
                                                -4.2943
 -4.7439
                   -4.4634
                                                          -4.2942
                                                                    -4.2619
          -3.6944
                                       -3.4780
                                                          -3.2599
 -3.8431
                   -3.6927
                             -3.6566
                                                -3.4740
                                                                    -2.7169
  0.1774
           0.4289
                     0.8149
                              0.8300
                                        1.1603
                                                 1.1629
                                                           1.5215
                                                                     2.0572
  2.2531
           2.2940
                                        2.5062
                                                  2.6141
                                                           2.6288
                                                                     2.7260
                     2.4428
                              2.4652
  2.7264
           2.7520
                     2.7530
                              2.7574
                                        2.8547
                                                  3.1602
                                                           3.1620
                                                                     3.4155
  3.4195
           3.6243
       k = 0.1587 - 0.2749 \ 0.0000 \ (64760 \ PWs)
                                                 bands (ev):
-21.4641 -21.3713 -20.6868 -20.6853 -20.6516 -20.6460 -20.0902 -20.0898
-19.9143 -19.9134 -19.5332 -19.5316 -19.1876 -19.1838 -18.8954 -18.4444
-18.4428 -18.3253 -18.1531 -18.1528 -17.8581 -17.7395 -17.7378 -17.6165 -17.6141 -17.4542 -16.8489 -16.8464 -16.2463 -16.2422 -15.7659 -15.5916 -15.0541 -14.0012 -13.9990 -13.2762 -13.2682 -13.1290 -12.3197 -12.0169 -12.0083 -12.0041 -12.0039 -11.8650 -11.6261 -11.6251 -11.6002 -10.8612
-10.8600 -10.7410 -10.6225 -10.6181 -10.5268 -10.5203 -10.0109
                                                                   -9.7997
                                                                   -9.0975
 -9.5406
          -9.5368
                   -9.5354
                            -9.5281 -9.4775
                                                -9.4351 -9.0982
 -8.8809
          -8.8755
                   -8.8154
                             -8.4918 -8.4431 -8.4381
                                                          -8.2808
                                                                   -8.2791
                                                -7.8747
                   -8.0986 -8.0310
                                      -8.0241
 -8.1689
          -8.1685
                                                          -7.8732
                                                                   -7.6265
 -7.5647
          -7.5622
                   -7.2984
                             -7.2896
                                      -7.2703
                                                -7.2698
                                                          -7.2244
                                                                   -7.2188
                                                -6.7215
                                      -6.7227
                                                          -6.7073
 -7.0506
          -7.0502
                   -6.9713
                             -6.9711
                                                                   -6.7025
                                                          -5.9457
                   -6.2734
                             -6.2718
                                      -6.2448
                                                -6.2444
 -6.5370
          -6.5359
                                                                    -5.9326
                                      -4.9189
          -5.3934
                   -5.3926
                             -5.3813
                                                -4.9159
                                                          -4.7494
 -5.6835
                                                                   -4.7338
          -4.5609
 -4.7326
                   -4.4437
                             -4.3257
                                      -4.3251
                                                -4.2774
                                                          -4.2774
                                                                   -4.2512
          -3.7050
 -3.8482
                   -3.7033
                             -3.6640
                                      -3.4952
                                                -3.4912
                                                          -3.2775
                                                                   -2.7536
           0.4306
                    0.8385
                                                 1.1326
                                                          1.5131
 0.2141
                              0.8538
                                       1.1300
                                                                     2.0489
  2.2515
           2.2856
                     2.4319
                              2.4543
                                        2.5216
                                                 2.6311
                                                           2.6457
                                                                     2.7032
  2.7035
           2.7494
                     2.7684
                              2.7695
                                        2.8463
                                                 3.1775
                                                           3.1792
                                                                     3.4332
           3.5779
  3.4371
       k = 0.1548 - 0.2681 \ 0.0000 \ (64754 \ PWs)
                                                 bands (ev):
-21.4699 -21.3762 -20.6764 -20.6749 -20.6390 -20.6334 -20.0948 -20.0944
-19.9200 -19.9191 -19.5509 -19.5493 -19.2114 -19.2076 -18.8746 -18.4363
-18.4347 -18.2952 -18.1429 -18.1427 -17.8617 -17.7464 -17.7447 -17.6046
-17.6022 -17.4659 -16.8202 -16.8177 -16.2681 -16.2640 -15.7708 -15.6286
-15.0593 -14.0387 -14.0366 -13.2379 -13.2297 -13.1034 -12.3229 -12.0221
-12.0218 -12.0111 -12.0025 -11.8401 -11.6097 -11.6087 -11.5923 -10.8610
```

```
-8.8799
           -8.8746
                      -8.8222
                                 -8.4683
                                           -8.4279
                                                      -8.4229
                                                                 -8.3047
                                                                           -8.3029
                                 -8.0292
                                                      -7.8603
 -8.1654
           -8.1650
                      -8.1234
                                           -8.0223
                                                                 -7.8588
                                                                           -7.6091
                                -7.3260
                                           -7.2697
                                                                 -7.2052
                                                                           -7.1995
 -7.5714
           -7.5690
                      -7.3349
                                                      -7.2692
 -7.0569
                      -6.9510
                                 -6.9504
           -7.0566
                                           -6.7548
                                                      -6.7535
                                                                 -6.7341
                                                                           -6.7290
 -6.5203
           -6.5192
                      -6.2982
                                 -6.2966
                                           -6.2296
                                                      -6.2292
                                                                 -5.9560
                                                                           -5.9448
 -5.6514
           -5.4049
                      -5.4041
                                -5.3519
                                           -4.9049
                                                      -4.9019
                                                                 -4.7281
                                                                           -4.7224
 -4.7211
           -4.5478
                      -4.4244
                                 -4.3058
                                           -4.3052
                                                      -4.2605
                                                                 -4.2605
                                                                           -4.2408
                                                                           -2.7905
 -3.8532
           -3.7158
                      -3.7142
                                -3.6713
                                           -3.5126
                                                      -3.5087
                                                                 -3.2955
  0.2510
            0.4322
                      0.8623
                                 0.8778
                                            1.1002
                                                       1.1028
                                                                 1.5050
                                                                            2.0408
  2.2499
            2.2774
                       2.4208
                                  2.4432
                                             2.5373
                                                       2.6482
                                                                  2.6624
                                                                             2.6810
  2.6812
            2.7417
                       2.7850
                                  2.7861
                                             2.8381
                                                       3.1950
                                                                  3.1967
                                                                             3.4511
  3.4550
             3.5316
        k = 0.1508 - 0.2612 \ 0.0000 \ (64762 \ PWs)
                                                       bands (ev):
-21.4756 -21.3811 -20.6658 -20.6643 -20.6262 -20.6206 -20.0993 -20.0989 -19.9256 -19.9247 -19.5685 -19.5670 -19.2351 -19.2312 -18.8538 -18.4282 -18.4266 -18.2651 -18.1329 -18.1327 -17.8651 -17.7535 -17.7518 -17.5925 -17.5900 -17.4778 -16.7915 -16.7889 -16.2898 -16.2858 -15.7755 -15.6656 -15.0644 -14.0761 -14.0740 -13.1995 -13.1912 -13.0777 -12.3260 -12.0396 -12.0394 -12.0054 -11.9966 -11.8150 -11.5931 -11.5921 -11.5842 -10.8610 -10.8599 -10.8084 -10.6483 -10.6441 -10.4457 -10.4390 -10.0696 -9.7675 -9.6124 -9.6002 -9.5435 -9.4666 -9.4662 -9.4489 -9.1094 -9.1087
                     -9.5435
                                                                           -9.1087
           -9.6002
                                -9.4676
                                           -9.4662
                                                      -9.4489
                                                                -9.1094
 -9.6124
                                -8.4454
                                           -8.4125
                                                      -8.4076
                                                                 -8.3284
 -8.8790
           -8.8738
                      -8.8288
                                                                           -8.3267
 -8.1621
           -8.1616
                                                      -7.8457
                      -8.1482
                                -8.0274
                                           -8.0204
                                                                 -7.8442
                                                                           -7.5921
                                 -7.3627
 -7.5781
           -7.5756
                      -7.3716
                                           -7.2691
                                                      -7.2686
                                                                 -7.1860
                                                                           -7.1802
                      -6.9316
                                                                 -6.7605
 -7.0631
           -7.0628
                                -6.9304
                                           -6.7870
                                                      -6.7858
                                                                           -6.7549
 -6.5037
           -6.5026
                      -6.3228
                                 -6.3213
                                           -6.2147
                                                      -6.2143
                                                                 -5.9670
                                                                           -5.9571
                      -5.4156
                                 -5.3224
 -5.6185
           -5.4165
                                           -4.8907
                                                      -4.8878
                                                                 -4.7108
                                                                           -4.7096
           -4.5351
                      -4.4055
                                 -4.2864
                                            -4.2859
 -4.7071
                                                      -4.2436
                                                                 -4.2435
                                                                            -4.2306
 -3.8581
           -3.7268
                      -3.7252
                                 -3.6783
                                            -3.5302
                                                      -3.5263
                                                                 -3.3139
                                                                            -2.8274
  0.2880
            0.4337
                       0.8862
                                  0.9020
                                             1.0708
                                                       1.0734
                                                                  1.4970
                                                                             2.0329
  2.2483
             2.2694
                       2.4094
                                  2.4318
                                             2.5535
                                                       2.6581
                                                                  2.6585
                                                                             2.6666
                       2.8017
  2.6801
             2.7345
                                  2.8027
                                             2.8302
                                                       3.2127
                                                                  3.2144
                                                                             3.4691
  3.4730
             3.4853
        k = 0.1468 - 0.2543 \ 0.0000 \ (64766 \ PWs)
                                                       bands (ev):
-21.4811 -21.3858 -20.6551 -20.6536 -20.6132 -20.6076 -20.1037 -20.1033
-19.9310 -19.9301 -19.5861 -19.5845 -19.2586 -19.2547 -18.8330 -18.4200
-18.4184 -18.2348 -18.1231 -18.1229 -17.8685 -17.7607 -17.7590 -17.5802
-17.5778 -17.4900 -16.7626 -16.7600 -16.3114 -16.3074 -15.7801 -15.7025
-15.0694 -14.1134 -14.1113 -13.1613 -13.1528 -13.0519 -12.3291 -12.0568
-12.0566 -11.9997 -11.9909 -11.7897 -11.5765 -11.5759 -11.5752 -10.8611
-10.8600 -10.8420 -10.6608 -10.6567 -10.4050 -10.3983 -10.0986
                                                                           -9.7511
                                                                -9.1146
 -9.6483
           -9.6363
                     -9.5765
                                -9.4554
                                          -9.4329
                                                     -9.4314
                                                                           -9.1139
           -8.8731
                      -8.8352
                                -8.4230
                                           -8.3969
                                                      -8.3920
                                                                -8.3521
                                                                           -8.3503
 -8.8782
           -8.1587
                      -8.1583
                                -8.0256
                                           -8.0187
                                                      -7.8310
                                                                -7.8295
                                                                           -7.5847
 -8.1731
 -7.5822
           -7.5754
                      -7.4084
                                -7.3995
                                           -7.2686
                                                      -7.2681
                                                                -7.1668
                                                                           -7.1610
 -7.0692
           -7.0688
                      -6.9137
                                -6.9114
                                           -6.8195
                                                      -6.8182
                                                                -6.7861
                                                                           -6.7797
 -6.4870
           -6.4859
                      -6.3475
                                -6.3459
                                           -6.2001
                                                      -6.1996
                                                                -5.9784
                                                                           -5.9694
 -5.5852
           -5.4281
                      -5.4272
                                -5.2929
                                           -4.8764
                                                      -4.8735
                                                                 -4.6992
                                                                           -4.6979
 -4.6866
           -4.5226
                      -4.3871
                                 -4.2677
                                            -4.2673
                                                      -4.2267
                                                                 -4.2265
                                                                            -4.2207
           -3.7380
                      -3.7364
                                            -3.5479
                                                      -3.5441
 -3.8628
                                 -3.6852
                                                                 -3.3327
                                                                            -2.8644
  0.3252
            0.4352
                       0.9103
                                  0.9263
                                            1.0420
                                                       1.0445
                                                                  1.4893
                                                                             2.0252
  2.2467
             2.2616
                       2.3977
                                  2.4201
                                             2.5701
                                                       2.6369
                                                                  2.6373
                                                                             2.6834
                                  2.8195
                                                       3.2305
                                                                  3.2322
  2.6962
             2.7284
                       2.8185
                                             2.8224
                                                                             3.4391
  3.4874
             3.4913
        k = 0.1429 - 0.2474 \ 0.0000 \ (64722 \ PWs)
                                                       bands (ev):
-21.4865 -21.3904 -20.6443 -20.6428 -20.6001 -20.5945 -20.1080 -20.1075
```

```
-19.9363 -19.9354 -19.6036 -19.6021 -19.2820 -19.2781 -18.8122 -18.4118
-18.4102 -18.2044 -18.1135 -18.1133 -17.8718 -17.7680 -17.7664 -17.5678
-17.5654 -17.5024 -16.7337 -16.7311 -16.3329 -16.3290 -15.7845 -15.7395
-15.0742 -14.1505 -14.1484 -13.1232 -13.1145 -13.0260 -12.3320 -12.0736 -12.0734 -11.9941 -11.9852 -11.7642 -11.5669 -11.5598 -11.5588 -10.8755
-10.8614 -10.8602 -10.6731 -10.6690 -10.3644 -10.3575 -10.1275
                                                                            -9.7345
           -9.6723
                      -9.6094
                                -9.4618 -9.3981
                                                      -9.3966 -9.1196
 -9.6842
                                                                            -9.1188
                      -8.8415
           -8.8725
                                 -8.4011
                                           -8.3812
                                                                 -8.3756
 -8.8775
                                                      -8.3763
                                                                            -8.3739
 -8.1978
           -8.1556
                      -8.1552
                                 -8.0239
                                            -8.0169
                                                                            -7.5913
                                                      -7.8161
                                                                 -7.8146
 -7.5887
           -7.5591
                      -7.4454
                                 -7.4364
                                            -7.2680
                                                      -7.2675
                                                                 -7.1478
                                                                            -7.1418
 -7.0751
           -7.0747
                      -6.8984
                                 -6.8943
                                            -6.8521
                                                       -6.8508
                                                                 -6.8100
                                                                            -6.8020
                                                                            -5.9819
 -6.4705
           -6.4694
                      -6.3720
                                 -6.3704
                                            -6.1857
                                                       -6.1852
                                                                 -5.9902
                                                                            -4.6862
 -5.5516
           -5.4398
                      -5.4389
                                 -5.2634
                                            -4.8620
                                                       -4.8591
                                                                 -4.6874
 -4.6666
           -4.5105
                      -4.3691
                                 -4.2497
                                            -4.2494
                                                       -4.2110
                                                                  -4.2095
                                                                            -4.2093
                                                                 -3.3518
                                                                            -2.9014
 -3.8674
           -3.7494
                      -3.7478
                                 -3.6919
                                            -3.5658
                                                       -3.5620
  0.3625
             0.4366
                       0.9345
                                  0.9507
                                             1.0136
                                                        1.0162
                                                                   1.4817
                                                                              2.0177
                                                        2.6159
  2.2451
             2.2540
                       2.3858
                                  2.4083
                                             2.5871
                                                                   2.6163
                                                                              2.7005
  2.7087
             2.7271
                        2.8149
                                  2.8354
                                             2.8364
                                                        3.2486
                                                                   3.2503
                                                                              3.3930
  3.5058
             3.5097
        k = 0.1389 - 0.2406 \ 0.0000 \ (64732 \ PWs)
                                                        bands (ev):
-21.4918 -21.3949 -20.6334 -20.6319 -20.5869 -20.5813 -20.1121 -20.1117 -19.9414 -19.9405 -19.6211 -19.6195 -19.3053 -19.3014 -18.7914 -18.4035 -18.4019 -18.1739 -18.1041 -18.1039 -17.8750 -17.7755 -17.7738 -17.5553 -17.5528 -17.5151 -16.7048 -16.7021 -16.3543 -16.3504 -15.7889 -15.7764 -15.0790 -14.1874 -14.1854 -13.0852 -13.0763 -12.9999 -12.3349 -12.0900 -12.0898 -11.9886 -11.9796 -11.7386 -11.5577 -11.5431 -11.5421 -10.9089 -10.8618 -10.8606 -10.6851 -10.6811 -10.3237 -10.3166 -10.1563 -9.7201 -9.7178 -9.7084 -9.6423 -9.4680 -9.3632 -9.3617 -9.1242 -9.1234
           -9.7084
                      -9.6423
                                -9.4680
                                           -9.3632
                                                      -9.3617
                                                                 -9.1242
 -9.7178
                                                                            -9.1234
 -8.8769
           -8.8719
                      -8.8475
                                 -8.3990
                                           -8.3973
                                                       -8.3797
                                                                 -8.3652
                                                                            -8.3604
                                 -8.0222
                                                      -7.8011
                                                                 -7.7996
                                                                            -7.5979
 -8.2224
           -8.1527
                      -8.1522
                                            -8.0153
 -7.5952
           -7.5432
                      -7.4824
                                 -7.4734
                                            -7.2675
                                                       -7.2670
                                                                 -7.1288
                                                                            -7.1229
 -7.0808
                                 -6.8849
           -7.0804
                      -6.8894
                                            -6.8836
                                                                 -6.8286
                                                       -6.8826
                                                                            -6.8183
                      -6.3964
                                 -6.3948
 -6.4539
           -6.4528
                                            -6.1715
                                                                  -6.0022
                                                                            -5.9945
                                                       -6.1711
 -5.5177
            -5.4515
                      -5.4507
                                 -5.2339
                                            -4.8474
                                                       -4.8445
                                                                  -4.6756
                                                                            -4.6743
                                            -4.2322
 -4.6470
            -4.4986
                      -4.3515
                                 -4.2324
                                                       -4.2016
                                                                  -4.1923
                                                                            -4.1920
 -3.8720
            -3.7610
                      -3.7593
                                 -3.6984
                                            -3.5839
                                                       -3.5801
                                                                  -3.3712
                                                                             -2.9385
  0.3999
             0.4379
                       0.9588
                                  0.9751
                                             0.9859
                                                        0.9883
                                                                   1.4744
                                                                              2.0105
  2.2436
             2.2466
                       2.3736
                                  2.3961
                                             2.5952
                                                        2.5955
                                                                   2.6046
                                                                              2.7062
  2.7205
             2.7384
                        2.8076
                                  2.8524
                                             2.8534
                                                        3.2668
                                                                   3.2685
                                                                              3.3470
  3.5245
             3.5284
        k = 0.1349 - 0.2337 \ 0.0000 \ (64734 \ PWs)
                                                        bands (ev):
-21.4969 -21.3992 -20.6224 -20.6209 -20.5735 -20.5679 -20.1161 -20.1157
-19.9464 -19.9455 -19.6385 -19.6369 -19.3284 -19.3245 -18.7706 -18.3951
-18.3935 -18.1432 -18.0949 -18.0947 -17.8781 -17.7831 -17.7814 -17.5427
-17.5402 -17.5280 -16.6758 -16.6730 -16.3757 -16.3718 -15.8133 -15.7931
-15.0835 -14.2241 -14.2222 -13.0473 -13.0383 -12.9737 -12.3377 -12.1060
-12.1058 -11.9831 -11.9741 -11.7128 -11.5482 -11.5263 -11.5253 -10.9423
-10.8623 -10.8612 -10.6968 -10.6929 -10.2831 -10.2758 -10.1848
                                                                            -9.7560
 -9.7444
           -9.7008
                      -9.6751
                                 -9.4739
                                            -9.3282
                                                       -9.3267
                                                                  -9.1285
                                                                            -9.1277
                                            -8.4205
                                                       -8.3588
 -8.8762
           -8.8715
                      -8.8533
                                 -8.4222
                                                                  -8.3491
                                                                            -8.3444
 -8.2469
                                                       -7.7859
                                                                  -7.7844
                                                                            -7.6047
            -8.1498
                      -8.1494
                                 -8.0206
                                            -8.0136
 -7.6018
           -7.5277
                      -7.5193
                                 -7.5101
                                            -7.2669
                                                       -7.2664
                                                                  -7.1101
                                                                             -7.1041
 -7.0862
           -7.0858
                      -6.9179
                                 -6.9166
                                            -6.8934
                                                       -6.8865
                                                                  -6.8319
                                                                             -6.8218
 -6.4375
           -6.4364
                      -6.4207
                                 -6.4192
                                            -6.1577
                                                       -6.1573
                                                                  -6.0144
                                                                             -6.0071
 -5.4835
           -5.4634
                      -5.4625
                                 -5.2043
                                            -4.8327
                                                       -4.8298
                                                                  -4.6636
                                                                             -4.6624
 -4.6279
           -4.4871
                      -4.3343
                                 -4.2159
                                            -4.2157
                                                       -4.1924
                                                                  -4.1749
                                                                             -4.1745
                      -3.7711
                                 -3.7047
                                            -3.6021
                                                       -3.5984
                                                                  -3.3910
 -3.8763
           -3.7727
                                                                            -2.9757
                                 0.9609
                                            0.9834
                                                       0.9999
  0.4375
            0.4393
                      0.9584
                                                                  1.4673
                                                                             2.0034
```

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2.2420
                                            2.5750
                                                      2.5753
                                                                2.6222
                                                                           2.7013
  2.2395
                       2.3612
                                 2.3838
            2.7551
  2.7382
                       2.8004
                                 2.8694
                                            2.8704
                                                      3.2852
                                                                3.2869
                                                                           3.3012
  3.5433
            3.5471
        k = 0.1310 - 0.2268 \ 0.0000 \ (64746 \ PWs)
                                                      bands (ev):
-21.5018 -21.4035 -20.6113 -20.6098 -20.5599 -20.5544 -20.1201 -20.1196
-19.9513 -19.9504 -19.6558 -19.6543 -19.3514 -19.3474 -18.7498 -18.3867
-18.3851 -18.1125 -18.0859 -18.0857 -17.8811 -17.7908 -17.7891 -17.5411 -17.5299 -17.5274 -16.6467 -16.6440 -16.3969 -16.3930 -15.8501 -15.7972 -15.0880 -14.2607 -14.2588 -13.0096 -13.0004 -12.9474 -12.3404 -12.1216
-12.1215 -11.9778 -11.9687 -11.6868 -11.5383 -11.5095 -11.5085 -10.9755
-10.8630 -10.8619 -10.7082 -10.7043 -10.2424 -10.2349 -10.2132
                                                                         -9.7918
                               -9.4797 -9.2931 -9.2916 -9.1325
 -9.7804
           -9.7079 -9.6837
                                                                         -9.1317
 -8.8757
           -8.8713
                     -8.8588 -8.4453
                                          -8.4436
                                                    -8.3386
                                                               -8.3328
                                                                         -8.3281
                                          -8.0120
                                                    -7.7706
                                                               -7.7691
                                                                         -7.6123
 -8.2714
           -8.1471
                     -8.1467
                               -8.0190
                     -7.5462 -7.5126
-6.9511 -6.9498
                                                                         -7.0922
 -7.6090
           -7.5555
                                          -7.2664
                                                    -7.2659
                                                               -7.0941
                                                               -6.8208
           -7.0847
                                                                         -6.8133
 -7.0888
                     -6.9511
                                          -6.9097
                                                    -6.9049
                               -6.4199
                                                    -6.1437
 -6.4449
           -6.4434
                     -6.4210
                                          -6.1442
                                                               -6.0268
                                                                         -6.0198
                     -5.4492
                                -5.1748
                                          -4.8179
                                                     -4.8150
                                                                          -4.6504
 -5.4753
           -5.4744
                                                               -4.6516
 -4.6093
           -4.4759
                     -4.3176
                                -4.2001
                                          -4.2000
                                                     -4.1835
                                                               -4.1575
                                                                          -4.1570
                     -3.7830
                                -3.7109
                                                                          -3.0129
 -3.8807
           -3.7846
                                          -3.6204
                                                     -3.6167
                                                               -3.4111
  0.4404
            0.4753
                       0.9317
                                 0.9341
                                           1.0078
                                                      1.0246
                                                                1.4603
                                                                           1.9965
                                 2.3711
                                            2.5552
  2.2325
                       2.3485
                                                      2.5556
            2.2405
                                                                2.6404
                                                                           2.6952
  2.7565
            2.7729
                                                                3.3039
                       2.7936
                                 2.8865
                                            2.8875
                                                      3.2553
                                                                           3.3057
  3.5621
            3.5659
        k = 0.1270 - 0.2199 \ 0.0000 \ (64750 \ PWs)
                                                      bands (ev):
-18.3766 -18.0816 -18.0771 -18.0769 -1/.8841 -1/.7986 -1/.7909 -1/.5145 -17.5169 -17.5144 -16.6176 -16.6148 -16.4180 -16.4142 -15.8870 -15.8012 -15.0923 -14.2971 -14.2952 -12.9720 -12.9627 -12.9210 -12.3431 -12.1368 -12.1367 -11.9726 -11.9634 -11.6606 -11.5281 -11.4927 -11.4917 -11.0087 -10.8639 -10.8628 -10.7193 -10.7155 -10.2413 -10.2017 -10.1939 -9.8275 -9.8163 -9.7406 -9.6664 -9.4852 -9.2579 -9.2565 -9.1361 -9.1354
 -8.8752
           -8.8716
                     -8.8637
                               -8.4682
                                          -8.4666
                                                    -8.3191
                                                               -8.3161
                                                                         -8.3117
                               -8.0174
                                          -8.0104
                                                    -7.7551
 -8.2959
           -8.1445
                     -8.1441
                                                               -7.7536
                                                                         -7.6231
           -7.5888
 -7.6187
                     -7.5796
                               -7.4979
                                          -7.2659
                                                    -7.2654
                                                               -7.0973
                                                                         -7.0970
 -7.0725
           -7.0668
                     -6.9844
                               -6.9831
                                          -6.9313
                                                    -6.9277
                                                               -6.8053
                                                                         -6.7995
                               -6.4035
                     -6.4046
 -6.4690
           -6.4675
                                          -6.1310
                                                     -6.1305
                                                               -6.0394
                                                                          -6.0327
           -5.4863
                     -5.4146
                                          -4.8029
                                                     -4.8000
 -5.4872
                                -5.1452
                                                               -4.6394
                                                                          -4.6382
           -4.4650
                     -4.3013
                                -4.1850
                                          -4.1849
                                                     -4.1748
 -4.5911
                                                               -4.1401
                                                                          -4.1395
 -3.8848
           -3.7967
                     -3.7950
                               -3.7169
                                          -3.6389
                                                     -3.6352
                                                               -3.4316
                                                                          -3.0501
                      0.9055
  0.4416
            0.5132
                                 0.9079
                                           1.0324
                                                     1.0494
                                                                1.4536
                                                                           1.9898
  2.2257
            2.2390
                       2.3356
                                 2.3582
                                            2.5359
                                                      2.5362
                                                                2.6589
                                                                           2.6889
  2.7751
            2.7862
                       2.7921
                                 2.9036
                                           2.9046
                                                      3.2096
                                                                3.3228
                                                                           3.3245
  3.5796
            3.5827
        k = 0.1230 - 0.2131 \ 0.0000 \ (64730 \ PWs)
                                                      bands (ev):
-21.5113 -21.4116 -20.5887 -20.5872 -20.5324 -20.5269 -20.1276 -20.1271
-19.9606 -19.9597 -19.6903 -19.6887 -19.3970 -19.3930 -18.7082 -18.3696
-18.3680 -18.0686 -18.0684 -18.0506 -17.8869 -17.8065 -17.8048 -17.5681
-17.5039 -17.5013 -16.5885 -16.5857 -16.4390 -16.4352 -15.9237 -15.8051
-15.0965 -14.3333 -14.3314 -12.9347 -12.9251 -12.8944 -12.3456 -12.1516
-12.1515 -11.9676 -11.9583 -11.6343 -11.5176 -11.4759 -11.4749 -11.0417
-10.8650 -10.8638 -10.7301 -10.7264 -10.2693 -10.1610 -10.1530
                                                                         -9.8631
 -9.8522
          -9.7733 -9.6489 -9.4905 -9.2227 -9.2212 -9.1395
                                                                         -9.1387
                                                    -8.3203
                    -8.8668 -8.4910 -8.4893
                                                               -8.3009
 -8.8749
          -8.8734
                                                                         -8.2986
 -8.2949 -8.1420 -8.1416 -8.0159 -8.0089 -7.7394 -7.7379
                                                                         -7.6449
```

```
-7.6392
          -7.6098
                    -7.6034
                              -7.4835
                                                   -7.2649
                                                             -7.1023
                                                                       -7.1020
                                         -7.2654
          -7.0493
 -7.0550
                    -7.0179
                              -7.0166
                                        -6.9542
                                                   -6.9513
                                                             -6.7888
                                                                       -6.7840
                                                             -6.0522
 -6.4930
          -6.4915
                    -6.3883
                              -6.3872
                                        -6.1181
                                                   -6.1176
                                                                       -6.0456
 -5.4993
                                         -4.7878
                                                   -4.7849
          -5.4984
                    -5.3800
                              -5.1157
                                                             -4.6272
                                                                       -4.6260
 -4.5735
          -4.4545
                     -4.2855
                               -4.1705
                                                             -4.1227
                                         -4.1705
                                                   -4.1664
                                                                       -4.1221
 -3.8888
          -3.8089
                     -3.8073
                               -3.7227
                                         -3.6574
                                                   -3.6538
                                                             -3.4524
                                                                       -3.0874
  0.4427
           0.5512
                     0.8799
                                0.8823
                                         1.0570
                                                   1.0742
                                                             1.4471
                                                                        1.9834
  2.2192
            2.2376
                      2.3225
                                2.3451
                                          2.5170
                                                    2.5174
                                                              2.6778
                                                                        2.6827
  2.7800
            2.7940
                      2.8103
                                2.9208
                                          2.9218
                                                    3.1640
                                                              3.3418
                                                                        3.3435
  3.5802
            3.5806
       k = 0.1190 - 0.2062 \ 0.0000 \ (64710 \ PWs)
                                                    bands (ev):
-21.5158 -21.4154 -20.5772 -20.5757 -20.5185 -20.5130 -20.1311 -20.1307
-19.9650 -19.9641 -19.7074 -19.7058 -19.4196 -19.4155 -18.6874 -18.3610
-18.3595 -18.0602 -18.0600 -18.0194 -17.8897 -17.8145 -17.8129 -17.5819 -17.4907 -17.4881 -16.5594 -16.5565 -16.4599 -16.4562 -15.9605 -15.8088 -15.1005 -14.3693 -14.3675 -12.8975 -12.8878 -12.8677 -12.3481 -12.1660 -12.1659 -11.9626 -11.9533 -11.6078 -11.5067 -11.4591 -11.4581 -11.0747 -10.8662 -10.8651 -10.7405 -10.7369 -10.2971 -10.1203 -10.1120 -9.8987
 -9.8879
          -9.8059
                     -9.6313
                              -9.4956
                                        -9.1874
                                                   -9.1859
                                                             -9.1425
                                                                       -9.1417
 -8.8775
          -8.8742
                    -8.8678
                              -8.5135
                                         -8.5119
                                                   -8.3445
                                                             -8.2837
                                                                       -8.2805
                                                   -7.7237
                                                                       -7.6783
 -8.2779
                              -8.0145
                                         -8.0074
                                                             -7.7221
          -8.1397
                     -8.1392
                    -7.6153
                              -7.4695
                                         -7.2649
                                                   -7.2644
 -7.6714
          -7.6192
                                                             -7.1072
                                                                       -7.1069
                              -7.0339
                                                             -6.7722
                                                                       -6.7681
                    -7.0391
                                        -6.9759
                                                   -6.9735
 -7.0516
          -7.0502
 -6.5170
          -6.5154
                    -6.3720
                              -6.3709
                                         -6.1055
                                                   -6.1050
                                                             -6.0651
                                                                       -6.0587
                     -5.3451
                              -5.0861
 -5.5114
          -5.5105
                                         -4.7725
                                                   -4.7697
                                                             -4.6149
                                                                       -4.6137
 -4.5563
                     -4.2700
          -4.4442
                               -4.1583
                                         -4.1566
                                                             -4.1054
                                                   -4.1565
                                                                       -4.1048
 -3.8927
           -3.8213
                     -3.8196
                               -3.7283
                                         -3.6760
                                                   -3.6724
                                                             -3.4735
                                                                       -3.1247
                                0.8572
  0.4438
            0.5894
                      0.8548
                                          1.0817
                                                    1.0990
                                                              1.4408
                                                                        1.9771
  2.2129
            2.2362
                      2.3091
                                2.3317
                                          2.4987
                                                    2.4991
                                                              2.6767
                                                                        2.6971
  2.7738
            2.8130
                      2.8292
                                2.9380
                                          2.9389
                                                    3.1185
                                                              3.3610
                                                                        3.3627
  3.5742
            3.5748
       k = 0.1151 - 0.1993 \ 0.0000 \ (64732 \ PWs)
                                                    bands (ev):
-21.5201 -21.4191 -20.5657 -20.5642 -20.5043 -20.4989 -20.1346 -20.1342
-19.9692 -19.9684 -19.7245 -19.7229 -19.4420 -19.4379 -18.6667 -18.3524
-18.3508 -18.0521 -18.0519 -17.9882 -17.8924 -17.8227 -17.8210 -17.5960
-17.4773 -17.4748 -16.5303 -16.5274 -16.4807 -16.4770 -15.9972 -15.8124
-15.1045 -14.4051 -14.4033 -12.8607 -12.8507 -12.8408 -12.3505 -12.1800
-12.1798 -11.9579 -11.9484 -11.5811 -11.4954 -11.4423 -11.4414 -11.1076
-10.8677 -10.8665 -10.7506 -10.7470 -10.3247 -10.0797 -10.0709
                                                                       -9.9341
                    -9.6134
                              -9.5004
                                        -9.1520
 -9.9235
          -9.8385
                                                  -9.1506
                                                            -9.1452
                                                                       -9.1444
                    -8.8680
                              -8.5359
                                        -8.5342
                                                  -8.3688
 -8.8820
          -8.8739
                                                             -8.2667
                                                                       -8.2629
 -8.2605
          -8.1374
                    -8.1370
                              -8.0130
                                        -8.0060
                                                  -7.7154
                                                             -7.7084
                                                                       -7.7075
          -7.6257
                    -7.6227
                              -7.4559
                                        -7.2644
                                                  -7.2640
                                                             -7.1120
 -7.7057
                                                                       -7.1116
 -7.0854
          -7.0840
                    -7.0307
                              -7.0276
                                        -6.9901
                                                  -6.9872
                                                            -6.7558
                                                                       -6.7522
 -6.5408
          -6.5392
                    -6.3558
                              -6.3547
                                        -6.0932
                                                  -6.0928
                                                             -6.0781
                                                                       -6.0718
 -5.5236
          -5.5227
                    -5.3101
                              -5.0565
                                         -4.7572
                                                  -4.7543
                                                             -4.6025
                                                                       -4.6013
 -4.5396
          -4.4343
                    -4.2551
                              -4.1504
                                         -4.1433
                                                   -4.1432
                                                             -4.0884
                                                                       -4.0877
 -3.8965
          -3.8338
                     -3.8321
                               -3.7338
                                         -3.6947
                                                   -3.6912
                                                             -3.4949
                                                                       -3.1621
  0.4448
           0.6277
                      0.8304
                                0.8328
                                          1.1064
                                                    1.1239
                                                              1.4347
                                                                        1.9711
  2.2067
            2.2348
                      2.2954
                                2.3181
                                          2.4809
                                                    2.4812
                                                              2.6708
                                                                        2.7168
  2.7677
            2.8322
                      2.8483
                                2.9551
                                          2.9561
                                                    3.0732
                                                              3.3804
                                                                        3.3821
  3.5682
            3.5689
       k = 0.1111 - 0.1925 \ 0.0000 \ (64778 \ PWs)
                                                    bands (ev):
-21.5243 -21.4227 -20.5540 -20.5525 -20.4901 -20.4846 -20.1379 -20.1375
-19.9734 -19.9725 -19.7414 -19.7399 -19.4644 -19.4602 -18.6460 -18.3437
-18.3421 -18.0442 -18.0441 -17.9568 -17.8949 -17.8309 -17.8292 -17.6102
```

```
-17.4639 -17.4613 -16.5034 -16.4996 -16.4986 -16.4968 -16.0339 -15.8159
-15.1083 -14.4407 -14.4389 -12.8244 -12.8147 -12.8126 -12.3528 -12.1935
-12.1934 -11.9533 -11.9438 -11.5544 -11.4839 -11.4256 -11.4246 -11.1403
-10.8693 -10.8682 -10.7603 -10.7568 -10.3521 -10.0391 -10.0299
                                                                         -9.9693
                     -9.5955
                               -9.5050
                                          -9.1475
                                                                          -9.1151
 -9.9590
           -9.8710
                                                     -9.1467
                                                               -9.1166
 -8.8867
           -8.8736
                     -8.8679
                                -8.5580
                                          -8.5563
                                                     -8.3929
                                                               -8.2496
                                                                          -8.2456
                                -8.0117
                                          -8.0046
                                                               -7.7455
                                                                          -7.6916
 -8.2431
           -8.1353
                     -8.1348
                                                    -7.7532
           -7.6313
                     -7.6286
                               -7.4428
                                          -7.2640
                                                                          -7.1180
 -7.6901
                                                     -7.2635
                                                               -7.1194
                                -7.0399
                                          -6.9860
                                                     -6.9806
                                                               -6.7397
 -7.1166
           -7.1163
                     -7.0426
                                                                          -6.7365
 -6.5645
                                                               -6.0814
           -6.5629
                     -6.3396
                                -6.3385
                                          -6.0913
                                                     -6.0851
                                                                          -6.0809
 -5.5359
           -5.5350
                     -5.2751
                                -5.0269
                                          -4.7416
                                                     -4.7388
                                                               -4.5900
                                                                          -4.5888
                      -4.2406
                                                               -4.0716
           -4.4247
                                                                          -4.0709
 -4.5234
                                -4.1427
                                           -4.1305
                                                     -4.1303
                     -3.8448
                                                                          -3.1995
 -3.9002
                                -3.7391
                                                     -3.7099
           -3.8464
                                          -3.7134
                                                               -3.5166
  0.4458
            0.6661
                      0.8066
                                 0.8089
                                                                1.4288
                                                                           1.9652
                                           1.1311
                                                     1.1488
  2.2008
            2.2334
                       2.2816
                                 2.3041
                                            2.4635
                                                      2.4639
                                                                 2.6651
                                                                           2.7368
  2.7618
            2.8516
                       2.8677
                                 2.9719
                                            2.9731
                                                      3.0285
                                                                 3.4000
                                                                           3.4017
  3.5624
            3.5631
        k = 0.1071 - 0.1856 \ 0.0000 \ (64730 \ PWs)
                                                      bands (ev):
-21.5284 -21.4262 -20.5422 -20.5407 -20.4757 -20.4702 -20.1412 -20.1407 -19.9774 -19.9765 -19.7584 -19.7568 -19.4865 -19.4823 -18.6252 -18.3349 -18.3333 -18.0366 -18.0364 -17.9253 -17.8975 -17.8392 -17.8375 -17.6247 -17.4503 -17.4477 -16.5221 -16.5184 -16.4719 -16.4689 -16.0705 -15.8193 -15.1119 -14.4760 -14.4743 -12.7903 -12.7844 -12.7768 -12.3550 -12.2066 -12.2065 -11.9490 -11.9393 -11.5274 -11.4719 -11.4089 -11.4080 -11.1730 -10.8712 -10.8700 -10.7695 -10.7661 -10.3793 -10.0047 -9.9984 -9.9943
                                          -9.1494
                               -9.5093
 -9.9887
                     -9.5773
                                                    -9.1486
           -9.9034
                                                               -9.0811
                                                                          -9.0796
                                -8.5799
                                          -8.5782
                     -8.8678
                                                     -8.4170
 -8.8914
           -8.8733
                                                               -8.2323
                                                                          -8.2284
 -8.2260
                                -8.0103
                                          -8.0032
                                                     -7.7915
                                                               -7.7836
           -8.1332
                     -8.1328
                                                                          -7.6754
                                -7.4301
 -7.6739
           -7.6364
                      -7.6339
                                          -7.2635
                                                     -7.2631
                                                               -7.1534
                                                                          -7.1521
 -7.1211
           -7.1207
                     -7.0645
                                -7.0616
                                          -6.9713
                                                     -6.9653
                                                                -6.7240
                                                                          -6.7211
           -6.5865
 -6.5880
                     -6.3235
                                -6.3224
                                          -6.1046
                                                     -6.0984
                                                               -6.0698
                                                                          -6.0693
 -5.5483
           -5.5473
                      -5.2398
                                -4.9974
                                           -4.7260
                                                     -4.7232
                                                                -4.5774
                                                                          -4.5762
 -4.5077
           -4.4154
                      -4.2266
                                -4.1353
                                           -4.1181
                                                     -4.1179
                                                                -4.0551
                                                                          -4.0543
 -3.9037
           -3.8592
                      -3.8576
                                -3.7445
                                           -3.7320
                                                     -3.7287
                                                                -3.5387
                                                                          -3.2369
                                                                 1.4231
  0.4467
            0.7047
                       0.7835
                                 0.7858
                                            1.1558
                                                      1.1737
                                                                           1.9596
  2.1951
            2.2319
                       2.2675
                                 2.2900
                                            2.4467
                                                      2.4471
                                                                 2.6595
                                                                           2.7562
                                 2.9771
  2.7571
            2.8712
                       2.8873
                                            2.9901
                                                      2.9956
                                                                 3.4198
                                                                           3.4215
  3.5567
            3.5574
        k = 0.1032 - 0.1787 \ 0.0000 \ (64728 \ PWs)
                                                      bands (ev):
-21.5323 -21.4296 -20.5303 -20.5288 -20.4611 -20.4557 -20.1443 -20.1438
-19.9812 -19.9803 -19.7752 -19.7736 -19.5086 -19.5044 -18.6046 -18.3261
-18.3245 -18.0292 -18.0290 -17.8999 -17.8937 -17.8476 -17.8459 -17.6394
-17.4365 -17.4339 -16.5426 -16.5389 -16.4428 -16.4398 -16.1071 -15.8225
-15.1154 -14.5111 -14.5094 -12.7614 -12.7500 -12.7405 -12.3572 -12.2193
-12.2192 -11.9449 -11.9351 -11.5003 -11.4597 -11.3923 -11.3913 -11.2056
-10.8733 -10.8721 -10.7784 -10.7751 -10.4063 -10.0393 -10.0293
                                                                          -9.9582
 -9.9477
           -9.9357
                     -9.5591
                                -9.5132
                                          -9.1510
                                                     -9.1502
                                                               -9.0455
                                                                          -9.0441
 -8.8959
           -8.8731
                     -8.8676
                                -8.6015
                                           -8.5999
                                                     -8.4410
                                                               -8.2150
                                                                          -8.2114
                                           -8.0019
 -8.2090
           -8.1313
                      -8.1308
                                -8.0090
                                                     -7.8301
                                                               -7.8221
                                                                          -7.6591
                                -7.4178
                                                     -7.2626
                                           -7.2631
 -7.6577
           -7.6411
                     -7.6386
                                                               -7.1876
                                                                          -7.1863
                                           -6.9542
                                                                -6.7088
 -7.1254
           -7.1251
                      -7.0885
                                -7.0855
                                                     -6.9481
                                                                          -6.7061
                                                     -6.1119
 -6.6115
           -6.6100
                      -6.3074
                                -6.3063
                                           -6.1180
                                                                -6.0587
                                                                          -6.0582
 -5.5607
           -5.5597
                      -5.2045
                                -4.9678
                                           -4.7102
                                                     -4.7074
                                                                -4.5647
                                                                          -4.5636
 -4.4926
           -4.4065
                      -4.2131
                                -4.1282
                                           -4.1061
                                                     -4.1059
                                                                -4.0389
                                                                          -4.0382
 -3.9071
           -3.8721
                      -3.8705
                                -3.7530
                                           -3.7490
                                                     -3.7459
                                                                -3.5610
                                                                          -3.2744
  0.4476
            0.7434
                      0.7610
                                           1.1805
                                                     1.1986
                                                                1.4176
                                0.7633
                                                                           1.9541
                                            2.4305
  2.1896
            2.2303
                       2.2534
                                 2.2756
                                                      2.4308
                                                                 2.6542
                                                                           2.7507
                                            3.0072
                                                      3.0089
  2.7778
            2.8910
                       2.9071
                                 2.9360
                                                                 3.4398
                                                                           3.4415
```

```
3.5512
             3.5520
         k = 0.0992 - 0.1718 \ 0.0000 \ (64752 \ PWs)
                                                          bands (ev):
-21.5361 -21.4328 -20.5183 -20.5168 -20.4465 -20.4410 -20.1473 -20.1468
-19.9849 -19.9840 -19.7920 -19.7904 -19.5305 -19.5262 -18.5839 -18.3173
-18.3157 -18.0220 -18.0218 -17.9022 -17.8620 -17.8561 -17.8544 -17.6544
-17.4227 -17.4201 -16.5629 -16.5593 -16.4138 -16.4107 -16.1436 -15.8257 -15.1188 -14.5459 -14.5443 -12.7338 -12.7145 -12.7045 -12.3593 -12.2315 -12.2314 -11.9410 -11.9311 -11.4731 -11.4471 -11.3758 -11.3748 -11.2381
-10.8756 \ -10.8744 \ -10.7868 \ -10.7836 \ -10.4330 \ -10.0740 \ -10.0642 \ -9.9681
 -9.9180
                                                                               -9.0085
            -9.9066 -9.5406 -9.5168 -9.1522 -9.1514 -9.0099
                                                                               -8.1948
 -8.9002
           -8.8728
                       -8.8674
                                  -8.6229
                                             -8.6213 -8.4649
                                                                    -8.1976
                                                        -7.8688
-7.2622
                                                                               -7.6471
                       -8.1290
 -8.1920
            -8.1294
                                  -8.0078 -8.0007
                                                                    -7.8609
                      -7.6395
-7.1130
 -7.6455
            -7.6407
                                  -7.4059
                                             -7.2627
                                                                    -7.2220
                                                                               -7.2206
                                                                    -6.6941
 -7.1297
            -7.1294
                                  -7.1099
                                             -6.9365
                                                         -6.9303
                                                                               -6.6916
                                  -6.2902
                                                         -6.1254
                                                                               -6.0473
 -6.6349
            -6.6333
                       -6.2913
                                             -6.1315
                                                                    -6.0478
                       -5.1691
                                                         -4.6916
 -5.5732
            -5.5722
                                  -4.9383
                                             -4.6944
                                                                    -4.5520
                                                                                -4.5508
 -4.4780
            -4.3978
                       -4.2001
                                  -4.1214
                                             -4.0947
                                                         -4.0945
                                                                    -4.0232
                                                                                -4.0224
                       -3.8835
                                  -3.7707
                                                         -3.7527
                                                                                -3.3118
 -3.9104
            -3.8851
                                             -3.7670
                                                                    -3.5836
  0.4484
             0.7391
                        0.7414
                                    0.7824
                                               1.2051
                                                          1.2234
                                                                     1.4123
                                                                                 1.9489
                                                          2.4150
  2.1843
             2.2279
                         2.2399
                                    2.2609
                                               2.4147
                                                                      2.6491
                                                                                 2.7454
  2.7989
             2.8911
                         2.9113
                                    2.9271
                                               3.0244
                                                          3.0258
                                                                      3.4600
                                                                                 3.4617
  3.5460
             3.5467
         k = 0.0952 - 0.1650 \ 0.0000 \ (64778 \ PWs)
                                                          bands (ev):
-21.5397 -21.4359 -20.5062 -20.5047 -20.4316 -20.4262 -20.1501 -20.1497 -19.9885 -19.9876 -19.8087 -19.8071 -19.5522 -19.5480 -18.5633 -18.3084 -18.3068 -18.0151 -18.0149 -17.9045 -17.8646 -17.8630 -17.8302 -17.6695 -17.4087 -17.4060 -16.5831 -16.5795 -16.3848 -16.3817 -16.1800 -15.8287 -15.1221 -14.5804 -14.5789 -12.7064 -12.6791 -12.6688 -12.3613 -12.2433 -12.2432 -11.9374 -11.9274 -11.4457 -11.4342 -11.3594 -11.3584 -11.2705 -10.8781 -10.8770 -10.7947 -10.7916 -10.4596 -10.1083 -10.0988 -10.0003 -9.8780 -9.8655 -9.5220 -9.5200 -9.1530 -9.1522 -8.9743 -8.9728 -8.80044 -8.88736 -8.8673 -8.86440 -8.86424 -8.84888 -8.81807 -8.81784
 -8.9044
            -8.8726
                       -8.8673
                                  -8.6440
                                             -8.6424
                                                         -8.4888
                                                                    -8.1807
                                                                                -8.1784
                                  -8.0066
                                             -7.9995
                                                         -7.9078
 -8.1747
            -8.1277
                       -8.1272
                                                                    -7.8998
                                                                               -7.6507
 -7.6483
            -7.6253
                       -7.6238
                                  -7.3945
                                             -7.2623
                                                         -7.2618
                                                                    -7.2564
                                                                               -7.2550
 -7.1390
            -7.1367
                       -7.1325
                                  -7.1313
                                             -6.9186
                                                         -6.9123
                                                                    -6.6799
                                                                               -6.6777
 -6.6580
            -6.6564
                       -6.2754
                                  -6.2743
                                             -6.1451
                                                         -6.1391
                                                                    -6.0373
                                                                               -6.0369
                                  -4.9087
                                             -4.6784
                                                         -4.6756
 -5.5858
            -5.5848
                       -5.1336
                                                                    -4.5391
                                                                                -4.5380
                                                         -4.0834
 -4.4639
            -4.3896
                       -4.1875
                                  -4.1148
                                             -4.0836
                                                                    -4.0078
                                                                                -4.0070
                       -3.8967
            -3.8983
                                  -3.7895
 -3.9136
                                             -3.7859
                                                         -3.7575
                                                                    -3.6066
                                                                               -3.3493
  0.4492
             0.7180
                        0.7202
                                    0.8214
                                               1.2298
                                                          1.2482
                                                                     1.4072
                                                                                 1.9439
                        2.2312
                                    2.2461
                                               2.3995
                                                          2.3999
  2.1792
             2.2202
                                                                      2.6441
                                                                                 2.7403
  2.8203
             2.8464
                        2.9313
                                    2.9473
                                               3.0416
                                                          3.0428
                                                                      3.4803
                                                                                 3.4820
  3.5409
             3.5417
         k = 0.0913 - 0.1581 \ 0.0000 \ (64764 \ PWs)
                                                          bands (ev):
-21.5432 -21.4388 -20.4940 -20.4925 -20.4166 -20.4113 -20.1529 -20.1525
-19.9919 -19.9910 -19.8253 -19.8237 -19.5739 -19.5696 -18.5427 -18.2994
-18.2978 -18.0084 -18.0083 -17.9066 -17.8733 -17.8716 -17.7982 -17.6848
-17.3945 -17.3919 -16.6033 -16.5997 -16.3559 -16.3527 -16.2164 -15.8316
-15.1253 -14.6147 -14.6131 -12.6790 -12.6440 -12.6335 -12.3632 -12.2547
-12.2546 -11.9340 -11.9240 -11.4209 -11.4181 -11.3431 -11.3421 -11.3028
-10.8809 -10.8798 -10.8022 -10.7991 -10.4860 -10.1424 -10.1331 -10.0325
 -9.8384
           -9.8243
                      -9.5226 -9.5033
                                             -9.1534
                                                        -9.1526
                                                                    -8.9385
                                                                               -8.9371
 -8.9085
           -8.8724
                       -8.8671
                                  -8.6648
                                             -8.6632
                                                         -8.5126
                                                                    -8.1650
                                                                               -8.1613
           -8.1260
                      -8.1255 -8.0055
                                             -7.9984
                                                        -7.9468
                                                                    -7.9387
                                                                               -7.6548
 -8.1571
           -7.6086 -7.6070 -7.3835 -7.2910 -7.2896
 -7.6524
                                                                    -7.2619
                                                                               -7.2614
 -7.1632 -7.1601 -7.1370 -7.1366 -6.9005 -6.8943 -6.6817
                                                                               -6.6802
```

```
-6.6657
          -6.6633
                    -6.2595
                                                            -6.0272
                                                                      -6.0267
                              -6.2584
                                        -6.1588
                                                  -6.1528
          -5.5974
 -5.5984
                    -5.0979
                              -4.8792
                                        -4.6622
                                                  -4.6595
                                                            -4.5262
                                                                      -4.5251
 -4.4503
          -4.3816
                    -4.1754
                              -4.1084
                                        -4.0730
                                                  -4.0728
                                                            -3.9929
                                                                      -3.9921
                                                  -3.7619
 -3.9166
          -3.9116
                    -3.9099
                              -3.8084
                                        -3.8049
                                                            -3.6298
                                                                      -3.3868
 0.4499
                     0.6998
                                         1.2543
                                                             1.4024
                                                                       1.9391
           0.6976
                               0.8605
                                                   1.2730
  2.1743
           2.2065
                     2.2274
                                2.2321
                                         2.3849
                                                   2.3852
                                                              2.6394
                                                                        2.7355
  2.8016
           2.8421
                     2.9517
                                2.9677
                                          3.0587
                                                    3.0599
                                                              3.5008
                                                                        3.5025
  3.5361
            3.5369
       k = 0.0873 - 0.1512 \ 0.0000 \ (64776 \ PWs)
                                                   bands (ev):
-21.5465 -21.4417 -20.4817 -20.4802 -20.4015 -20.3962 -20.1556 -20.1551
-18.2888 -18.0020 -18.0019 -17.9087 -17.8820 -17.8803 -17.7662 -17.7003 -17.3803 -17.3776 -16.6233 -16.6197 -16.3271 -16.3239 -16.2527 -15.8343 -15.1283 -14.6486 -14.6471 -12.6514 -12.6092 -12.5986 -12.3651 -12.2656 -12.2655 -11.9311 -11.9209 -11.4073 -11.3905 -11.3350 -11.3269 -11.3260 -10.8839 -10.8828 -10.8061 -10.5121 -10.1762 -10.1671 -10.0646
          -9.7831
                    -9.5245
                                                  -9.1526
 -9.7992
                              -9.4844
                                        -9.1534
                                                            -8.9123
          -8.8723
                    -8.8670
                              -8.6853
                                        -8.6837
                                                            -8.1506
                                                                      -8.1437
 -8.9013
                                                  -8.5363
                                                                      -7.6587
 -8.1394
          -8.1244
                    -8.1239
                              -8.0044
                                        -7.9974
                                                  -7.9857
                                                            -7.9776
                    -7.5901
                              -7.3730
                                        -7.3257
                                                  -7.3243
                                                            -7.2615
 -7.6563
          -7.5916
                                                                      -7.2610
                    -7.1407
                              -7.1403
                                                            -6.7045
                                                                      -6.7030
                                        -6.8825
                                                  -6.8762
 -7.1880
          -7.1848
          -6.6505
                    -6.2436
                              -6.2425
 -6.6526
                                        -6.1727
                                                  -6.1667
                                                            -6.0175
                                                                      -6.0170
          -5.6102
                    -5.0622
                              -4.8497
                                        -4.6460
                                                            -4.5132
 -5.6111
                                                  -4.6432
                                                                      -4.5121
          -4.3740
                    -4.1637
                               -4.1024
                                        -4.0629
                                                            -3.9784
 -4.4372
                                                  -4.0626
                                                                      -3.9776
 -3.9250
          -3.9234
                    -3.9194
                              -3.8273
                                        -3.8238
                                                   -3.7661
                                                            -3.6532
                                                                      -3.4243
  0.4506
           0.6779
                     0.6801
                               0.8998
                                         1.2789
                                                              1.3977
                                                   1.2977
                                                                        1.9344
  2.1696
            2.1914
                      2.2147
                                2.2279
                                          2.3707
                                                    2.3711
                                                              2.6348
                                                                        2.7308
  2.7569
            2.8642
                                          3.0758
                                                   3.0770
                      2.9723
                                2.9883
                                                              3.5213
                                                                        3.5227
  3.5316
            3.5328
       k = 0.0833 - 0.1443 \ 0.0000 \ (64826 \ PWs)
                                                   bands (ev):
-21.5497 -21.4444 -20.4693 -20.4678 -20.3863 -20.3809 -20.1581 -20.1577
-19.9982 -19.9974 -19.8583 -19.8567 -19.6167 -19.6123 -18.5015 -18.2814 -18.2798 -17.9958 -17.9957 -17.9107 -17.8907 -17.8891 -17.7340 -17.7161
-17.3659 -17.3632 -16.6432 -16.6397 -16.2989 -16.2958 -16.2879 -15.8370
-15.1311 -14.6821 -14.6807 -12.6238 -12.5749 -12.5641 -12.3668 -12.2760
-12.2759 -11.9284 -11.9181 -11.3934 -11.3671 -11.3627 -11.3109 -11.3099
-10.8872 -10.8861 -10.8155 -10.8126 -10.5380 -10.2096 -10.2008 -10.0966
 -9.7609
          -9.7419
                    -9.5254
                             -9.4654
                                        -9.1531
                                                 -9.1522
                                                            -8.9161
                                                                      -8.8721
                              -8.7055
                                                  -8.5599
                                        -8.7039
 -8.8670
          -8.8669
                    -8.8655
                                                            -8.1368
                                                                      -8.1261
                                                  -8.0031
                              -8.0246
                                        -8.0170
                                                            -7.9959
 -8.1229
          -8.1226
                    -8.1218
                                                                      -7.6625
                              -7.3630
                                        -7.3603
          -7.5745
                    -7.5729
                                                  -7.3591
                                                            -7.2612
 -7.6601
                                                                      -7.2607
                                                  -6.8582
 -7.2127
          -7.2095
                    -7.1443
                              -7.1439
                                        -6.8645
                                                            -6.7274
                                                                      -6.7259
 -6.6399
          -6.6379
                    -6.2278
                              -6.2267
                                        -6.1866
                                                  -6.1807
                                                            -6.0082
                                                                      -6.0077
 -5.6239
          -5.6230
                    -5.0264
                              -4.8203
                                        -4.6296
                                                  -4.6269
                                                            -4.5002
                                                                      -4.4991
 -4.4248
          -4.3667
                    -4.1526
                              -4.0966
                                        -4.0531
                                                  -4.0529
                                                            -3.9645
                                                                      -3.9637
 -3.9385
          -3.9369
                    -3.9223
                              -3.8463
                                        -3.8428
                                                  -3.7701
                                                            -3.6770
                                                                      -3.4618
 0.4513
           0.6589
                     0.6611
                                         1.3033
                               0.9392
                                                   1.3223
                                                             1.3932
                                                                        1.9300
  2.1651
           2.1758
                      2.1991
                                2.2265
                                          2.3572
                                                    2.3576
                                                              2.6305
                                                                        2.7123
  2.7264
            2.8866
                      2.9931
                                3.0091
                                          3.0927
                                                    3.0939
                                                              3.5267
                                                                        3.5273
  3.5424
            3.5447
       k = 0.0794 - 0.1375 \ 0.0000 \ (64782 \ PWs)
                                                   bands (ev):
-21.5527 -21.4470 -20.4567 -20.4552 -20.3708 -20.3655 -20.1605 -20.1601
-20.0012 -20.0004 -19.8747 -19.8731 -19.6379 -19.6335 -18.4811 -18.2723
-18.2707 -17.9899 -17.9898 -17.9126 -17.8996 -17.8979 -17.7320 -17.7017
-17.3513 -17.3486 -16.6629 -16.6595 -16.3254 -16.2698 -16.2665 -15.8395
-15.1339 -14.7152 -14.7139 -12.5960 -12.5411 -12.5301 -12.3685 -12.2860
```

```
-12.2859 -11.9262 -11.9157 -11.3991 -11.3791 -11.3348 -11.2950 -11.2940
-10.8908 -10.8896 -10.8212 -10.8184 -10.5637 -10.2427 -10.2340 -10.1286
                      -9.5248
                                 -9.4462
 -9.7237
            -9.7007
                                            -9.1522
                                                       -9.1514 -8.9196
                                                                             -8.8720
                                 -8.7254
            -8.8311
                      -8.8296
                                             -8.7238
                                                        -8.5834
                                                                   -8.1238
 -8.8668
                                                                              -8.1215
                                                        -8.0022
                                                                   -7.9950
 -8.1210
            -8.1098
                       -8.1061
                                 -8.0614
                                             -8.0545
                                                                             -7.6661
 -7.6637
            -7.5572
                      -7.5556
                                 -7.3954
                                            -7.3940
                                                       -7.3531
                                                                   -7.2608
                                                                              -7.2603
                                            -6.8465
                                                        -6.8402
 -7.2374
            -7.2341
                      -7.1476
                                 -7.1472
                                                                   -6.7502
                                                                              -6.7487
                                                                   -5.9993
                                 -6.2109
                                            -6.2007
                                                        -6.1947
 -6.6277
            -6.6258
                      -6.2120
                                                                              -5.9988
 -5.6368
                      -4.9905
                                  -4.7908
                                                       -4.6104
            -5.6358
                                            -4.6131
                                                                   -4.4870
                                                                              -4.4859
 -4.4128
            -4.3597
                       -4.1420
                                  -4.0910
                                             -4.0438
                                                        -4.0435
                                                                   -3.9530
                                                                              -3.9523
 -3.9497
            -3.9489
                      -3.9249
                                  -3.8652
                                            -3.8618
                                                        -3.7738
                                                                   -3.7010
                                                                              -3.4992
  0.4520
             0.6407
                       0.6429
                                  0.9788
                                              1.3277
                                                         1.3469
                                                                   1.3890
                                                                               1.9258
  2.1598
             2.1609
                        2.1832
                                   2.2254
                                              2.3443
                                                         2.3446
                                                                    2.6263
                                                                               2.6677
                        3.0140
             2.9093
                                   3.0301
                                              3.1098
                                                         3.1110
                                                                    3.5225
  2.7221
                                                                               3.5232
  3.5580
             3.5656
        k = 0.0754 - 0.1306 \ 0.0000 \ (64784 \ PWs)
                                                         bands (ev):
-21.5556 -21.4495 -20.4441 -20.4426 -20.3553 -20.3500 -20.1628 -20.1624 -20.0040 -20.0032 -19.8910 -19.8894 -19.6590 -19.6545 -18.4606 -18.2632 -18.2616 -17.9843 -17.9842 -17.9144 -17.9084 -17.9068 -17.7481 -17.6693 -17.3366 -17.3339 -16.6826 -16.6791 -16.3615 -16.2416 -16.2381 -15.8419 -15.1365 -14.7480 -14.7467 -12.5682 -12.5077 -12.4965 -12.3701 -12.2956 -12.2954 -11.9244 -11.9138 -11.4311 -11.3645 -11.3067 -11.2793 -11.2783 -10.8946 -10.8935 -10.8264 -10.8237 -10.5892 -10.2753 -10.2669 -10.1605 -9.6887 -9.6595 -9.5220 -9.4269 -9.1510 -9.1501 -8.9230 -8.8719 -8.8667 -8.7052 -8.7057 -8.7040 -8.7040 -8.7040 -8.7040 -8.7040 -8.86600 -8.1202 -8.1107
                                 -8.7449
            -8.7952
                      -8.7937
                                            -8.7434
                                                       -8.6069
                                                                   -8.1202
 -8.8667
                                                                             -8.1197
                                 -8.0789
                                            -8.0755
                                                                   -7.9941
                       -8.1064
                                                        -8.0013
                                                                             -7.6696
 -8.1137
            -8.1108
            -7.5397
                       -7.5382
                                            -7.4290
                                  -7.4304
                                                       -7.3439
                                                                   -7.2619
 -7.6672
                                                                             -7.2605
 -7.2600
            -7.2586
                      -7.1508
                                  -7.1504
                                            -6.8286
                                                        -6.8223
                                                                   -6.7729
                                                                              -6.7714
                       -6.2148
 -6.6161
            -6.6143
                                 -6.2089
                                             -6.1963
                                                        -6.1952
                                                                   -5.9907
                                                                              -5.9902
                       -4.9546
                                  -4.7614
                                             -4.5965
                                                        -4.5938
 -5.6497
            -5.6487
                                                                   -4.4738
                                                                              -4.4727
                                             -4.0349
 -4.4014
            -4.3530
                       -4.1318
                                  -4.0858
                                                        -4.0346
                                                                   -3.9660
                                                                              -3.9645
                       -3.9275
 -3.9380
            -3.9371
                                  -3.8840
                                                        -3.7774
                                                                   -3.7253
                                             -3.8807
                                                                              -3.5367
  0.4525
                        0.6254
             0.6233
                                   1.0185
                                              1.3520
                                                         1.3713
                                                                    1.3849
                                                                               1.9218
  2.1436
             2.1568
                        2.1669
                                   2.2244
                                              2.3319
                                                         2.3322
                                                                    2.6223
                                                                               2.6233
  2.7181
             2.9324
                        3.0352
                                   3.0513
                                              3.1267
                                                         3.1279
                                                                    3.5185
                                                                               3.5192
  3.5558
             3.5856
        k = 0.0714 - 0.1237 \ 0.0000 \ (64788 \ PWs)
                                                         bands (ev):
-21.5583 -21.4518 -20.4314 -20.4298 -20.3396 -20.3343 -20.1650 -20.1645
-20.0067 -20.0059 -19.9072 -19.9057 -19.6799 -19.6754 -18.4402 -18.2541
-18.2525 -17.9790 -17.9788 -17.9177 -17.9163 -17.9153 -17.7644 -17.6368
-17.3218 -17.3191 -16.7021 -16.6987 -16.3975 -16.2135 -16.2100 -15.8441
-15.1389 -14.7802 -14.7790 -12.5402 -12.4749 -12.4636 -12.3716 -12.3046
-12.3045 -11.9230 -11.9123 -11.4629 -11.3496 -11.2785 -11.2638 -11.2628
-10.8987 -10.8976 -10.8309 -10.8282 -10.6145 -10.3075 -10.2993 -10.1923
 -9.6572
                                                                  -8.9261
           -9.6183
                      -9.5155
                                 -9.4074
                                            -9.1493
                                                       -9.1484
                                                                             -8.8718
 -8.8667
            -8.7642
                      -8.7626
                                 -8.7591
                                            -8.7577
                                                        -8.6303
                                                                   -8.1483
                                                                              -8.1402
 -8.1189
            -8.1185
                       -8.0993
                                  -8.0660
                                             -8.0617
                                                        -8.0004
                                                                   -7.9932
                                                                              -7.6728
 -7.6704
            -7.5221
                       -7.5206
                                  -7.4655
                                             -7.4641
                                                        -7.3351
                                                                   -7.2864
                                                                              -7.2830
 -7.2602
            -7.2597
                       -7.1538
                                  -7.1534
                                             -6.8108
                                                        -6.8047
                                                                   -6.7953
                                                                              -6.7938
                                             -6.1807
 -6.6050
            -6.6033
                       -6.2291
                                  -6.2232
                                                        -6.1796
                                                                   -5.9826
                                                                              -5.9821
            -5.6618
                                  -4.7320
                                             -4.5798
                                                        -4.5771
                                                                   -4.4605
 -5.6628
                       -4.9185
                                                                              -4.4595
 -4.3906
            -4.3467
                       -4.1222
                                  -4.0807
                                             -4.0264
                                                        -4.0262
                                                                   -3.9799
                                                                              -3.9784
 -3.9299
            -3.9258
                       -3.9248
                                  -3.9028
                                             -3.8995
                                                        -3.7808
                                                                   -3.7499
                                                                              -3.5742
  0.4531
             0.6066
                       0.6088
                                  1.0583
                                             1.3762
                                                        1.3811
                                                                   1.3957
                                                                              1.9180
                                                         2.3205
             2.1504
                        2.1530
                                   2.2234
                                              2.3201
                                                                    2.5790
                                                                               2.6186
  2.1271
  2.7143
             2.9558
                        3.0566
                                   3.0727
                                              3.1435
                                                         3.1447
                                                                    3.5147
                                                                               3.5154
  3.5523
             3.6073
```

```
k = 0.0675 - 0.1168 \ 0.0000 \ (64782 \ PWs)
                                                            bands (ev):
-21.5609 -21.4540 -20.4185 -20.4170 -20.3238 -20.3185 -20.1670 -20.1666
-20.0093 -20.0084 -19.9234 -19.9218 -19.7007 -19.6962 -18.4199 -18.2449 -18.2433 -17.9739 -17.9737 -17.9265 -17.9248 -17.9176 -17.7808 -17.6041
-17.3069 -17.3042 -16.7216 -16.7182 -16.4335 -16.1858 -16.1822 -15.8463 -15.1413 -14.8120 -14.8108 -12.5122 -12.4426 -12.4312 -12.3730 -12.3132 -12.3131 -11.9221 -11.9113 -11.4946 -11.3343 -11.2502 -11.2484 -11.2474 -10.9031 -10.9020 -10.8347 -10.8321 -10.6395 -10.3391 -10.3312 -10.2240
 -9.6313
            -9.5771 -9.5032 -9.3879 -9.1472 -9.1463
                                                                      -8.9292 -8.8717
 -8.8666
            -8.7829
                        -8.7814
                                   -8.7233
                                              -8.7218
                                                          -8.6536
                                                                      -8.1872
                                                                                 -8.1790
                                                                                 -7.6759
 -8.1178
            -8.1173
                        -8.0881
                                   -8.0482
                                              -8.0439
                                                          -7.9995
                                                                      -7.9923
                                                                                  -7.3073
 -7.6735
            -7.5044
                        -7.5029
                                   -7.5007
                                               -7.4993
                                                          -7.3268
                                                                      -7.3107
                                                                                 -6.7866
 -7.2599
            -7.2594
                        -7.1566
                                   -7.1563
                                               -6.8181
                                                          -6.8165
                                                                      -6.7928
                                                                      -5.9749
                                                                                  -5.9744
 -6.5945
            -6.5929
                        -6.2435
                                   -6.2376
                                               -6.1651
                                                           -6.1640
 -5.6759
            -5.6749
                        -4.8824
                                   -4.7027
                                               -4.5630
                                                           -4.5603
                                                                      -4.4472
                                                                                  -4.4461
                                                                      -3.9939
                                                                                  -3.9924
 -4.3803
            -4.3408
                        -4.1130
                                   -4.0760
                                               -4.0184
                                                           -4.0181
                        -3.9187
                                               -3.9125
                                                                      -3.7747
                                                                                  -3.6116
 -3.9323
            -3.9223
                                   -3.9131
                                                           -3.7840
  0.4536
              0.5908
                         0.5929
                                     1.0982
                                                1.3774
                                                            1.4003
                                                                        1.4199
                                                                                   1.9144
  2.1103
              2.1336
                         2.1493
                                     2.2225
                                                 2.3089
                                                            2.3093
                                                                        2.5348
                                                                                   2.6151
  2.7106
              2.9795
                          3.0781
                                     3.0942
                                                 3.1602
                                                            3.1614
                                                                        3.5110
                                                                                   3.5118
  3.5488
              3.6292
         k = 0.0635 - 0.1100 \ 0.0000 \ (64768 \ PWs)
                                                            bands (ev):
-21.5633 -21.4561 -20.4056 -20.4040 -20.3078 -20.3025 -20.1690 -20.1685 -20.0117 -20.0108 -19.9394 -19.9379 -19.7213 -19.7168 -18.3996 -18.2357 -18.2341 -17.9691 -17.9689 -17.9356 -17.9339 -17.9191 -17.7974 -17.5714 -17.2918 -17.2891 -16.7409 -16.7375 -16.4694 -16.1584 -16.1547 -15.8483 -15.1435 -14.8431 -14.8420 -12.4840 -12.4110 -12.3994 -12.3744 -12.3213 -12.3212 -11.9218 -11.9108 -11.5262 -11.3187 -11.2333 -11.2323 -11.2218 -10.9078 -10.9067 -10.8377 -10.8352 -10.6643 -10.3702 -10.3625 -10.2557 -9.6127 -9.5359 -9.4834 -9.3681 -9.1446 -9.1436 -8.9320 -8.8716
 -9.6127
            -9.5359
                                   -9.3681
                                              -9.1446
                                                          -9.1436
                                                                      -8.9320
                       -9.4834
                                                                                 -8.8716
                        -8.7999
                                   -8.6873
                                               -8.6858
                                                           -8.6768
                                                                      -8.2268
 -8.8666
            -8.8013
                                                                                  -8.2186
                        -8.0775
                                   -8.0296
                                               -8.0252
                                                           -7.9986
                                                                      -7.9914
 -8.1167
             -8.1162
                                                                                  -7.6788
 -7.6764
             -7.5360
                        -7.5346
                                   -7.4865
                                               -7.4849
                                                           -7.3349
                                                                      -7.3314
                                                                                  -7.3189
 -7.2596
            -7.2591
                        -7.1593
                                   -7.1589
                                               -6.8403
                                                           -6.8388
                                                                      -6.7751
                                                                                  -6.7689
 -6.5845
            -6.5830
                        -6.2580
                                   -6.2521
                                               -6.1496
                                                           -6.1485
                                                                      -5.9676
                                                                                  -5.9671
                        -4.8462
                                   -4.6734
                                               -4.5461
                                                           -4.5434
 -5.6891
            -5.6881
                                                                      -4.4337
                                                                                  -4.4327
                                                                      -4.0080
 -4.3706
            -4.3351
                        -4.1044
                                    -4.0715
                                               -4.0109
                                                           -4.0106
                                                                                  -4.0065
                        -3.9335
                                               -3.9016
                                                           -3.7998
 -3.9406
            -3.9380
                                    -3.9023
                                                                      -3.7871
                                                                                  -3.6490
  0.4541
             0.5757
                         0.5779
                                     1.1383
                                                1.3740
                                                            1.4243
                                                                        1.4441
                                                                                   1.9110
                         2.1459
                                     2.2217
                                                 2.2983
                                                            2.2987
                                                                        2.4906
  2.0933
              2.1165
                                                                                   2.6117
                         3.0999
                                     3.1160
                                                 3.1769
                                                            3.1781
                                                                        3.5076
  2.7072
              3.0035
                                                                                   3.5084
  3.5455
              3.6261
         k = 0.0595 - 0.1031 \ 0.0000 \ (64751 \ PWs)
                                                            bands (ev):
-21.5656 -21.4581 -20.3925 -20.3910 -20.2917 -20.2864 -20.1708 -20.1704
-20.0139 -20.0130 -19.9554 -19.9539 -19.7418 -19.7373 -18.3793 -18.2264
-18.2248 -17.9646 -17.9644 -17.9447 -17.9430 -17.9206 -17.8143 -17.5385
-17.2766 -17.2739 -16.7600 -16.7567 -16.5053 -16.1313 -16.1276 -15.8502
-15.1455 -14.8737 -14.8726 -12.4557 -12.3801 -12.3757 -12.3683 -12.3290
-12.3289 -11.9220 -11.9109 -11.5577 -11.3028 -11.2183 -11.2174 -11.1932
-10.9128 -10.9117 -10.8400 -10.8376 -10.6889 -10.4007 -10.3933 -10.2873
 -9.6012
            -9.4946
                       -9.4563
                                   -9.3483
                                               -9.1415
                                                          -9.1406
                                                                      -8.9347
                                                                                  -8.8716
 -8.8665
            -8.8194
                        -8.8179
                                   -8.7000
                                               -8.6512
                                                           -8.6497
                                                                      -8.2667
                                                                                  -8.2585
                                                           -7.9977
                                                                      -7.9906
            -8.1151
                        -8.0675
                                   -8.0106
                                               -8.0063
 -8.1156
                                                                                  -7.6815
            -7.5713
                        -7.5699
                                   -7.4684
                                               -7.4669
                                                           -7.3589
                                                                      -7.3555
 -7.6791
                                                                                  -7.3114
 -7.2593
            -7.2588
                        -7.1618
                                   -7.1614
                                               -6.8626
                                                           -6.8610
                                                                      -6.7575
                                                                                  -6.7513
                                              -6.1342
                                                          -6.1331
 -6.5751
            -6.5737
                        -6.2726
                                   -6.2666
                                                                      -5.9607
                                                                                  -5.9602
                                  -4.6441 -4.5291 -4.5264
                                                                      -4.4202
 -5.7023 -5.7013 -4.8100
                                                                                 -4.4192
```

```
-4.3615
                     -4.0962
                               -4.0673
                                         -4.0224
                                                    -4.0210
                                                              -4.0036
                                                                        -4.0034
           -4.3298
 -3.9591
           -3.9561
                     -3.9361
                               -3.8918
                                         -3.8910
                                                    -3.8251
                                                              -3.7899
                                                                        -3.6863
                                                    1.4481
                                                              1.4681
  0.4546
            0.5615
                      0.5637
                                1.1785
                                          1.3708
                                                                         1.9078
                                                               2.4467
  2.0760
            2.0992
                                2.2209
                                                     2.2887
                                                                         2.6086
                      2.1427
                                           2.2884
                                                               3.5044
  2.7040
            3.0278
                      3.1218
                                3.1380
                                           3.1935
                                                     3.1946
                                                                         3.5052
  3.5424
            3.6141
        k = 0.0556 - 0.0962 \ 0.0000 \ (64757 \ PWs)
                                                     bands (ev):
-21.5678 -21.4599 -20.3793 -20.3778 -20.2754 -20.2702 -20.1725 -20.1721
-20.0160 -20.0152 -19.9713 -19.9697 -19.7622 -19.7576 -18.3591 -18.2171
-18.2155 -17.9604 -17.9601 -17.9538 -17.9521 -17.9219 -17.8313 -17.5056 -17.2613 -17.2585 -16.7791 -16.7758 -16.5411 -16.1048 -16.1010 -15.8520 -15.1475 -14.9035 -14.9025 -12.4274 -12.3769 -12.3498 -12.3380 -12.3361 -12.3360 -11.9229 -11.9116 -11.5891 -11.2866 -11.2036 -11.2027 -11.1645
-10.9181 \ -10.9170 \ -10.8414 \ -10.8391 \ -10.7132 \ -10.4305 \ -10.4234 \ -10.3188
                                         -9.1380
                                                   -9.1370
                              -9.3283
                                                                        -8.8715
 -9.5947
           -9.4533
                    -9.4240
                                                             -8.9372
                     -8.8356
                                                              -8.3068
                                                                        -8.2986
 -8.8665
           -8.8370
                               -8.7230 -8.6151
                                                   -8.6136
                                                   -7.9890
                                                              -7.9866
                                                                        -7.6840
                    -8.0582
                                         -7.9921
 -8.1147
           -8.1142
                               -7.9975
           -7.6068
                     -7.6054
 -7.6816
                               -7.4502
                                         -7.4487
                                                   -7.3828
                                                              -7.3794
                                                                        -7.3045
 -7.2591
           -7.2586
                     -7.1642
                               -7.1638
                                         -6.8846
                                                   -6.8831
                                                              -6.7400
                                                                        -6.7338
                                                                        -5.9537
 -6.5663
           -6.5650
                     -6.2873
                               -6.2813
                                         -6.1188
                                                    -6.1177
                                                              -5.9542
                     -4.7737
                                         -4.5120
 -5.7157
           -5.7146
                               -4.6149
                                                    -4.5094
                                                              -4.4067
                                                                        -4.4057
 -4.3529
           -4.3249
                     -4.0886
                                         -4.0369
                                                    -4.0355
                               -4.0634
                                                              -3.9970
                                                                        -3.9967
 -3.9774
           -3.9745
                     -3.9380
                               -3.8818
                                                              -3.7926
                                                                        -3.7236
                                         -3.8809
                                                    -3.8507
            0.5482
                      0.5503
                                1.2189
  0.4550
                                          1.3678
                                                    1.4719
                                                               1.4920
                                                                         1.9049
                                                     2.2794
  2.0584
            2.0816
                      2.1397
                                2.2202
                                           2.2790
                                                               2.4028
                                                                         2.6056
  2.7010
            3.0524
                      3.1440
                                3.1601
                                           3.2099
                                                     3.2111
                                                               3.5014
                                                                         3.5022
  3.5395
            3.6030
        k = 0.0516 - 0.0894 \ 0.0000 \ (64745 \ PWs)
                                                     bands (ev):
-21.5698 -21.4616 -20.3661 -20.3646 -20.2590 -20.2538 -20.1741 -20.1736
-20.0180 -20.0171 -19.9871 -19.9856 -19.7824 -19.7779 -18.3390 -18.2078
-18.2062 -17.9631 -17.9616 -17.9562 -17.9561 -17.9232 -17.8484 -17.4725 -17.2458 -17.2430 -16.7980 -16.7947 -16.5767 -16.0789 -16.0750 -15.8536 -15.1493 -14.9325 -14.9316 -12.3989 -12.3780 -12.3428 -12.3427 -12.3204
-12.3084 -11.9244 -11.9130 -11.6204 -11.2701 -11.1892 -11.1882 -11.1357
-10.9238 -10.9227 -10.8420 -10.8397 -10.7373 -10.4597 -10.4528 -10.3502
 -9.5913
           -9.4121 -9.3885
                              -9.3082
                                        -9.1340
                                                   -9.1330
                                                             -8.9395
                                                                        -8.8715
                              -8.7460
                                         -8.5790
                                                   -8.5775
 -8.8664
           -8.8543
                    -8.8528
                                                             -8.3470
                                                                        -8.3388
                                         -7.9895
 -8.1138
           -8.1133
                    -8.0495
                               -7.9966
                                                   -7.9715
                                                             -7.9674
                                                                        -7.6864
                                         -7.4304
                                                   -7.4066
                              -7.4319
                                                             -7.4031
 -7.6840
          -7.6423
                    -7.6409
                                                                        -7.2980
                                         -6.9066
                                                   -6.9051
          -7.2584
 -7.2588
                    -7.1664
                               -7.1660
                                                             -6.7226
                                                                        -6.7163
                    -6.3021
          -6.5568
                               -6.2961
                                                              -5.9482
 -6.5580
                                         -6.1034
                                                   -6.1024
                                                                        -5.9477
          -5.7281
 -5.7291
                    -4.7373
                               -4.5857
                                         -4.4948
                                                   -4.4922
                                                             -4.3930
                                                                        -4.3920
 -4.3449
           -4.3202
                     -4.0815
                               -4.0597
                                         -4.0515
                                                   -4.0502
                                                             -3.9961
                                                                        -3.9933
 -3.9903
          -3.9900
                     -3.9398
                               -3.8773
                                         -3.8720
                                                   -3.8713
                                                             -3.7951
                                                                        -3.7608
  0.4554
            0.5357
                      0.5378
                                          1.3650
                                1.2593
                                                    1.4955
                                                               1.5157
                                                                         1.9021
  2.0406
            2.0637
                      2.1369
                                2.2195
                                           2.2702
                                                     2.2706
                                                               2.3590
                                                                         2.6029
  2.6982
            3.0773
                      3.1663
                                3.1825
                                           3.2262
                                                     3.2274
                                                               3.4986
                                                                         3.4994
  3.5368
            3.5916
        k = 0.0476 - 0.0825 \ 0.0000 \ (64769 \ PWs)
                                                     bands (ev):
-21.5716 -21.4632 -20.3527 -20.3512 -20.2424 -20.2373 -20.1755 -20.1751
-20.0198 -20.0189 -20.0028 -20.0013 -19.8025 -19.7979 -18.3189 -18.1985
-18.1969 -17.9723 -17.9707 -17.9525 -17.9525 -17.9243 -17.8657 -17.4393
-17.2302 -17.2274 -16.8168 -16.8136 -16.6124 -16.0536 -16.0496 -15.8552
-15.1510 -14.9606 -14.9598 -12.3790 -12.3703 -12.3490 -12.3489 -12.2917
-12.2796 -11.9267 -11.9152 -11.6517 -11.2532 -11.1750 -11.1740 -11.1068
-10.9297 -10.9286 -10.8417 -10.8394 -10.7611 -10.4881 -10.4815 -10.3816
```

```
-9.5896
            -9.3709
                       -9.3511
                                  -9.2880
                                             -9.1295
                                                        -9.1285
                                                                    -8.9417
                                                                              -8.8715
 -8.8711
            -8.8697
                       -8.8664
                                  -8.7689
                                             -8.5429
                                                        -8.5414
                                                                   -8.3873
                                                                              -8.3790
                                             -7.9888
                                                                   -7.9477
                                                                              -7.6886
 -8.1130
            -8.1125
                       -8.0414
                                  -7.9960
                                                        -7.9519
                                                                              -7.2920
            -7.6778
                       -7.6764
                                  -7.4303
                                             -7.4267
                                                        -7.4134
                                                                   -7.4119
 -7.6862
 -7.2586
            -7.2582
                       -7.1684
                                  -7.1680
                                             -6.9285
                                                        -6.9269
                                                                   -6.7052
                                                                              -6.6990
 -6.5504
            -6.5493
                       -6.3170
                                  -6.3110
                                             -6.0882
                                                        -6.0871
                                                                   -5.9426
                                                                              -5.9421
 -5.7426
            -5.7416
                       -4.7009
                                  -4.5566
                                             -4.4775
                                                        -4.4749
                                                                   -4.3793
                                                                              -4.3783
 -4.3375
            -4.3159
                       -4.0749
                                  -4.0664
                                             -4.0651
                                                        -4.0563
                                                                   -4.0139
                                                                              -4.0111
                                                                   -3.7980
 -3.9848
            -3.9845
                       -3.9415
                                  -3.9030
                                             -3.8635
                                                        -3.8628
                                                                              -3.7973
  0.4557
             0.5241
                       0.5261
                                  1.2999
                                              1.3624
                                                         1.5189
                                                                    1.5392
                                                                               1.8995
  2.0225
             2.0456
                        2.1343
                                   2.2189
                                              2.2620
                                                         2.2625
                                                                     2.3155
                                                                                2.6003
  2.6956
             3.1025
                        3.1888
                                   3.2050
                                              3.2424
                                                          3.2436
                                                                     3.4960
                                                                                3.4968
  3.5343
             3.5801
        k = 0.0437 - 0.0756 \ 0.0000 \ (64777 \ PWs)
                                                         bands (ev):
-21.5733 -21.4646 -20.3393 -20.3377 -20.2257 -20.2206 -20.1769 -20.1765 -20.0214 -20.0206 -20.0185 -20.0169 -19.8225 -19.8178 -18.2989 -18.1891 -18.1875 -17.9816 -17.9800 -17.9492 -17.9491 -17.9254 -17.8831 -17.4060 -17.2145 -17.2116 -16.8355 -16.8323 -16.6479 -16.0292 -16.0251 -15.8566 -15.1525 -14.9877 -14.9869 -12.3799 -12.3547 -12.3546 -12.3416 -12.2639 -12.2517 -11.9297 -11.9180 -11.6828 -11.2361 -11.1611 -11.1601 -11.0778 -10.9360 -10.9349 -10.8404 -10.8381 -10.7847 -10.5157 -10.5093 -10.4129 -9.5890 -9.3296 -9.3125 -9.2676 -9.1245 -9.1236 -8.9437 -8.8875 -8.8861 -8.8714 -8.8664 -8.7017 -8.5068 -8.5068 -8.5063 -8.4277 -8.4104
                                             -8.5068
                       -8.8664
                                  -8.7917
                                                        -8.5053
                                                                   -8.4277
 -8.8861
           -8.8714
                                                                              -8.4194
                                                                   -7.9279
                                             -7.9882
 -8.1122
            -8.1118
                       -8.0339
                                  -7.9954
                                                        -7.9321
                                                                              -7.7135
                                  -7.4538
                                             -7.4502
                                                                   -7.3933
 -7.7120
            -7.6906
                       -7.6882
                                                        -7.3948
                                                                              -7.2865
            -7.2580
                                                        -6.9487
 -7.2585
                       -7.1703
                                  -7.1699
                                             -6.9502
                                                                   -6.6879
                                                                              -6.6817
 -6.5433
                       -6.3320
                                  -6.3260
                                             -6.0730
                                                        -6.0719
            -6.5423
                                                                   -5.9374
                                                                              -5.9369
 -5.7561
            -5.7551
                       -4.6644
                                  -4.5275
                                             -4.4601
                                                        -4.4575
                                                                    -4.3655
                                                                               -4.3646
 -4.3307
            -4.3120
                       -4.0815
                                  -4.0803
                                             -4.0689
                                                        -4.0532
                                                                    -4.0317
                                                                               -4.0291
            -3.9792
                                  -3.9294
 -3.9794
                       -3.9430
                                             -3.8556
                                                        -3.8548
                                                                    -3.8345
                                                                               -3.7995
  0.4561
             0.5133
                        0.5154
                                   1.3406
                                              1.3600
                                                         1.5422
                                                                     1.5627
                                                                                1.8972
                                                          2.2550
                                   2.2184
                                              2.2541
  2.0042
             2.0273
                        2.1319
                                                                     2.2724
                                                                                2.5980
  2.6932
                                   3.2277
                                                          3.2596
                                                                     3.4935
             3.1281
                        3.2115
                                              3.2585
                                                                                3.4944
  3.5319
             3.5683
        k = 0.0397 - 0.0687 \ 0.0000 \ (64791 \ PWs)
                                                         bands (ev):
-21.5749 -21.4660 -20.3257 -20.3242 -20.2089 -20.2038 -20.1781 -20.1777
-20.0340 -20.0325 -20.0230 -20.0221 -19.8423 -19.8376 -18.2790 -18.1798
-18.1781 \ -17.9909 \ -17.9893 \ -17.9461 \ -17.9460 \ -17.9264 \ -17.9007 \ -17.3726
-17.1986 -17.1958 -16.8541 -16.8509 -16.6833 -16.0057 -16.0015 -15.8579
-15.1539 -15.0136 -15.0129 -12.3808 -12.3599 -12.3599 -12.3128 -12.2370
-12.2247 -11.9335 -11.9217 -11.7138 -11.2186 -11.1474 -11.1464 -11.0486
-10.9426 -10.9415 -10.8382 -10.8359 -10.8081 -10.5424 -10.5363 -10.4441
 -9.5889
           -9.2884
                      -9.2732
                                 -9.2471
                                            -9.1191
                                                       -9.1181
                                                                  -8.9455
                                                                              -8.9034
 -8.9020
           -8.8714
                       -8.8664
                                 -8.8144
                                            -8.4706
                                                        -8.4691
                                                                   -8.4682
                                                                              -8.4599
            -8.1111
                      -8.0271
                                 -7.9949 -7.9876
                                                        -7.9121
                                                                   -7.9080
                                                                              -7.7491
 -8.1116
 -7.7477
            -7.6924
                       -7.6900
                                  -7.4771
                                             -7.4735
                                                        -7.3761
                                                                   -7.3745
                                                                              -7.2815
 -7.2583
            -7.2578
                       -7.1720
                                  -7.1716
                                             -6.9718
                                                        -6.9703
                                                                   -6.6707
                                                                               -6.6645
 -6.5369
            -6.5359
                       -6.3471
                                  -6.3411
                                             -6.0579
                                                        -6.0568
                                                                   -5.9327
                                                                               -5.9322
 -5.7698
            -5.7687
                       -4.6279
                                  -4.4985
                                             -4.4426
                                                        -4.4401
                                                                    -4.3517
                                                                               -4.3508
                                             -4.0633
                                                         -4.0503
                                                                    -4.0492
 -4.3245
            -4.3083
                       -4.0968
                                  -4.0957
                                                                               -4.0468
                                  -3.9443
                                             -3.8723
                                                                    -3.8468
 -3.9746
            -3.9743
                       -3.9562
                                                         -3.8478
                                                                               -3.8014
                                   1.3578
                                                         1.5653
                                                                     1.5859
  0.4564
             0.5035
                        0.5055
                                              1.3814
                                                                                1.8950
                                                          2.2481
             2.0086
                        2.1297
                                              2.2278
                                                                     2.2484
  1.9856
                                   2.2178
                                                                                2.5959
             3.1539
                        3.2344
                                   3.2506
                                              3.2744
                                                          3.2756
                                                                     3.4914
  2.6911
                                                                                3.4922
  3.5298
             3.5563
        k = 0.0357 - 0.0619 \ 0.0000 \ (64779 \ PWs)
                                                          bands (ev):
```

```
-21.5763 -21.4672 -20.3120 -20.3105 -20.1919 -20.1868 -20.1793 -20.1788
-20.0495 -20.0479 -20.0243 -20.0235 -19.8620 -19.8573 -18.2591 -18.1704
-18.1687 -18.0002 -17.9986 -17.9433 -17.9432 -17.9273 -17.9185 -17.3391
-17.1826 -17.1797 -16.8725 -16.8693 -16.7187 -15.9833 -15.9790 -15.8590 -15.1552 -15.0382 -15.0375 -12.3816 -12.3647 -12.3646 -12.2839 -12.2111
-12.1987 -11.9382 -11.9263 -11.7447 -11.2008 -11.1340 -11.1330 -11.0194
-10.9496 -10.9485 -10.8349 -10.8325 -10.8312 -10.5682 -10.5624 -10.4752
           -9.2471 -9.2333 -9.2265
                                          -9.1131
                                                     -9.1121
 -9.5891
                                                                -8.9471
                                                                          -8.9189
 -8.9175
                     -8.8664
                                -8.8369
                                           -8.5088
                                                     -8.5004
           -8.8714
                                                                -8.4345
                                                                           -8.4330
 -8.1110
           -8.1105
                     -8.0210
                                -7.9944
                                           -7.9871
                                                     -7.8920
                                                                -7.8879
                                                                           -7.7848
 -7.7834
           -7.6941
                     -7.6917
                                -7.5003
                                           -7.4967
                                                      -7.3572
                                                                -7.3556
                                                                           -7.2769
                                                                           -6.6474
 -7.2581
           -7.2576
                     -7.1735
                                -7.1731
                                           -6.9933
                                                      -6.9917
                                                                -6.6536
 -6.5310
           -6.5301
                     -6.3623
                                -6.3564
                                           -6.0428
                                                      -6.0417
                                                                -5.9284
                                                                           -5.9279
 -5.7835
           -5.7825
                      -4.5914
                                -4.4695
                                           -4.4251
                                                      -4.4226
                                                                -4.3378
                                                                           -4.3369
 -4.3188
           -4.3050
                      -4.1124
                                -4.1114
                                           -4.0665
                                                      -4.0643
                                                                -4.0583
                                                                           -4.0477
 -3.9835
           -3.9701
                      -3.9698
                                -3.9456
                                           -3.9086
                                                     -3.8411
                                                                -3.8402
                                                                           -3.8031
  0.4566
            0.4945
                       0.4966
                                  1.3558
                                            1.4224
                                                       1.5883
                                                                  1.6090
                                                                            1.8931
  1.9668
             1.9898
                       2.1277
                                  2.1849
                                            2.2173
                                                       2.2418
                                                                  2.2419
                                                                            2.5940
  2.6891
             3.1799
                       3.2574
                                  3.2737
                                            3.2901
                                                       3.2913
                                                                  3.4894
                                                                            3,4902
  3.5279
             3.5441
        k = 0.0317 - 0.0550 \ 0.0000 \ (64763 \ PWs)
                                                       bands (ev):
-21.5775 -21.4683 -20.2983 -20.2967 -20.1803 -20.1798 -20.1748 -20.1697 -20.0649 -20.0633 -20.0256 -20.0247 -19.8815 -19.8768 -18.2394 -18.1609 -18.1593 -18.0096 -18.0080 -17.9410 -17.9407 -17.9361 -17.9280 -17.3055 -17.1665 -17.1636 -16.8908 -16.8876 -16.7539 -15.9623 -15.9578 -15.8601 -15.1563 -15.0612 -15.0605 -12.3823 -12.3689 -12.3688 -12.2549 -12.1862 -12.1737 -11.9438 -11.9318 -11.7754 -11.1827 -11.1210 -11.1200 -10.9900 -10.9569 -10.9558 -10.8540 -10.8304 -10.8280 -10.5931 -10.5876 -10.5062
 -9.5895
           -9.2059
                      -9.2058
                                -9.1932
                                           -9.1067
                                                      -9.1056
                                                                -8.9486
                                                                          -8.9339
 -8.9326
                                -8.8594
                                           -8.5494
                                                      -8.5410
           -8.8714
                      -8.8664
                                                                -8.3983
                                                                           -8.3968
                                -7.9940
                                           -7.9867
                                                      -7.8718
                                                                           -7.8203
 -8.1104
           -8.1099
                      -8.0154
                                                                -7.8678
                                -7.5233
                                           -7.5197
 -7.8189
           -7.6956
                      -7.6932
                                                      -7.3381
                                                                -7.3366
                                                                           -7.2728
                      -7.1749
                                -7.1745
 -7.2580
           -7.2575
                                           -7.0146
                                                      -7.0131
                                                                -6.6366
                                                                           -6.6305
                                 -6.3717
 -6.5258
           -6.5250
                      -6.3777
                                           -6.0278
                                                      -6.0267
                                                                 -5.9246
                                                                           -5.9241
 -5.7973
           -5.7962
                      -4.5548
                                 -4.4406
                                           -4.4075
                                                      -4.4050
                                                                -4.3238
                                                                           -4.3230
 -4.3138
           -4.3021
                      -4.1283
                                 -4.1274
                                           -4.0834
                                                      -4.0815
                                                                -4.0538
                                                                           -4.0454
           -3.9661
 -4.0112
                      -3.9659
                                 -3.9467
                                           -3.9448
                                                      -3.8351
                                                                -3.8341
                                                                           -3.8047
  0.4568
            0.4865
                       0.4886
                                  1.3540
                                            1.4634
                                                       1.6111
                                                                  1.6319
                                                                            1.8913
                                  2.1418
  1.9477
             1.9706
                       2.1259
                                            2.2169
                                                       2.2361
                                                                  2.2364
                                                                            2.5922
  2.6873
             3.2062
                       3.2807
                                  3.2969
                                            3.3058
                                                       3.3070
                                                                  3.4876
                                                                            3.4885
  3.5261
             3.5317
        k = 0.0278 - 0.0481 \ 0.0000 \ (64757 \ PWs)
                                                       bands (ev):
-21.5786 -21.4692 -20.2844 -20.2829 -20.1811 -20.1807 -20.1575 -20.1525
-20.0801 -20.0786 -20.0267 -20.0258 -19.9009 -19.8961 -18.2197 -18.1515
-18.1499 -18.0190 -18.0173 -17.9546 -17.9385 -17.9383 -17.9286 -17.2718
-17.1502 -17.1473 -16.9090 -16.9059 -16.7891 -15.9428 -15.9382 -15.8610
-15.1573 -15.0825 -15.0818 -12.3829 -12.3726 -12.3726 -12.2258 -12.1623
-12.1498 -11.9504 -11.9383 -11.8061 -11.1643 -11.1082 -11.1072 -10.9645
-10.9634 -10.9605 -10.8766 -10.8249 -10.8224 -10.6169 -10.6117 -10.5371
 -9.5900
                                           -9.0997
                                                      -9.0986
                                                                -8.9499
           -9.1850
                      -9.1647
                                -9.1528
                                                                           -8.9485
                                           -8.5901
                                                                -8.3621
 -8.9471
           -8.8819
                      -8.8714
                                 -8.8664
                                                      -8.5816
                                                                           -8.3606
 -8.1100
           -8.1095
                      -8.0105
                                 -7.9936
                                           -7.9863
                                                      -7.8591
                                                                 -7.8586
                                                                           -7.8475
                      -7.6945
                                 -7.5462
                                           -7.5425
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 -7.8444
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                                                                           -7.2692
 -7.2578
           -7.2574
                                -7.1757
                                           -7.0358
                                                      -7.0343
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                      -7.1761
                                                                           -6.6135
                      -6.3931
                                -6.3871
                                           -6.0128
                                                      -6.0118
                                                                 -5.9211
                                                                           -5.9206
 -6.5211
           -6.5204
           -5.8101
                     -4.5183
                                -4.4117
                                           -4.3898
                                                      -4.3874
                                                                -4.3104
                                                                           -4.3092
 -5.8112
                                           -4.1001
                                                      -4.0983
 -4.3084
           -4.2994
                      -4.1445
                                -4.1436
                                                                -4.0499
                                                                           -4.0434
          -3.9808 -3.9626 -3.9622 -3.9476
                                                     -3.8297
                                                                -3.8288
 -4.0394
                                                                           -3.8060
```

```
0.4570
            0.4794
                      0.4815
                                           1.5045
                                                     1.6338
                                                               1.6546
                                                                          1.8898
                                 1.3525
            1.9513
                      2.0989
  1.9284
                                 2.1244
                                           2.2165
                                                     2.2312
                                                               2.2314
                                                                          2.5907
  2.6858
            3.2327
                      3.3041
                                 3.3204
                                           3.3212
                                                     3.3224
                                                               3.4860
                                                                          3.4869
  3.5190
            3.5203
        k = 0.0238 - 0.0412 \ 0.0000 \ (64741 \ PWs)
                                                     bands (ev):
-21.5796 -21.4700 -20.2704 -20.2689 -20.1819 -20.1815 -20.1401 -20.1351
-20.0953 -20.0938 -20.0276 -20.0268 -19.9201 -19.9153 -18.2001 -18.1420
-18.1404 -18.0284 -18.0268 -17.9727 -17.9366 -17.9364 -17.9292 -17.2379 -17.1338 -17.1309 -16.9271 -16.9239 -16.8242 -15.9251 -15.9204 -15.8618 -15.1582 -15.1018 -15.1010 -12.3835 -12.3759 -12.3758 -12.1966 -12.1395
-12.1269 -11.9580 -11.9457 -11.8367 -11.1456 -11.0957 -11.0947 -10.9725
-10.9714 \ -10.9309 \ -10.8989 \ -10.8182 \ -10.8156 \ -10.6397 \ -10.6347 \ -10.5680
                     -9.1235 -9.1123 -9.0922 -9.0911 -8.9625
 -9.5905
           -9.1640
                                                                        -8.9612
                    -8.8713 -8.8664
-8.0063 -7.9932
-7.6956 -7.5690
                                                    -8.6223
 -8.9510
          -8.9042
                                         -8.6309
                                                              -8.3259
                                                                        -8.3244
                                                              -7.8916
                                                                        -7.8296
                                                    -7.8931
 -8.1096
           -8.1091
                                         -7.9860
 -7.8256
           -7.6980
                                         -7.5653
                                                    -7.2996
                                                              -7.2980
                                                                        -7.2660
                                                              -6.6029
                                                                        -6.5967
 -7.2577
           -7.2573
                     -7.1772
                               -7.1768
                                         -7.0569
                                                    -7.0554
          -6.5164
                               -6.4026
                                         -5.9980
                                                              -5.9183
                                                                        -5.9177
 -6.5171
                     -6.4086
                                                    -5.9969
 -5.8251
           -5.8240
                     -4.4817
                               -4.3828
                                         -4.3721
                                                    -4.3697
                                                               -4.3057
                                                                         -4.2974
           -4.2947
 -4.2953
                     -4.1611
                               -4.1601
                                          -4.1164
                                                    -4.1149
                                                              -4.0684
                                                                        -4.0464
                                          -3.9485
 -4.0416
           -4.0160
                     -3.9595
                               -3.9592
                                                    -3.8250
                                                               -3.8241
                                                                         -3.8072
                                           1.5456
  0.4572
            0.4732
                      0.4753
                                1.3511
                                                     1.6562
                                                               1.6770
                                                                          1.8884
                                 2.1230
                                                               2.2272
  1.9089
                                           2.2162
                                                     2.2269
            1.9317
                      2.0561
                                                                          2.5894
  2.6845
            3.2595
                      3.3277
                                 3.3365
                                           3.3377
                                                     3.3439
                                                               3.4845
                                                                          3.4855
  3.5063
            3.5075
        k = 0.0198 - 0.0344 \ 0.0000 \ (64721 \ PWs)
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-20.1104 -20.1089 -20.0284 -20.0276 -19.9392 -19.9344 -18.1806 -18.1326 -18.1310 -18.0378 -18.0362 -17.9910 -17.9350 -17.9348 -17.9297 -17.2040 -17.1173 -17.1144 -16.9450 -16.9419 -16.8592 -15.9094 -15.9046 -15.8625 -15.1589 -15.1188 -15.1180 -12.3840 -12.3786 -12.3785 -12.1673 -12.1178
-12.1052 -11.9667 -11.9543 -11.8671 -11.1266 -11.0836 -11.0826 -10.9808
-10.9798 -10.9210 -10.9013 -10.8103 -10.8076 -10.6614 -10.6567 -10.5987
 -9.5910
           -9.1429
                    -9.0842
                              -9.0831
                                         -9.0823
                                                   -9.0717
                                                              -8.9761
                                                                        -8.9748
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           -8.9264
                     -8.8713
                               -8.8664
                                         -8.6717
                                                    -8.6630
                                                              -8.2897
                                                                        -8.2883
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           -8.1087
                     -8.0027
                               -7.9930
                                         -7.9857
                                                    -7.9288
                                                              -7.9274
                                                                        -7.8090
 -7.8050
           -7.6990
                    -7.6966 -7.5916
                                         -7.5878
                                                   -7.2801
                                                              -7.2786
                                                                        -7.2634
 -7.2576
           -7.2572
                     -7.1781
                               -7.1777
                                         -7.0779
                                                    -7.0763
                                                              -6.5862
                                                                        -6.5800
                     -6.4243
                               -6.4182
 -6.5137
           -6.5131
                                         -5.9832
                                                    -5.9821
                                                              -5.9158
                                                                        -5.9152
          -5.8380
                                                    -4.3516
                     -4.4452
                               -4.3545
                                         -4.3542
                                                              -4.3024
 -5.8391
                                                                        -4.2952
                     -4.1779
                               -4.1768
                                         -4.1323
                                                    -4.1311
                                                              -4.0982
 -4.2812
           -4.2806
                                                                        -4.0505
 -4.0435
           -4.0401
                     -3.9569
                               -3.9566
                                         -3.9492
                                                    -3.8210
                                                              -3.8201
                                                                        -3.8082
                                           1.5867
                                                     1.6785
            0.4680
                      0.4701
  0.4573
                                1.3500
                                                               1.6993
                                                                          1.8873
            1.9119
  1.8891
                      2.0135
                                 2.1219
                                           2.2159
                                                     2.2233
                                                               2.2236
                                                                          2.5883
  2.6833
            3.2866
                                 3.3518
                                                     3.3677
                                                               3.4832
                                                                          3.4843
                      3.3514
                                           3.3529
  3.4934
            3.4945
        k = 0.0159 - 0.0275 \ 0.0000 \ (64687 \ PWs)
                                                     bands (ev):
-21.5811 -21.4713 -20.2422 -20.2407 -20.1831 -20.1827 -20.1255 -20.1239
-20.1049 -20.0999 -20.0290 -20.0282 -19.9582 -19.9534 -18.1611 -18.1231
-18.1215 -18.0473 -18.0456 -18.0094 -17.9338 -17.9334 -17.9300 -17.1700
-17.1007 -17.0977 -16.9628 -16.9597 -16.8941 -15.8961 -15.8912 -15.8630
-15.1595 -15.1332 -15.1324 -12.3844 -12.3809 -12.3807 -12.1379 -12.0972
-12.0847 -11.9764 -11.9639 -11.8974 -11.1073 -11.0717 -11.0707 -10.9895
-10.9885 -10.9428 -10.8715 -10.8011 -10.7983 -10.6819 -10.6775 -10.6294
 -9.5914 -9.1217 -9.0757 -9.0746 -9.0412 -9.0311 -8.9892 -8.9879
 -8.9526 -8.9485 -8.8713 -8.8664 -8.7125 -8.7038 -8.2536 -8.2521
```

```
-8.1089
           -8.1084
                      -7.9998
                                -7.9927
                                           -7.9855
                                                     -7.9648
                                                                -7.9633
                                                                          -7.7880
 -7.7840
           -7.6998
                     -7.6974
                                -7.6140
                                           -7.6102
                                                     -7.2612
                                                                -7.2605
                                                                           -7.2590
           -7.2571
                                                                          -6.5634
 -7.2575
                     -7.1788
                                -7.1784
                                           -7.0987
                                                     -7.0971
                                                                -6.5696
                                                                -5.9137
 -6.5109
           -6.5103
                      -6.4400
                                -6.4339
                                           -5.9685
                                                     -5.9674
                                                                           -5.9132
           -5.8521
                     -4.4088
                                -4.3366
                                           -4.3345
                                                     -4.3249
                                                                -4.2998
 -5.8532
                                                                           -4.2935
 -4.2669
           -4.2663
                      -4.1949
                                -4.1938
                                           -4.1481
                                                      -4.1471
                                                                -4.1291
                                                                           -4.0841
 -4.0411
           -4.0389
                      -3.9548
                                -3.9545
                                           -3.9497
                                                      -3.8178
                                                                -3.8168
                                                                           -3.8090
  0.4574
            0.4637
                       0.4658
                                 1.3490
                                           1.6278
                                                      1.7007
                                                                 1.7214
                                                                           1.8691
  1.8864
            1.8918
                       1.9711
                                 2.1209
                                            2.2157
                                                       2.2203
                                                                 2.2206
                                                                            2.5874
  2.6824
            3.3139
                       3.3667
                                  3.3679
                                            3.3753
                                                       3.3915
                                                                 3.4791
                                                                            3.4802
  3.4835
            3.4842
        k = 0.0119 - 0.0206 \ 0.0000 \ (64669 \ PWs)
                                                       bands (ev):
-21.5816 -21.4717 -20.2279 -20.2264 -20.1835 -20.1831 -20.1404 -20.1388
-21.3616 -21.4717 -20.2279 -20.2264 -20.1633 -20.1631 -20.1404 -20.1366

-20.0871 -20.0821 -20.0296 -20.0287 -19.9770 -19.9722 -18.1418 -18.1136

-18.1120 -18.0567 -18.0551 -18.0280 -17.9329 -17.9324 -17.9302 -17.1359

-17.0839 -17.0809 -16.9805 -16.9774 -16.9289 -15.8853 -15.8803 -15.8634

-15.1600 -15.1448 -15.1439 -12.3848 -12.3826 -12.3824 -12.1086 -12.0779

-12.0655 -11.9873 -11.9747 -11.9276 -11.0878 -11.0603 -11.0592 -10.9986

-10.9975 -10.9644 -10.8416 -10.7907 -10.7877 -10.7012 -10.6970 -10.6599
                                -9.0656
                                          -9.0018
 -9.5918
           -9.1005
                     -9.0667
                                                     -9.0005
                                                                -9.0001
                                                                          -8.9905
                                                                -8.2174
 -8.9705
                      -8.8713
                                -8.8664
                                           -8.7534
                                                     -8.7445
           -8.9530
                                                                           -8.2159
                      -8.0007
                                                                           -7.7669
 -8.1087
                                -7.9993
                                           -7.9975
                                                     -7.9926
                                                                -7.9853
           -8.1082
                                -7.6363
 -7.7629
           -7.7004
                      -7.6980
                                           -7.6325
                                                     -7.2595
                                                                -7.2575
                                                                           -7.2570
 -7.2407
           -7.2392
                      -7.1794
                                -7.1790
                                           -7.1194
                                                     -7.1178
                                                                -6.5530
                                                                          -6.5470
 -6.5087
           -6.5082
                      -6.4558
                                -6.4497
                                           -5.9539
                                                      -5.9528
                                                                -5.9121
                                                                           -5.9116
 -5.8673
           -5.8662
                      -4.3725
                                -4.3189
                                           -4.3168
                                                      -4.2977
                                                                -4.2962
                                                                           -4.2919
                      -4.2122
                                -4.2109
 -4.2525
           -4.2520
                                           -4.1643
                                                      -4.1630
                                                                -4.1602
                                                                           -4.1165
 -4.0393
           -4.0379
                      -3.9532
                                -3.9528
                                           -3.9502
                                                      -3.8153
                                                                -3.8143
                                                                           -3.8096
  0.4573
            0.4605
                       0.4626
                                  1.3483
                                            1.6684
                                                       1.7229
                                                                 1.7431
                                                                            1.8491
  1.8716
            1.8857
                       1.9291
                                  2.1202
                                            2.2155
                                                       2.2181
                                                                 2.2184
                                                                            2.5866
  2.6817
             3.3414
                                  3.3827
                                            3.3992
                                                       3.4153
                                                                 3.4662
                                                                            3.4674
                       3.3815
  3.4818
            3.4832
        k = 0.0079 - 0.0137 \ 0.0000 \ (64667 \ PWs)
                                                       bands (ev):
-21.5820 -21.4721 -20.2136 -20.2121 -20.1838 -20.1834 -20.1552 -20.1536
-20.0691 -20.0642 -20.0299 -20.0291 -19.9956 -19.9908 -18.1226 -18.1042
-18.1025 -18.0662 -18.0646 -18.0466 -17.9323 -17.9316 -17.9302 -17.1016
-17.0670 -17.0640 -16.9980 -16.9950 -16.9636 -15.8775 -15.8724 -15.8637
-15.1604 -15.1533 -15.1524 -12.3852 -12.3839 -12.3834 -12.0793 -12.0596
-12.0475 -11.9993 -11.9865 -11.9575 -11.0679 -11.0491 -11.0481 -11.0080
-11.0069 -10.9856 -10.8116 -10.7791 -10.7758 -10.7193 -10.7154 -10.6903
                               -9.0560
          -9.0791
                     -9.0572
                                          -9.0139
                                                     -9.0127
                                                                -8.9924
 -9.5920
                                                                          -8.9594
           -8.9470
 -8.9558
                     -8.8713
                                -8.8664
                                           -8.7943
                                                     -8.7853
                                                                -8.1813
                                                                          -8.1798
           -8.1081
                     -8.0368
                                -8.0353
                                           -7.9959
                                                     -7.9924
                                                                -7.9851
 -8.1086
                                                                          -7.7456
 -7.7416
           -7.7008
                     -7.6984
                                -7.6584
                                           -7.6545
                                                     -7.2584
                                                                -7.2573
                                                                          -7.2569
 -7.2209
           -7.2194
                     -7.1798
                                -7.1794
                                           -7.1399
                                                     -7.1384
                                                                -6.5366
                                                                           -6.5306
 -6.5071
           -6.5066
                     -6.4717
                                -6.4656
                                           -5.9393
                                                     -5.9382
                                                                -5.9110
                                                                           -5.9104
 -5.8815
           -5.8804
                      -4.3365
                                -4.3017
                                           -4.2998
                                                      -4.2951
                                                                -4.2908
                                                                           -4.2670
 -4.2382
           -4.2377
                      -4.2294
                                -4.2282
                                           -4.1949
                                                      -4.1786
                                                                -4.1779
                                                                           -4.1479
 -4.0379
           -4.0372
                      -3.9521
                                -3.9516
                                           -3.9504
                                                      -3.8135
                                                                -3.8125
                                                                           -3.8099
  0.4570
            0.4583
                       0.4604
                                 1.3478
                                            1.7079
                                                       1.7453
                                                                 1.7645
                                                                            1.8291
  1.8513
            1.8851
                       1.8877
                                  2.1197
                                            2.2153
                                                       2.2164
                                                                 2.2168
                                                                            2.5861
  2.6811
            3.3691
                       3.3961
                                  3.3973
                                            3.4230
                                                       3.4387
                                                                 3.4527
                                                                            3.4539
  3.4809
            3.4823
        k = 0.0040 - 0.0069 \ 0.0000 \ (64673 \ PWs)
                                                       bands (ev):
-21.5822 -21.4722 -20.1992 -20.1977 -20.1840 -20.1835 -20.1699 -20.1683
-20.0510 -20.0462 -20.0301 -20.0293 -20.0141 -20.0093 -18.1035 -18.0947
```

```
-18.0931 -18.0757 -18.0740 -18.0654 -17.9321 -17.9312 -17.9301 -17.0674
-17.0500 -17.0469 -17.0154 -17.0125 -16.9982 -15.8726 -15.8676 -15.8639
-15.1606 -15.1585 -15.1575 -12.3855 -12.3846 -12.3840 -12.0513 -12.0421
-12.0310 -12.0122 -11.9994 -11.9868 -11.0478 -11.0383 -11.0373 -11.0177
-11.0167 -11.0066 -10.7817 -10.7661 -10.7626 -10.7360 -10.7325 -10.7206
 -9.5922 -9.0576 -9.0471 -9.0459 -9.0255 -9.0243 -9.0142 -8.9546
 -8.9179 \quad -8.9083 \quad -8.8714 \quad -8.8665 \quad -8.8351 \quad -8.8258 \quad -8.1451 \quad -8.1437
 -8.1085 -8.1080 -8.0728 -8.0714 -7.9949 -7.9923 -7.9851 -7.7242 -7.7203 -7.7010 -7.6987 -7.6803 -7.6764 -7.2578 -7.2572 -7.2568 -7.2009 -7.1994 -7.1800 -7.1796 -7.1604 -7.1588 -6.5204 -6.5145

      -6.5062
      -6.5056
      -6.4876
      -6.4816
      -5.9248
      -5.9238
      -5.9103

      -5.8958
      -5.8947
      -4.3015
      -4.2958
      -4.2909
      -4.2829
      -4.2802

                                                                                  -5.9098
                                                                                  -4.2474
           -4.2376 -4.2292 -4.2230 -4.2227 -4.1936 -4.1931
                                                                                  -4.1784
 -4.2461
 -4.0372 -4.0368 -3.9516 -3.9509 -3.9504 -3.8125
                                                                      -3.8115
                                                                                  -3.8100
                                                                                  1.8106
                                               1.7428
                                                           1.7692
                                                                       1.7849
            0.4574
                        0.4592
                                   1.3475
  0.4561
  1.8313
             1.8480
                                     2.1194
                                                            2.2155
                                                                        2.2159
                         1.8848
                                                 2.2151
                                                                                   2.5858
  2.6808
             3.3971
                         3.4105
                                     3.4117
                                                 3.4388
                                                            3.4399
                                                                        3.4462
                                                                                   3.4534
  3.4609
              3.4792
         k = 0.0000 \ 0.0000 \ 0.0000 \ (64705 \ PWs)
                                                          bands (ev):
-21.5823 -21.4723 -20.1857 -20.1848 -20.1839 -20.1836 -20.1831 -20.1818 -20.0335 -20.0330 -20.0317 -20.0283 -20.0271 -20.0268 -18.0864 -18.0858 -18.0844 -18.0839 -18.0831 -18.0826 -17.9320 -17.9310 -17.9300 -17.0345 -17.0334 -17.0327 -17.0324 -17.0298 -17.0280 -15.8710 -15.8660 -15.8639 -15.1608 -15.1602 -15.1591 -12.3857 -12.3849 -12.3841 -12.0343 -12.0272 -12.0206 -12.0182 -12.0121 -12.0081 -11.0282 -11.0280 -11.0280 -11.0272 -11.0267 -11.0258 -10.7549 -10.7532 -10.7507 -10.7498 -10.7478 -10.7458 -9.5922 -9.0371 -9.0368 -9.0362 -9.0356 -9.0351 -9.0349 -8.9546
            -8.8750 -8.8710 -8.8695 -8.8693
                                                          -8.8597
 -8.8808
                                                                      -8.1098
                                                                                  -8.1092
            -8.1082 -8.1071 -8.1068 -7.9946
 -8.1084
                                                          -7.9923
                                                                      -7.9850
                                                                                  -7.7052
            -7.6998 -7.6988 -7.6984
                                                          -7.2577
 -7.7032
                                              -7.6960
                                                                      -7.2571
                                                                                  -7.2568
            -7.1810 -7.1805 -7.1795 -7.1794
 -7.1815
                                                          -7.1774 -6.5065
                                                                                  -6.5060
 -6.5046
            -6.5040
                       -6.4972
                                  -6.4969 -5.9118
                                                                      -5.9100
                                                          -5.9113
                                                                                  -5.9094
            -5.9072
                       -4.2960
                                   -4.2912
 -5.9090
                                               -4.2679
                                                          -4.2678
                                                                      -4.2657
                                                                                  -4.2626
                                   -4.2091
 -4.2620
            -4.2592
                       -4.2095
                                               -4.2087
                                                           -4.2079
                                                                      -4.2074
                                                                                  -4.2071
                       -3.9515
                                  -3.9507
                                               -3.9503
                                                          -3.8122
                                                                                  -3.8100
 -4.0369
            -4.0367
                                                                      -3.8111
                        0.4590
                                   1.3474
                                               1.7604
                                                           1.7855
                                                                       1.8020
                                                                                  1.8031
  0.4557
             0.4571
                         1.8847
                                     2.1193
                                                 2.2149
                                                            2.2152
  1.8137
              1.8224
                                                                        2.2157
                                                                                    2.5857
  2.6807
              3.4240
                         3.4244
                                     3.4255
                                                3.4257
                                                            3.4262
                                                                        3.4262
                                                                                    3.4624
  3.4704
              3.4749
  Writing output data file A.save
                           29.68s CPU
                                              30.17s WALL (
                                                                        1 calls)
  init run
  electrons : 203053.87s CPU 204506.46s WALL (
                                                                        1 calls)
  Called by init_run:
  wfcinit : 0.00s CPU
                                            0.00s WALL (
                                                                        1 calls)
                           3.26s CPU
                                             3.45s WALL (
  potinit
                                                                        1 calls)
  Called by electrons:
  c_bands : 203053.69s CPU 204506.20s WALL (
                                                                        1 calls)
  v_of_rho
                   : 2.53s CPU 2.59s WALL (
                                                                        1 calls)
                            0.07s CPU
  v_h
                                             0.07s WALL (
                                                                        1 calls)
                          2.46s CPU 2.52s WALL (
13.30s CPU 13.43s WALL (
                                                                        1 calls)
  v_xc
  newd
                                                                        1 calls)
  Called by c_bands:
                           16.40s CPU 17.46s WALL ( 400 calls)
  init_us_2 :
               : 191803.88s CPU 193180.34s WALL (
  cegterg
                                                                    1734 calls)
```

## Called by sum\_band:

```
Called by *egterg:
h_psi : 80758.39s CPU 81230.96s WALL (
                                                    33524 calls)
            : 26703.44s CPU 26796.55s WALL (
                                                    33524 calls)
s_psi
g_psi : 87.48s CPU 88.51s WALL ( 31390 calls) cdiaghg : 17801.45s CPU 17870.00s WALL ( 31790 calls)
cegterg:over : 29713.08s CPU 29853.53s WALL ( 31390 calls) cegterg:upda : 21665.92s CPU 21877.81s WALL ( 31390 calls)
cegterg:last: 18438.71s CPU 18547.07s WALL (
                                                    2934 calls)
cdiaghg:chol: 1154.02s CPU 1160.37s WALL (
                                                    31790 calls)
cdiaghg:inve: 117.46s CPU 118.67s WALL (cdiaghg:para: 5926.96s CPU 5948.74s WALL (
                                                    31790 calls)
                                                    63580 calls)
Called by h_psi:
h_psi:vloc : 27481.51s CPU 27679.26s WALL (
                                                    33524 calls)
h_psi:vnl : 53183.49s CPU 53444.05s WALL (
                                                    33524 calls)
add_vuspsi : 26829.17s CPU 26931.52s WALL (
                                                    33524 calls)
General routines
calbec : 26353.74s CPU 26512.27s WALL (
                                                    33524 calls)
                                    1.81s WALL (
fft
                    1.79s CPU
                                                       23 calls)
                                                       2 calls)
                    0.04s CPU
                                    0.04s WALL (
ffts
fftw
             : 21283.69s CPU 21416.55s WALL ( 2578666 calls)
interpolate : 0.16s CPU
                                0.16s WALL ( 2 calls)
                    0.42s CPU
                                   16.17s WALL (
davcio
                                                     400 calls)
Parallel routines
fft_scatter : 8493.77s CPU 8562.89s WALL ( 2578691 calls)
PWSCF
                   2d
                          8h24m CPU
                                           2d
                                                  9h 3m WALL
```

This run was terminated on: 21:45:25 11Apr2021

JOB DONE.

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