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Table a37 STAGS "soccerball" model of equivalent ellipsoidal shell.
This list is of the file: soccerball.localpress.usrfab.410.inp, which
pertains to one of the cases in which a residual dent is generated
by a concentrated load produced by inward-directed pressure applied
to a single finite element at Row 1, Column 1 of Shell unit 15.
Figure a2 is a plot of the STAGS model corresponding to this file
(except in Fig. a2 the 480 finite element is used, not the 410 element).
The concentrated load is in the form of inward normal pressure
applied uniformly over a single finite element: the finite
element at (LI,LJ) = (Row 1,Column 1) in Shell unit no. 15.
This input file, when combined with the proper eqellipse.bin
file, produces deformation such as that displayed in Fig. 170
(except that Fig. 170 is a "refined" model and has 480 finite elements).
______
soccerball model of isogrid-stiffened equivalent ellipsoidal shell
                        $B-1 IGRAV, ICHECK, ILIST, INCBC, NRUNIT, NROTS, KDEV
  50 0
                    $B-2 NUNITS, NUNITE, NSTFS, NINTS, NPATS,
            85
                0,
             0
                    $B-2 NCONST, NIMPFS, INERT, NINSR, NPATX, NSTIFS
                    $B-3 NTAM, NTAB, NTAW, NTAP, NTAMT, NGCP
        1
           0
$ F-1 records...
  5 13,
                    $F-1 NROWS(1), NCOLS(1)
  5 13,
                    $F-1 NROWS(1), NCOLS(1)
 13 13,
                    $F-1 NROWS(1), NCOLS(1)
  5 13,
                    $F-1 NROWS(1), NCOLS(1)
  5 13,
                    $F-1 NROWS(1), NCOLS(1)
 13 13,
                    F-1 NROWS(1), NCOLS(1)
  5 13,
                    $F-1 NROWS(1), NCOLS(1)
```

```
$F-1 NROWS(1), NCOLS(1)
 5 13,
 5 13,
                     $F-1 NROWS(1), NCOLS(1)
 5 13
                     $F-1 NROWS(1), NCOLS(1)
G-1 records...
soccerball cap junctions...
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 1
    2
        2
           4
        3
 1
    1
           3
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 2
    1
        3 -2
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 2
    2
        4
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 3
    1
        6
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 4
    1
        6
           3
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 4
    2
        5
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 5
    1
        6 - 2
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
junction
          at xinput(2)...
    3
        7
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 1
           1
 2
    3
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
        8
           1
    3
        9
 4
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 5
    3
      10
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 7
    2
        8
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
           4
 8
    2
        9
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
    2 10
 9
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
junction at xinput(3)...
 7
    3 11
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
    3 12
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
           1
 8
 9
    3 13
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
    3 14
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
10
           1
11
    2 12
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
    2 13
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
12
           4
13
    2 14
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
```

```
$ junction at xinput(4)...
11
     3 15
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
12
     3 16
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 13
     3 17
            1
     3 18
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 14
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
15
     2 16
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
16
     2 17
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     2 18
 17
$ junction at xinput(5)...
15
     3 19
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 20
16
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
17
     3 21
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 22
 18
            1
 19
     2 20
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
20
     2 21
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
 21
     2 22
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
$ junction at xinput(6)...
19
     3 23
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            1
     3 24
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
20
            1
     3 25
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
21
            1
     3 26
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
22
            1
23
     2 24
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
24
     2 25
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
25
     2 26
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
$ junction at xinput(7)...
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
23
     3 27
            1
     3 28
24
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 29
25
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
26
     3 30
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
27
     2 28
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
28
     2 29
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 29
     2 30
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
$ junction at xinput(8)...
27
     3 31
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            1
     3 32
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
28
            1
29
     3 33
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            1
 30
     3 34
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            1
31
     2 32
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
32
     2 33
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     2 34
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 33
            4
$ junction at xinput(9)...
31
     3 35
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 36
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
32
33
     3 37
            1
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 38
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 34
            1
35
     2 36
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     2 37
            4
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 36
 37
     2 38
                      $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
```

```
$ junction at xinput(10)...
 35
     3 39
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 40
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 36
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 37
     3 41
           1
     3 42
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 38
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     2 40
 39
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 40
     2 41
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     2 42
 41
$ junction at xinput(11)...
 39
     3 43
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 44
 40
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 41
     3 45
           1
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
     3 46
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 42
           1
 43
     2 44
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 44
     2 45
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
           4
 45
     2 46
           4
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
$ junction at xinput(12)...
     3 47
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 43
     3 48
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 44
           1
     3 49
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 45
           1
     3 50
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 46
           1
 47
     2 48
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
           4
 48
     2 49
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
            4
     2 50
                     $G-1 MUNIT, MBOUND, NUNIT, NBOUND
 49
           4
$ Materials...
                     $I-1 ITAM, NESP, IPLST, ITANST, ICREEP, IPLANE
        1
           1
                  0
     7
               0
                                  16.E+06 0. $I-2 E1,U12,G,RHO,A1,E2,A2
 16.E+06 0.25
                 0.0
                     0.16
                             0.0
  .0075 120000.,
                     I-3 E(i), S(i)
  .0088 138000.,
                     I-3 E(i), S(i)
  .0102 148000.,
                     I-3 E(i), S(i)
  .0122 156000.,
                     I-3 E(i), S(i)
  .0156 164000.,
                     I-3 E(i), S(i)
  .0200 165000.,
                     I-3 E(i), S(i)
  .0400 166000.
                     I-3 E(i), S(i)
                     $I-1 ITAM, NESP, IPLST, ITANST, ICREEP, IPLANE
     7
        1
           1
                  0
 496894.4 .333 0. .004969 496894.4 0. $I-2 E1,U12,G,RHO,A1,E2,A2
  .0075 3726.710,
                      I-3 E(i), S(i)
  .0088 4285.710,
                      I-3 E(i), S(i)
  .0102 4596.270,
                      I-3 E(i), S(i)
  .0122 4844.720,
                      I-3 E(i), S(i)
  .0156 5093.170,
                      I-3 E(i), S(i)
                      I-3 E(i), S(i)
  .0200 5124.220,
  .0400 5155.280
                      I-3 E(i), S(i)
C
C New section added for GCP records
C
C GCP Material in one or more of shell unit walls
PLASTIC WB MATERIAL
                       1 1 1 2 0 $ I-5a matid, ngroups, nstates.onetwo
```

```
16.E+06 0.25 0.16 0.0 7 0.
                                $ I-9a E, GNU, RHO, ALPHA, NSUBS, T
 .0075 120000. .0088 138000.,
                                $ I-9b strain, stress material 1
 .0102 148000. .0122 156000.,
                                $ I-9b strain, stress material 1
                                $ I-9b strain, stress material 1
 .0156 164000. .0200 165000.,
 .0400 166000.
                                $ I-9b strain, stress material 1
PLASTIC WB MATERIAL
                      2 1 1 2 0 $ I-5a matid, ngroups, nstates.onetwo
 496894.4 0.333 0.004969 0. 7 0. $ I-9a E, GNU, RHO, ALPHA, NSUBS, T
 .0075 3726.71 .0088 4285.71, $ I-9b strain, stress material 2
 .0102 4596.27 .0122 4844.72, $ I-9b strain, stress material 2
 .0156 5093.17 .0200 5124.22, $ I-9b strain, stress material 2
                                $ I-9b strain, stress material 2
 .0400 5155.28
C
C shell unit wall props
SHELL FABRICATION -1 2 1 0 0 $ I-5a fabid, nlayer, ipts, ishr, isym
    1   I-21a  MATID(j),   j = 1, nlayer
       = 1 - 1 INTSHL(j), j = 1,nlayer
 1.0E-06 0.4 $ I-21c THKSHL(j), j=1, nlayer
       0.0
              $ I-21d ANGSHL(j), j=1,nlayer
 0.0
C
        $ I-5a cease (end of GCP input data, all matl, all walls)
END
C wall properties for the six segments of the soccerball apex...
                    $K-1 ITAW, KWALL, NLAY, NLIP, NSMRS
  1
     1 2 5 0
                  0 $K-2 MATL, TL, XETL, LSOL
  2
     .000001 0.
        0. 0 $K-2 MATL, TL, XETL, LSOL
C
$ Soccerball apex follows (2 x three shell units)...
$ First 90-degree (0 - 90 deg) group of 3 units...
$ Unit 1: Right pie segment
        0 0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  0. 2.958103 0. 45. 49.5 0. 90.
 -1 0
       0.0.
               0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6 6
                    P-1 IBLN(i), i=1,4, IBOND
              0
  1 0
        0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
              0
  1
     1
       0
                    $Q-2 ISYS, NN, IFLG
 -460.
        5
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        0
           0
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
$ Unit 2: Left pie segment
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0
           0 0
  0. 2.958103 45. 90. 49.5 0. 90.
 -1 0 0.0.0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 6
              0
        6 6
  1
     0
        0 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
     1
                    $Q-2 ISYS,NN,IFLG
  1
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
```

```
$R-1 IPRD, IPRR, IPRE, IPRS, IPRP
$ Unit 3: inner square
       0 0
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  0. 2.958103 0. 90. 49.5 0. 90.
       0.0.
               0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6
    6
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
    0
              0
  1
        0
                    $Q-2 ISYS, NN, IFLG
  1
        0
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
$ Second 90-degree (90 - 180 deg) group of 3 units...
$ Unit 1: Right pie segment (Shell unit 4)
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
                0. 45. 49.5
  0. 2.958103
                              0.90.
       0. 0. 0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6
    6
        6
              0
                    P-1 IBLN(i), i=1,4, IBOND
    0
        0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
           0
  1
     1
                    $Q-2 ISYS,NN,IFLG
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
        5
           3
              0
           0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
$ Unit 2: Left pie segment (Shell unit 5)
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0
           0
             0
  0. 2.958103 45. 90. 49.5 0. 90.
               0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
        0.0.
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6
           6
              0
  1
     0
        0
           0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                    $Q-2 ISYS, NN, IFLG
  1
     1
        0
 -460.
        5
           3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
        0
           0
              0
$ Unit 3: inner square
                             (Shell unit 6)
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0
                 0
  0. 2.958103 0. 90. 49.5 0. 90.
              0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
        0.0.
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  4
    6
        6
           6
              0
  1
    0
        0
           0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0
                    $Q-2 ISYS, NN, IFLG
  1
     1
 -460.
        5
           3
              0
                    0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
        0
           0
$ The remainder of the shell follows (2 x 22 shell units)...
C original unit 2 = toroidal, now unit 7 (0 - 45 degrees)
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0 0
              0
  2.957441 6.69448 0. 45. .08364234 47.890324 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
 -1 0 0.0.0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
```

```
410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 6
        6 4 0
  1 0
        0 0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                    $Q-2 ISYS, NN, IFLG
  1 1
 -460.
        5
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
C original unit 2 = toroidal now unit 8 (45 - 90 degrees)
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  2.957441 6.69448 45. 90. .08364234 47.890324 $M-2 PH1,PH2,THET1,
                                                 $
                                                      THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                    $N-1 KELT
  6 6
                    P-1 IBLN(i), i=1,4, IBOND
        6 6 0
  1 0
        0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                    $Q-2 ISYS, NN, IFLG
  1
     1
        0
 -460.
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
           0
              0
C original unit 2 = toroidal, now unit 9 (90 - 135 degrees)
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  2.957441 6.69448 90. 135. .08364234 47.890324 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
                                                  $
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
     0
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 6
        6 6 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0
           0
              0
                    $Q-2 ISYS,NN,IFLG
  1 1
        0
 -460.
        5
           3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
              0
C original unit 2 = toroidal now unit 10 (135 - 180 degrees)
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0 0 0
  2.957441 6.69448 135. 180. .08364234 47.890324 $M-2 PH1,PH2,THET1,
                                                    $
                                                         THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 4
              0
        6
  1 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0
           0
              0
  1
        0
                    $Q-2 ISYS, NN, IFLG
     1
 -460.
        5
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
           0
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 3 = toroidal now unit 11
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
  6.67782 10.67682 0. 45. .4623073 44.752884 $M-2 PH1,PH2,THET1,
                                               $
                                                    THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6
    6
          4
              0
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0
           0
  1
     1
        0
                     $Q-2 ISYS,NN,IFLG
```

```
0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0 0 0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 3 = toroidal now unit 12
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  6.67782 10.67682 45. 90. .4623073 44.752884 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
                                               $
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
        0.0.0
  410
                    $N-1 KELT
  6 6
                    P-1 IBLN(i), i=1,4, IBOND
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
  1
                    $Q-2 ISYS,NN,IFLG
 -460.
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 3 = toroidal now unit 13
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  6.67782 10.67682 90. 135. .4623073 44.752884 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
 -1
     0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6 6
                    P-1 IBLN(i), i=1,4, IBOND
     0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
        0
    1
                    $Q-2 ISYS,NN,IFLG
  1
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 3 = toroidal now unit 14
             0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0 0
  6.67782 10.67682 135. 180. .4623073 44.752884 $M-2 PH1,PH2,THET1,
                                                        THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6 4
        6
              0
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
     1
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 4 = toroidal now unit 15
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
                 0
  10.65673 15.12016 0. 45. 1.338907 40.095947 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
                    $P-1 IBLN(i), i=1,4, IBOND
  6
    6
        6
              0
              0
  2 0
        0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
     1
                    $Q-2 ISYS, NN, IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  2
    1
                    $Q-2 ISYS, NN, IFLG
 -1.
     5 3 1 1 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0
        0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
```

```
C original unit 4 = toroidal now unit 16
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0 0 0 0
  10.65673 15.12016 45. 90. 1.338907 40.095947 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6
    6
              0
  1 0
                 0 0 $0-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                    $Q-2 ISYS, NN, IFLG
  1
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 4 = toroidal now unit 17
                 0
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
     1
        0 0 0
  10.65673 15.12016 90. 135. 1.338907 40.095947 $M-2 PH1,PH2,THET1,
                                                  $
                                                       THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6
    6
           6 0
                    P-1 IBLN(i), i=1,4, IBOND
        6
           0 0
    0
        0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
                    $Q-2 ISYS,NN,IFLG
  1
     1
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 4 = toroidal now unit 18
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
                 0
  10.65673 15.12016 135. 180. 1.338907 40.095947 $M-2 PH1,PH2,THET1,
                                                    $
                                                         THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
     0
  410
                    $N-1 KELT
  6 4
        6 6 0
                    P-1 IBLN(i), i=1,4, IBOND
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0 0
  1
     1
        0
                    $Q-2 ISYS,NN,IFLG
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
        5 3 0
              0
           0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 5 = toroidal now unit 19
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  15.08829 20.32144 0. 45. 2.895449 34.199043 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
     0
        0.0.0
 -1
  410
                    $N-1 KELT
  6 6
                    $P-1 IBLN(i), i=1,4, IBOND
        6 4
              0
  1 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0 0
                    $Q-2 ISYS, NN, IFLG
  1 1
        0
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 5 = toroidal now unit 20
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  15.08829 20.32144 45. 90. 2.895449 34.199043 $M-2 PH1,PH2,THET1,
                                                 $
                                                      THET2, Ra, Rb
```

```
0. 0. 0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 6
        6
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
                    $Q-2 ISYS,NN,IFLG
  1
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0 0
           0
              0
C original unit 5 = toroidal now unit 21
                0
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  15.08829 20.32144 90. 135. 2.895449 34.199043 $M-2 PH1,PH2,THET1,
                                                 $
                                                       THET2, Ra, Rb
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
        0.0.0
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6
    6
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0
  1 1
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0 0
           0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 5 = toroidal now unit 22
                0
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  15.08829 20.32144 135. 180. 2.895449 34.199043 $M-2 PH1,PH2,THET1,
                                                    $
                                                         THET2, Ra, Rb
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
        0.0.0
  410
                    $N-1 KELT
              0
                    P-1 IBLN(i), i=1,4, IBOND
  6 4
           6
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0 0 0
     1
                    $Q-2 ISYS, NN, IFLG
  1
        0
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0 0
           0
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 6 = toroidal now unit 23
              0
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  20.26536 26.78145 0. 45. 5.259145 27.465466 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6 6
              0
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
        0
           0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 1
        0
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0 0
           0
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 6 = toroidal now unit 24
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  20.26536 26.78145 45. 90. 5.259145 27.465466 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
        0.0.0
  410
                    $N-1 KELT
                    $P-1 IBLN(i), i=1,4, IBOND
  6 6
        6 6 0
  1
        0 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
```

```
$Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
       0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 6 = toroidal now unit 25
                0
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
     1 0 0 0
  20.26536 26.78145 90. 135. 5.259145 27.465466 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                    $N-1 KELT
                    $P-1 IBLN(i), i=1,4, IBOND
  6
    6
           6 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
    0
        0
              0
  1
                    $Q-2 ISYS,NN,IFLG
 -460.
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
           0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 6 = toroidal now unit 26
           0 0
                 0
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  20.26536 26.78145 135. 180. 5.259145 27.465466 $M-2 PH1,PH2,THET1,
                                                   $
                                                        THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
  6 4
        6 6 0
  1 0
        0 0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
        0
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
           0
C original unit 7 = toroidal now unit 27
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
        0 0
  26.79548 32.96853 0. 45. 7.971097 21.436380 $M-2 PH1,PH2,THET1,
                                               $
                                                    THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
     0
  410
                    $N-1 KELT
  6 6
        6 4 0
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
        0 0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 1
        0
                    $Q-2 ISYS, NN, IFLG
 -460.
        5 3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
              0
C original unit 7 = toroidal now unit 28
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  26.79548 32.96853 45. 90. 7.971097 21.436380 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
                                                $
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
        0.0.0
  410
                    $N-1 KELT
                    P-1 IBLN(i), i=1,4, IBOND
              0
  6 6
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0 0
              0
  1
     1
       0
                    $Q-2 ISYS,NN,IFLG
 -460.
        5
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
C original unit 7 = toroidal now unit 29
```

```
8 1 0 0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  26.79548 32.96853 90. 135. 7.971097 21.436380 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
        0.0.0
  410
                    $N-1 KELT
                    $P-1 IBLN(i), i=1,4, IBOND
  6 6
              0
  1 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 1
                    $0-2 ISYS,NN,IFLG
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
C original unit 7 = toroidal now unit 30
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  26.79548 32.96853
                    135. 180. 7.971097 21.436380 $M-2 PH1,PH2,THET1,
                                                         THET2, Ra, Rb
                                                    Ś
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
  410
                    $N-1 KELT
  6 4
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
                0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
     1
                    $Q-2 ISYS,NN,IFLG
  1
        0
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
           0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
C original unit 8 = toroidal now unit 31
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  32.94721 39.85107 0. 45. 10.52211 16.758169 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
     0
  410
                    $N-1 KELT
  6 6
        6 4 0
                    P-1 IBLN(i), i=1,4, IBOND
  1 0
           0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 1
        0
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
              0
C original unit 8 = toroidal now unit 32
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  32.94721 39.85107 45. 90. 10.52211 16.758169 $M-2 PH1,PH2,THET1,T
                                                      THET2, Ra, Rb
 -1 0
        0.0.0
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                    $N-1 KELT
  6 6
              0
                    P-1 IBLN(i), i=1,4, IBOND
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
  1
     1
                    $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        0 0 0
                    $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 8 = toroidal now unit 33
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
                 0
  32.94721 39.85107 90. 135. 10.52211 16.758169 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
 -1 0 0.0.0 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
```

```
410
                     $N-1 KELT
                     P-1 IBLN(i), i=1,4, IBOND
  6 6
        6 6 0
  1 0
        0 0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                     $Q-2 ISYS,NN,IFLG
  1
 -460.
        5
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
              0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
     0
C original unit 8 = toroidal now unit 34
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  32.94721 39.85107 135. 180. 10.52211 16.758169 $M-2 PH1,PH2,THET1,
                                                    $
                                                         THET2, Ra, Rb
 -1
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
        0.0.0
  410
                     $N-1 KELT
                     P-1 IBLN(i), i=1,4, IBOND
  6 4
        6
           6 0
  1
    0
        0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                     $Q-2 ISYS,NN,IFLG
  1
     1
        0
 -460.
           3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
           0
              0
C original unit 9 = toroidal now unit 35
              0 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  39.77901 48.82777 0. 45. 13.07984 12.785950 $M-2 PH1,PH2,THET1,
                                                $
                                                     THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
     0
  410
                     $N-1 KELT
  6 6
                     P-1 IBLN(i), i=1,4, IBOND
        6 4
              0
           0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0
              0
  1
     1
        0
                     $Q-2 ISYS,NN,IFLG
 -460.
           3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        5
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
           0
              0
C original unit 9 = toroidal now unit 36
                0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
  39.77901 48.82777 45. 90. 13.07984 12.785950 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
  410
                     $N-1 KELT
                     P-1 IBLN(i), i=1,4, IBOND
  6 6
              0
        6
  1 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0
           0
              0
        0
                     $Q-2 ISYS, NN, IFLG
  1
     1
 -460.
        5
           3
              0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
           0
              0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 9 = toroidal now unit 37
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
                 0
  39.77901 48.82777 90. 135. 13.07984 12.785950 $M-2 PH1,PH2,THET1,
                                                  $
                                                       THET2, Ra, Rb
 -1 0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
  6
    6
           6
              0
                     P-1 IBLN(i), i=1,4, IBOND
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
        0
           0
  1
     1
        0
                     $Q-2 ISYS,NN,IFLG
```

```
0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0 0 0 0 0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 9 = toroidal now unit 38
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  39.77901 48.82777 135. 180. 13.07984 12.785950 $M-2 PH1,PH2,THET1,
                                                         THET2, Ra, Rb
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
        0.0.0
  410
                     $N-1 KELT
                     P-1 IBLN(i), i=1,4, IBOND
  6 4
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
  1
                     $Q-2 ISYS,NN,IFLG
 -460.
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0 0
C original unit 10 = toroidal now unit 39
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  48.74254 60.90592 0. 45. 15.55374 9.5117826 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
 -1
     0
        0.0.0
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
  6 6
                     P-1 IBLN(i), i=1,4, IBOND
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
     1
                     $Q-2 ISYS,NN,IFLG
  1
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
 -460.
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 10 = toroidal now unit 40
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  48.74254 60.90592 45. 90. 15.55374 9.5117826 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
 -1
     0
        0.0.0
                 1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
  6 6
        6
           6
              0
                     P-1 IBLN(i), i=1,4, IBOND
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1 0
              0
  1
     1
                     $Q-2 ISYS, NN, IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 10 = toroidal now unit 41
                    $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
     1
        0
              0
                 0
  48.74254 60.90592 90. 135. 15.55374 9.5117826 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
 -1 0
        0.0.0
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
                     $P-1 IBLN(i), i=1,4, IBOND
  6
    6
        6
           6
              0
        0 0 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
    0
  1
  1
     1
                     $Q-2 ISYS,NN,IFLG
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
        0 0 0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 10 = toroidal now unit 42
     1
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
```

```
48.74254 60.90592 135. 180. 15.55374 9.5117826 $M-2 PH1,PH2,THET1,
                                                     Ś
                                                          THET2, Ra, Rb
 -1
        0.0.0
                  1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
                     $N-1 KELT
  410
                     P-1 IBLN(i), i=1,4, IBOND
  6 4
        6
           6
              0
                  0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
              0
  1
     0
  1
     1
        0
                     $Q-2 ISYS,NN,IFLG
 -460.
                  0 0 $0-3 P,LT,LD,LI,LJ,LAX
           3
              0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
              0
C original unit 11 = toroidal now unit 43
                  0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  60.95361 75.15099 0. 45. 17.45365 7.3341379 $M-2 PH1,PH2,THET1,
                                                 $
                                                      THET2, Ra, Rb
        0.0.0
                  1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                     $N-1 KELT
  6
    6
              0
                     P-1 IBLN(i), i=1,4, IBOND
  1
     0
           0
              0
                  0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
        0
     1
        0
                     $Q-2 ISYS,NN,IFLG
  1
 -460.
        5
           3
              0
                  0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
              0
C original unit 11 = toroidal now unit 44
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
                  0
  60.95361 75.15099 45. 90. 17.45365 7.3341379 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
 -1
        0.0.0
                  1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
     0
  410
                     $N-1 KELT
                     P-1 IBLN(i), i=1,4, IBOND
  6 6
        6
           6
              0
                  0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
     0
        0
           0
              0
  1
     1
        0
                     $Q-2 ISYS,NN,IFLG
              0
 -460.
        5
           3
                  0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0
        0
           0
              0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 11 = toroidal now unit 45
                  0
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
              0
  60.95361 75.15099 0. 45. 17.45365 7.3341379 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
                                                 $
        0.0.0
                  1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1 0
  410
                     $N-1 KELT
              0
                     P-1 IBLN(i), i=1,4, IBOND
  6
    6
        6
           6
  1
     0
        0
           0
              0
                  0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                     $Q-2 ISYS, NN, IFLG
  1
     1
        0
 -460.
        5
              0
           3
                  0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
  0
     0
        0
           0
              0
C original unit 11 = toroidal now unit 46
                  0
                     $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  60.95361 75.15099 45. 90. 17.45365 7.3341379 $M-2 PH1,PH2,THET1,
                                                       THET2, Ra, Rb
 -1 0
                  1 0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
        0.0.0
  410
                     $N-1 KELT
```

```
6 4
                     $P-1 IBLN(i), i=1,4, IBOND
  1 0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
     1
                     $Q-2 ISYS, NN, IFLG
  1
 -460.
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 12 = toroidal now unit 47
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  75.3152 89.91051 0. 45. 18.40842 6.3415871 $M-2 PH1,PH2,THET1,
                                                    THET2, Ra, Rb
                                               $
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
        0.0.0
  410
                     $N-1 KELT
  6 6
                     P-1 IBLN(i), i=1,4, IBOND
                     $P-2 ITRA, IROT (conditions at pole)
 001 000
    0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
                    $Q-2 ISYS, NN, IFLG
  1
 -460.
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
           0
              0
C original unit 12 = toroidal now unit 48
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  75.3152 89.91051 45. 90. 18.40842 6.3415871 $M-2 PH1,PH2,THET1,
                                                     THET2, Ra, Rb
                                                $
        0.0.0
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
 -1
  410
                     $N-1 KELT
  6 6
                     P-1 IBLN(i), i=1,4, IBOND
              0
                     $P-2 ITRA, IROT (conditions at pole)
 001 000
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
    0
           0 0
                     $Q-2 ISYS, NN, IFLG
  1
     1
        0
 -460.
        5 3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
  0
           0
              0
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
C original unit 12 = toroidal now unit 49
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
  75.3152 89.91051 90. 135. 18.40842 6.3415871 $M-2 PH1,PH2,THET1,
                                                      THET2, Ra, Rb
 -1 0
       0.0.0
                     0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
              0
                     P-1 IBLN(i), i=1,4, IBOND
  6 6
        0
 001 000
                     $P-2 ITRA, IROT (conditions at pole)
    0
        0
           0
              0
                 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
  1
  1
     1
                     $Q-2 ISYS,NN,IFLG
 -460.
        5
           3 0
                 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
                     $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
           0
              0
C original unit 12 = toroidal now unit 50
                 0 $M-1 ISHELL, IGLOBE, NROWS, NCOLS, NLAYS, NFABS
     1
        0
           0
              0
  75.3152 89.91051
                    135. 180. 18.40842 6.3415871 $M-2 PH1, PH2, THET1,
                                                        THET2, Ra, Rb
 -1 0
        0.0.0
                 1
                    0 $M-5 IWALL, IWIMP, ZETA, ECZ, ILIN, IPLAS, IRAMP
  410
                     $N-1 KELT
  6 4
                     P-1 IBLN(i), i=1,4, IBOND
        0 6 0
```

```
$P-2 ITRA, IROT (conditions at pole)
001 000
1 0 0 0 0 0 $Q-1 NSYS, NICS, NAMS, NUSS, NHINGE, etc.
                $Q-2 ISYS,NN,IFLG
1 1 0
-460. 5 3 0 0 0 $Q-3 P,LT,LD,LI,LJ,LAX
0 0 0 0 0 $R-1 IPRD, IPRR, IPRE, IPRS, IPRP
```
