demagoque

Generated by Doxygen 1.7.3

Thu Sep 1 2011 18:44:02

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Chapter 1

Modules Index

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Chapter 2

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File Index

3.1 File List

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Chapter 4

Module Documentation

4.1 bmath Module Reference

Functions/Subroutines

- complex ∗16 zdet2d (cmat, n)
- logical isOdd (num)
- subroutine zGauss (n, a, l)
- subroutine zlin_int (xa, ya, n, x, y, ki)

4.1.1 Function/Subroutine Documentation

4.1.1.1 logical bmath::isOdd (integer,intent(in) *num*)

Definition at line 123 of file bmath.f90.

4.1.1.2 complex∗16 bmath::zdet2d (complex∗16,dimension(n,n),intent(in) *cmat,* integer,intent(in) *n*)

Definition at line 75 of file bmath.f90.

4.1.1.3 subroutine bmath::zGauss (integer,intent(in) *n,* complex∗16,dimension(n,n),intent(inout) *a,* integer,dimension(n),intent(out) *l*)

Definition at line 138 of file bmath.f90.

4.1.1.4 subroutine bmath::zlin_int (real∗8,dimension(n),intent(in) *xa,* complex∗16,dimension(n),intent(in) *ya,* integer,intent(in) *n,* real∗8,intent(in) *x,* complex∗16,intent(out) *y,* integer,intent(inout) *ki*)

Definition at line 199 of file bmath.f90.

4.2 bstring Module Reference

Functions/Subroutines

- subroutine findFirstWord (line, delimiters, istart, iend)
- character getFirstNonBlankChar (chararr)
- logical isComment (line)

4.2.1 Function/Subroutine Documentation

4.2.1.1 subroutine bstring::findFirstWord (character(len=∗),intent(in) *line,* character(len=∗),intent(in) *delimiters,* integer,intent(out) *istart,* integer,intent(out) *iend*)

Definition at line 28 of file bstring.f90.

4.2.1.2 character bstring::getFirstNonBlankChar (character(len=∗),intent(in) *chararr*)

Definition at line 73 of file bstring.f90.

4.2.1.3 logical bstring::isComment (character(len=∗) *line*)

Definition at line 89 of file bstring.f90.

4.3 class_ArrayList Module Reference

Data Types

- type dArrayList

Functions/Subroutines

- type(dArrayList) make_dArrayList (initLength)
- subroutine dArrayList_add (list, newValue)
- subroutine dArrayList_ensureCapacity (list, newCapacity)
- real ∗8 dArrayList_get (list, indix)
- subroutine dArrayList_set (list, indix, val)
- integer dArrayList_size (list)

Variables

- integer, parameter, private INITIAL_LENGTH = 10

4.3.1 Function/Subroutine Documentation

4.3.1.1 subroutine class_ArrayList::dArrayList_add (type (dArrayList),intent(inout) *list,* real∗8,intent(in) *newValue*)

Definition at line 57 of file class_ArrayList.f90.

4.3.1.2 subroutine class_ArrayList::dArrayList_ensureCapacity (type (dArrayList),intent(inout) *list,* integer,intent(in) *newCapacity*)

Definition at line 74 of file class_ArrayList.f90.

4.3.1.3 real∗8 class_ArrayList::dArrayList_get (type(dArrayList),intent(in) *list,* integer,intent(in) *indix*)

Definition at line 88 of file class_ArrayList.f90.

4.3.1.4 subroutine class_ArrayList::dArrayList_set (type(dArrayList),intent(inout) *list,* integer,intent(in) *indix,* real∗8,intent(in) *val*)

Definition at line 108 of file class_ArrayList.f90.

4.3.1.5 integer class_ArrayList::dArrayList_size (type(dArrayList),intent(in) *list*)

Definition at line 127 of file class_ArrayList.f90.

4.3.1.6 type (dArrayList) class_ArrayList::make_dArrayList (integer,intent(in),optional *initLength*)

Definition at line 38 of file class_ArrayList.f90.

4.3.2 Variable Documentation

4.3.2.1 integer,parameter,private class_ArrayList::INITIAL_LENGTH = 10

Definition at line 27 of file class_ArrayList.f90.

4.4 cons_laws Module Reference

Variables

- real(Long) ekin
- real(Long) ekerr

- real(Long) ek0
- real(Long) ek0err
- real(Long), dimension(:), allocatable potx
- real(Long) epot
- real(Long) eperr
- real(Long) ep0
- real(Long) ep0err
- real(Long) nnum

4.4.1 Variable Documentation

4.4.1.1 real (Long) cons_laws::ek0

Definition at line 7 of file cons_laws.f90.

4.4.1.2 real (Long) cons_laws::ek0err

Definition at line 8 of file cons_laws.f90.

4.4.1.3 real (Long) cons_laws::ekerr

Definition at line 6 of file cons_laws.f90.

4.4.1.4 real (Long) cons_laws::ekin

Definition at line 5 of file cons_laws.f90.

4.4.1.5 real (Long) cons_laws::ep0

Definition at line 13 of file cons_laws.f90.

4.4.1.6 real (Long) cons_laws::ep0err

Definition at line 14 of file cons_laws.f90.

4.4.1.7 real (Long) cons_laws::eperr

Definition at line 12 of file cons_laws.f90.

4.4.1.8 real (Long) cons_laws::epot

Definition at line 11 of file cons_laws.f90.

4.4.1.9 real (Long) cons_laws::nnum

Definition at line 16 of file cons_laws.f90.

4.4.1.10 real (Long),dimension(:),allocatable cons_laws::potx

Definition at line 10 of file cons_laws.f90.

4.5 format Module Reference

Variables

- integer dummy

4.5.1 Variable Documentation

4.5.1.1 integer format::dummy

Definition at line 26 of file format.f90.

4.6 formatting Module Reference

Variables

- character(len=20), parameter fr5 = "(5E17.9)"

4.6.1 Variable Documentation

4.6.1.1 character(len=20),parameter formatting::fr5 = "(5E17.9)"

Definition at line 4 of file formatting.f90.

4.7 input_parameters Module Reference

Variables

- integer potInitial
- integer potFinal
- real(Long) ea
- integer ntime
- REAL(Long) delt
- integer Nevt

- logical useImCutoff
- real(Long) cutoff_w0
- real(Long) cutoff_x0
- real(Long) cutoff_d0
- real(Long) initialSeparation
- logical initState_gaussianNuclear
- REAL(long) w
- REAL(long) whm
- INTEGER Nmax
- logical initState_cosine
- integer initState_cosine_number
- real(Long) initState_cosine_norm
- real(Long) initState_cosine_shift
- logical initState_plane
- integer initState_plane_number
- real(Long) initState_plane_norm
- real(Long) initState_plane_shift
- logical initState_kdelta
- real(Long) initState_kdelta_norm
- real(Long) initState_kdelta_x0
- integer splitOperatorMethod
- logical useImEvol
- integer Nimev
- logical useFlipClone
- logical useAdiabatic
- integer iadib
- integer Nad
- real(Long) tad
- real(Long) wtad

4.7.1 Variable Documentation

4.7.1.1 real (Long) input_parameters::cutoff_d0

Definition at line 19 of file input_parameters.f90.

4.7.1.2 real (Long) input_parameters::cutoff_w0

Definition at line 17 of file input_parameters.f90.

4.7.1.3 real (Long) input_parameters::cutoff_x0

Definition at line 18 of file input_parameters.f90.

4.7.1.4 REAL (Long) input_parameters::delt

Definition at line 12 of file input_parameters.f90.

4.7.1.5 real (Long) input_parameters::ea

Definition at line 8 of file input_parameters.f90.

4.7.1.6 integer input_parameters::iadib

Definition at line 55 of file input_parameters.f90.

4.7.1.7 real (Long) input_parameters::initialSeparation

Definition at line 21 of file input_parameters.f90.

4.7.1.8 logical input_parameters::initState_cosine

Definition at line 28 of file input_parameters.f90.

4.7.1.9 real (Long) input_parameters::initState_cosine_norm

Definition at line 30 of file input_parameters.f90.

4.7.1.10 integer input_parameters::initState_cosine_number

Definition at line 29 of file input_parameters.f90.

4.7.1.11 real (Long) input_parameters::initState_cosine_shift

Definition at line 31 of file input_parameters.f90.

4.7.1.12 logical input_parameters::initState_gaussianNuclear

Definition at line 23 of file input_parameters.f90.

4.7.1.13 logical input_parameters::initState_kdelta

Definition at line 38 of file input_parameters.f90.

4.7.1.14 real (Long) input_parameters::initState_kdelta_norm

Definition at line 39 of file input_parameters.f90.

4.7.1.15 real (Long) input_parameters::initState_kdelta_x0

Definition at line 40 of file input_parameters.f90.

4.7.1.16 logical input_parameters::initState_plane

Definition at line 33 of file input_parameters.f90.

4.7.1.17 real (Long) input_parameters::initState_plane_norm

Definition at line 35 of file input_parameters.f90.

4.7.1.18 integer input_parameters::initState_plane_number

Definition at line 34 of file input_parameters.f90.

4.7.1.19 real (Long) input_parameters::initState_plane_shift

Definition at line 36 of file input_parameters.f90.

4.7.1.20 integer input_parameters::Nad

Definition at line 56 of file input_parameters.f90.

4.7.1.21 integer input_parameters::Nevt

Definition at line 13 of file input_parameters.f90.

4.7.1.22 integer input_parameters::Nimev

Definition at line 50 of file input_parameters.f90.

4.7.1.23 INTEGER input_parameters::Nmax

Definition at line 26 of file input_parameters.f90.

4.7.1.24 integer input_parameters::ntime

Definition at line 10 of file input_parameters.f90.

4.7.1.25 integer input_parameters::potFinal

Definition at line 6 of file input_parameters.f90.

4.7.1.26 integer input_parameters::potInitial

Definition at line 5 of file input_parameters.f90.

4.7.1.27 integer input_parameters::splitOperatorMethod

Definition at line 47 of file input_parameters.f90.

4.7.1.28 real (Long) input_parameters::tad

Definition at line 57 of file input_parameters.f90.

4.7.1.29 logical input_parameters::useAdiabatic

Definition at line 54 of file input_parameters.f90.

4.7.1.30 logical input_parameters::useFlipClone

Definition at line 52 of file input_parameters.f90.

4.7.1.31 logical input_parameters::useImCutoff

Definition at line 16 of file input_parameters.f90.

4.7.1.32 logical input_parameters::useImEvol

Definition at line 49 of file input_parameters.f90.

4.7.1.33 REAL (long) input_parameters::w

Definition at line 24 of file input_parameters.f90.

4.7.1.34 REAL (long) input_parameters::whm

Definition at line 25 of file input_parameters.f90.

4.7.1.35 real (Long) input_parameters::wtad

Definition at line 57 of file input_parameters.f90.

4.8 lib_fftpack Module Reference

Functions/Subroutines

- subroutine FT (L, M, xre, xim)
- subroutine IFT (L, M, xre, xim)
- subroutine FFT2C (L, M, xre, xim, fb)
- subroutine FFT1 (L, M, xre, xim, fb)
- subroutine fft_initial (N)

Variables

- INTEGER, dimension(2) lensav
- INTEGER, dimension(2) lenwrk
- REAL(Long), dimension(:,:), allocatable work
- REAL(Long), dimension(:,:), allocatable wsavec
- REAL(Long), dimension(:,:), allocatable wsaves

4.8.1 Function/Subroutine Documentation

4.8.1.1 subroutine lib_fftpack::FFT1 (integer *L,* integer *M,* real (Long),dimension(l,m) *xre,* real (Long),dimension(l,m) *xim,* integer *fb*)

Definition at line 157 of file lib_fftpack.f90.

4.8.1.2 subroutine lib_fftpack::FFT2C (integer *L,* integer *M,* real (Long),dimension(l,m) *xre,* real (Long),dimension(l,m) *xim,* integer *fb*)

Definition at line 105 of file lib_fftpack.f90.

4.8.1.3 subroutine lib_fftpack::fft_initial (integer,dimension(2) *N*)

Definition at line 234 of file lib_fftpack.f90.

4.8.1.4 subroutine lib_fftpack::FT (integer *L,* integer *M,* real (Long),dimension(l,m) *xre,* real (Long),dimension(l,m) *xim*)

Definition at line 45 of file lib_fftpack.f90.

4.8.1.5 subroutine lib_fftpack::IFT (integer *L,* integer *M,* real (Long),dimension(l,m) *xre,* real (Long),dimension(l,m) *xim*)

Definition at line 75 of file lib_fftpack.f90.

4.8.2 Variable Documentation

4.8.2.1 INTEGER,dimension(2) lib_fftpack::lensav

Definition at line 28 of file lib_fftpack.f90.

4.8.2.2 INTEGER,dimension(2) lib_fftpack::lenwrk

Definition at line 28 of file lib_fftpack.f90.

4.8.2.3 REAL (Long),dimension(:,:),allocatable lib_fftpack::work

Definition at line 33 of file lib_fftpack.f90.

4.8.2.4 REAL (Long),dimension(:,:),allocatable lib_fftpack::wsavec

Definition at line 36 of file lib_fftpack.f90.

4.8.2.5 REAL (Long),dimension(:,:),allocatable lib_fftpack::wsaves

Definition at line 39 of file lib_fftpack.f90.

4.9 lib_fftw Module Reference

Functions/Subroutines

- subroutine ft_z2z_1d (arrayin, arrayout, num)
- subroutine ift_z2z_1d (arrayin, arrayout, num)
- subroutine ft_re_1d (arrayin, arrayout, num)
- subroutine ft_ro_1d (arrayin, arrayout, num)

Variables

- logical ft_re_1d_init

4.9.1 Function/Subroutine Documentation

4.9.1.1 subroutine lib_fftw::ft_re_1d (real∗8,dimension(0:num-1) *arrayin,* real∗8,dimension(0:num-1) *arrayout,* integer,intent(in) *num*)

Definition at line 75 of file lib_fftw.f90.

4.9.1.2 subroutine lib_fftw::ft_ro_1d (real∗8,dimension(0:num-1) *arrayin,* real∗8,dimension(0:num-1) *arrayout,* integer,intent(in) *num*)

Definition at line 92 of file lib_fftw.f90.

4.9.1.3 subroutine lib_fftw::ft_z2z_1d (complex∗16,dimension(0:num-1) *arrayin,* complex∗16,dimension(0:num-1) *arrayout,* integer,intent(in) *num*)

Definition at line 32 of file lib_fftw.f90.

4.9.1.4 subroutine lib_fftw::ift_z2z_1d (complex∗16,dimension(0:num-1) *arrayin,* complex∗16,dimension(0:num-1) *arrayout,* integer,intent(in) *num*)

Definition at line 56 of file lib_fftw.f90.

4.9.2 Variable Documentation

4.9.2.1 logical lib_fftw::ft_re_1d_init

Definition at line 28 of file lib_fftw.f90.

4.10 lib_lapack Module Reference

Functions/Subroutines

- subroutine getEigenSq (mat, num, evals, evecs)
- subroutine getInvMat (mat, num, matinv)

4.10.1 Function/Subroutine Documentation

4.10.1.1 subroutine lib_lapack::getEigenSq (complex∗16,dimension(0:num-1,0:num-1),intent(inout) *mat,* integer,intent(in) *num,* complex∗16,dimension(0:num-1),intent(out) *evals,* complex∗16,dimension(0:num-1,0:num-1),intent(inout) *evecs*)

Definition at line 27 of file lib_lapack.f90.

4.10.1.2 subroutine lib_lapack::getInvMat (complex∗16,dimension(0:num-1,0:num-1),intent(in) *mat,* integer,intent(in) *num,* complex∗16,dimension(0:num-1,0:num-1),intent(out) *matinv*)

Definition at line 74 of file lib_lapack.f90.

4.11 mesh Module Reference

Functions/Subroutines

- integer getNearestIndexX (xx)
- subroutine initializeMesh
- complex ∗16 getDen (i1, i2)
- complex ∗16 getDenDiagK (ika)
- complex ∗16 getDenX (ixa, ixr)
- subroutine mesh_reflectLR ()
- subroutine mesh_setReflectedLR (reflect)
- subroutine setDenX (ixa, ixr, value)
- complex ∗16 getDenW (ixa, ika)
- subroutine setDenW (ixa, ika, this_value)
- complex ∗16 getDenK (ikr, ika)
- subroutine setDenK (ikr, ika, val)
- subroutine getDenEigens (evals, evecs)
- subroutine setState (state)
- subroutine transform_x_to_wigner_trig
- subroutine transform_x_to_wigner_dumb
- subroutine transform_x_to_w_dumb_kshift
- subroutine transform_w_to_x_norepeat_fft
- subroutine transform_w_to_x_norepeat_fft_bad
- subroutine transform_wigner_to_x_trig
- subroutine transform_wigner_to_x_dumb
- subroutine transform_k_to_wigner_trig
- subroutine transform_wigner_to_k_trig
- subroutine transform_wigner_to_k_dumb
- subroutine transform_wigner_to_k_fft_exp
- subroutine transform_k_to_wigner_dumb
- subroutine transform_k_to_wigner_fft_exp
- subroutine transform_x_to_k_norepeat
- subroutine transform_x_to_w_norepeat
- subroutine transform_x_to_w_norepeat_fft
- subroutine transform_w_to_k_norepeat

Variables

- REAL ∗8 xLa
- REAL ∗8 xLr
- real ∗8 kLa
- INTEGER Nxa
- INTEGER Nxr
- INTEGER Nxa2
- INTEGER Nxr2
- INTEGER Nka

- integer Nkr
- INTEGER Nkr2
- INTEGER Nka2
- integer Nxam
- integer Nxax
- integer Nxrm
- integer Nxrx
- integer Nkam
- integer Nkax
- integer Nkrm
- integer Nkrx
- REAL ∗8 delxa
- REAL ∗8 delxr
- REAL ∗8 delka
- REAL ∗8 delkr
- real(Long) norm_thy
- REAL ∗8 facd
- REAL ∗8, dimension(:), allocatable xa
- REAL ∗8, dimension(:), allocatable ka
- REAL ∗8, dimension(:), allocatable xr
- REAL ∗8, dimension(:), allocatable kr
- REAL ∗8, dimension(:,:), allocatable den_re
- REAL ∗8, dimension(:,:), allocatable den_im
- complex ∗16, dimension(:,:), allocatable denmat
- complex ∗16, dimension(:,:), allocatable denmat2
- integer denState
- integer, parameter SPACE = 0
- integer, parameter WIGNER = 1
- integer, parameter MOMENTUM = 2
- logical isReflectedLR
- INTEGER, allocatable iNkr2
- INTEGER, allocatable iNka2
- real ∗8, allocatable potDiag
- real ∗8 maxxim

4.11.1 Function/Subroutine Documentation

4.11.1.1 complex∗16 mesh::getDen (integer,intent(in) *i1,* integer,intent(in) *i2*)

Definition at line 176 of file mesh.f90.

4.11.1.2 complex∗16 mesh::getDenDiagK (integer,intent(in) *ika*)

Definition at line 204 of file mesh.f90.

4.11.1.3 subroutine mesh::getDenEigens (complex∗16,dimension(0:nxa-1),intent(out) *evals,* complex∗16,dimension(-nxa2:nxa2-1,-nxr2:nxr2-1),intent(out) *evecs*)

Definition at line 345 of file mesh.f90.

4.11.1.4 complex∗16 mesh::getDenK (integer,intent(in) *ikr,* integer,intent(in) *ika*)

Definition at line 319 of file mesh.f90.

4.11.1.5 complex∗16 mesh::getDenW (integer,intent(in) *ixa,* integer,intent(in) *ika*)

Definition at line 290 of file mesh.f90.

4.11.1.6 complex∗16 mesh::getDenX (integer,intent(in) *ixa,* integer,intent(in) *ixr*)

Definition at line 216 of file mesh.f90.

4.11.1.7 integer mesh::getNearestIndexX (real (Long),intent(in) *xx*)

Definition at line 82 of file mesh.f90.

4.11.1.8 subroutine mesh::initializeMesh ( )

Definition at line 106 of file mesh.f90.

4.11.1.9 subroutine mesh::mesh_reflectLR ( )

Definition at line 228 of file mesh.f90.

4.11.1.10 subroutine mesh::mesh_setReflectedLR (logical,intent(in) *reflect*)

Definition at line 264 of file mesh.f90.

4.11.1.11 subroutine mesh::setDenK (integer,intent(in) *ikr,* integer,intent(in) *ika,* complex∗16,intent(in) *val*)

Definition at line 331 of file mesh.f90.

4.11.1.12 subroutine mesh::setDenW (integer,intent(in) *ixa,* integer,intent(in) *ika,* complex∗16,intent(in) *this_value*)

Definition at line 307 of file mesh.f90.

4.11.1.13 subroutine mesh::setDenX (integer,intent(in) *ixa,* integer,intent(in) *ixr,* complex∗16,intent(in) *value*)

Definition at line 277 of file mesh.f90.

4.11.1.14 subroutine mesh::setState (integer,intent(in) *state*)

Definition at line 376 of file mesh.f90.

4.11.1.15 subroutine mesh::transform_k_to_wigner_dumb ( )

Definition at line 961 of file mesh.f90.

4.11.1.16 subroutine mesh::transform_k_to_wigner_fft_exp ( )

Definition at line 1001 of file mesh.f90.

4.11.1.17 subroutine mesh::transform_k_to_wigner_trig ( )

Definition at line 800 of file mesh.f90.

4.11.1.18 subroutine mesh::transform_w_to_k_norepeat ( )

Definition at line 1313 of file mesh.f90.

4.11.1.19 subroutine mesh::transform_w_to_x_norepeat_fft ( )

Definition at line 603 of file mesh.f90.

4.11.1.20 subroutine mesh::transform_w_to_x_norepeat_fft_bad ( )

Definition at line 648 of file mesh.f90.

4.11.1.21 subroutine mesh::transform_wigner_to_k_dumb ( )

Definition at line 874 of file mesh.f90.

4.11.1.22 subroutine mesh::transform_wigner_to_k_fft_exp ( )

Definition at line 919 of file mesh.f90.

4.11.1.23 subroutine mesh::transform_wigner_to_k_trig ( )

Definition at line 850 of file mesh.f90.

4.11.1.24 subroutine mesh::transform_wigner_to_x_dumb ( )

Definition at line 762 of file mesh.f90.

4.11.1.25 subroutine mesh::transform_wigner_to_x_trig ( )

Definition at line 736 of file mesh.f90.

4.11.1.26 subroutine mesh::transform_x_to_k_norepeat ( )

Definition at line 1042 of file mesh.f90.

4.11.1.27 subroutine mesh::transform_x_to_w_dumb_kshift ( )

Definition at line 567 of file mesh.f90.

4.11.1.28 subroutine mesh::transform_x_to_w_norepeat ( )

Definition at line 1131 of file mesh.f90.

4.11.1.29 subroutine mesh::transform_x_to_w_norepeat_fft ( )

Definition at line 1210 of file mesh.f90.

4.11.1.30 subroutine mesh::transform_x_to_wigner_dumb ( )

Definition at line 503 of file mesh.f90.

4.11.1.31 subroutine mesh::transform_x_to_wigner_trig ( )

Definition at line 453 of file mesh.f90.

4.11.2 Variable Documentation

4.11.2.1 REAL∗8 mesh::delka

Definition at line 50 of file mesh.f90.

4.11.2.2 REAL∗8 mesh::delkr

Definition at line 51 of file mesh.f90.

4.11.2.3 REAL∗8 mesh::delxa

Definition at line 48 of file mesh.f90.

4.11.2.4 REAL∗8 mesh::delxr

Definition at line 49 of file mesh.f90.

4.11.2.5 REAL∗8,dimension(:,:),allocatable mesh::den_im

Definition at line 60 of file mesh.f90.

4.11.2.6 REAL∗8,dimension(:,:),allocatable mesh::den_re

Definition at line 60 of file mesh.f90.

4.11.2.7 complex∗16,dimension(:,:),allocatable mesh::denmat

Definition at line 61 of file mesh.f90.

4.11.2.8 complex∗16,dimension(:,:),allocatable mesh::denmat2

Definition at line 62 of file mesh.f90.

4.11.2.9 integer mesh::denState

Definition at line 63 of file mesh.f90.

4.11.2.10 REAL∗8 mesh::facd

Definition at line 56 of file mesh.f90.

4.11.2.11 INTEGER,allocatable mesh::iNka2

Definition at line 72 of file mesh.f90.

4.11.2.12 INTEGER,allocatable mesh::iNkr2

Definition at line 72 of file mesh.f90.

4.11.2.13 logical mesh::isReflectedLR

Definition at line 69 of file mesh.f90.

4.11.2.14 REAL∗8,dimension(:),allocatable mesh::ka

Definition at line 57 of file mesh.f90.

4.11.2.15 real∗8 mesh::kLa

Definition at line 29 of file mesh.f90.

4.11.2.16 REAL∗8,dimension(:),allocatable mesh::kr

Definition at line 57 of file mesh.f90.

4.11.2.17 real∗8 mesh::maxxim

Definition at line 76 of file mesh.f90.

4.11.2.18 integer,parameter mesh::MOMENTUM = 2

Definition at line 67 of file mesh.f90.

4.11.2.19 INTEGER mesh::Nka

Definition at line 34 of file mesh.f90.

4.11.2.20 INTEGER mesh::Nka2

Definition at line 37 of file mesh.f90.

4.11.2.21 integer mesh::Nkam

Definition at line 43 of file mesh.f90.

4.11.2.22 integer mesh::Nkax

Definition at line 44 of file mesh.f90.

4.11.2.23 integer mesh::Nkr

Definition at line 35 of file mesh.f90.

4.11.2.24 INTEGER mesh::Nkr2

Definition at line 36 of file mesh.f90.

4.11.2.25 integer mesh::Nkrm

Definition at line 45 of file mesh.f90.

4.11.2.26 integer mesh::Nkrx

Definition at line 46 of file mesh.f90.

4.11.2.27 real (Long) mesh::norm_thy

Definition at line 53 of file mesh.f90.

4.11.2.28 INTEGER mesh::Nxa

Definition at line 30 of file mesh.f90.

4.11.2.29 INTEGER mesh::Nxa2

Definition at line 32 of file mesh.f90.

4.11.2.30 integer mesh::Nxam

Definition at line 39 of file mesh.f90.

4.11.2.31 integer mesh::Nxax

Definition at line 40 of file mesh.f90.

4.11.2.32 INTEGER mesh::Nxr

Definition at line 31 of file mesh.f90.

4.11.2.33 INTEGER mesh::Nxr2

Definition at line 33 of file mesh.f90.

4.11.2.34 integer mesh::Nxrm

Definition at line 41 of file mesh.f90.

4.11.2.35 integer mesh::Nxrx

Definition at line 42 of file mesh.f90.

4.11.2.36 real∗8,allocatable mesh::potDiag

Definition at line 74 of file mesh.f90.

4.11.2.37 integer,parameter mesh::SPACE = 0

Definition at line 65 of file mesh.f90.

4.11.2.38 integer,parameter mesh::WIGNER = 1

Definition at line 66 of file mesh.f90.

4.11.2.39 REAL∗8,dimension(:),allocatable mesh::xa

Definition at line 57 of file mesh.f90.

4.11.2.40 REAL∗8 mesh::xLa

Definition at line 27 of file mesh.f90.

4.11.2.41 REAL∗8 mesh::xLr

Definition at line 28 of file mesh.f90.

4.11.2.42 REAL∗8,dimension(:),allocatable mesh::xr

Definition at line 57 of file mesh.f90.

4.12 phys_cons Module Reference

Variables

- complex ∗16, parameter imagi = cmplx(0.d0, 1.d0, 8)
- REAL(long), parameter pi = 4d0∗atan(1d0)
- real(long), parameter invpi = 1d0/pi
- real(long), parameter invsqrt2pi = 1d0/sqrt(2d0∗pi)
- REAL(long), parameter rho0 = 0.16d0
- REAL(long), parameter hbc = 197.326963d0

- REAL(long), parameter hbc2 = hbc∗hbc
- REAL(long), parameter mp = 938.272013d0
- REAL(long), parameter mn = 939.565560d0
- REAL(long), parameter m0 = (mp+mn)∗0.5d0
- REAL(Long), parameter a0 = 931.494028d0
- REAL(long), parameter hm = hbc∗hbc/(2.d0∗m0)
- REAL(long), parameter deg = 4.d0

4.12.1 Variable Documentation

4.12.1.1 REAL (Long),parameter phys_cons::a0 = 931.494028d0

Definition at line 19 of file phys_cons.f90.

4.12.1.2 REAL (long),parameter phys_cons::deg = 4.d0

Definition at line 22 of file phys_cons.f90.

4.12.1.3 REAL (long),parameter phys_cons::hbc = 197.326963d0

Definition at line 14 of file phys_cons.f90.

4.12.1.4 REAL (long),parameter phys_cons::hbc2 = hbc∗hbc

Definition at line 15 of file phys_cons.f90.

4.12.1.5 REAL (long),parameter phys_cons::hm = hbc∗hbc/(2.d0∗m0)

Definition at line 20 of file phys_cons.f90.

4.12.1.6 complex∗16,parameter phys_cons::imagi = cmplx(0.d0, 1.d0, 8)

Definition at line 6 of file phys_cons.f90.

4.12.1.7 real (long),parameter phys_cons::invpi = 1d0/pi

Definition at line 10 of file phys_cons.f90.

4.12.1.8 real (long),parameter phys_cons::invsqrt2pi = 1d0/sqrt(2d0∗pi)

Definition at line 11 of file phys_cons.f90.

4.12.1.9 REAL (long),parameter phys_cons::m0 = (mp+mn)∗0.5d0

Definition at line 18 of file phys_cons.f90.

4.12.1.10 REAL (long),parameter phys_cons::mn = 939.565560d0

Definition at line 17 of file phys_cons.f90.

4.12.1.11 REAL (long),parameter phys_cons::mp = 938.272013d0

Definition at line 16 of file phys_cons.f90.

4.12.1.12 REAL (long),parameter phys_cons::pi = 4d0∗atan(1d0)

Definition at line 9 of file phys_cons.f90.

4.12.1.13 REAL (long),parameter phys_cons::rho0 = 0.16d0

Definition at line 13 of file phys_cons.f90.

4.13 prec_def Module Reference

Variables

- INTEGER, parameter long = 8
- integer, parameter stderr = 102

4.13.1 Variable Documentation

4.13.1.1 INTEGER,parameter prec_def::long = 8

Definition at line 5 of file prec_def.f90.

4.13.1.2 integer,parameter prec_def::stderr = 102

Definition at line 8 of file prec_def.f90.

4.14 skyrme_params Module Reference

Variables

- real ∗8, parameter t0 = -2150.1d0

- real ∗8, parameter t3 = 14562d0
- real ∗8, parameter sig = 0.257d0

4.14.1 Variable Documentation

4.14.1.1 real∗8,parameter skyrme_params::sig = 0.257d0

Definition at line 13 of file skyrme_params.f90.

4.14.1.2 real∗8,parameter skyrme_params::t0 = -2150.1d0

Definition at line 11 of file skyrme_params.f90.

4.14.1.3 real∗8,parameter skyrme_params::t3 = 14562d0

Definition at line 12 of file skyrme_params.f90.

4.15 time Module Reference

Variables

- INTEGER it
- REAL ∗8 t
- INTEGER Nt
- logical firstOutput

4.15.1 Variable Documentation

4.15.1.1 logical time::firstOutput

Definition at line 32 of file time.f90.

4.15.1.2 INTEGER time::it

Definition at line 27 of file time.f90.

4.15.1.3 INTEGER time::Nt

Definition at line 29 of file time.f90.

4.15.1.4 REAL∗8 time::t

Definition at line 28 of file time.f90.

Chapter 5

Data Type Documentation

5.1 class_ArrayList::dArrayList Type Reference

Public Attributes

- integer capacity
- integer size
- real ∗8, dimension(:), allocatable values

5.1.1 Detailed Description

Definition at line 29 of file class_ArrayList.f90.

5.1.2 Member Data Documentation

5.1.2.1 integer class_ArrayList::dArrayList::capacity

Definition at line 31 of file class_ArrayList.f90.

5.1.2.2 integer class_ArrayList::dArrayList::size

Definition at line 32 of file class_ArrayList.f90.

5.1.2.3 real∗8,dimension(:),allocatable class_ArrayList::dArrayList::values

Definition at line 33 of file class_ArrayList.f90.

The documentation for this type was generated from the following file:

- /home/bob/proj/DEMAGOQUE/work2/trunk/src/class_ArrayList.f90

Chapter 6

File Documentation

6.1 /home/bob/proj/DEMAGOQUE/work2/trunk/src/bmath.f90 File Reference

Modules

- module bmath

Functions/Subroutines

- complex ∗16 bmath::zdet2d (cmat, n)
- logical bmath::isOdd (num)
- subroutine bmath::zGauss (n, a, l)
- subroutine bmath::zlin_int (xa, ya, n, x, y, ki)

6.2 /home/bob/proj/DEMAGOQUE/work2/trunk/src/bstring.f90 File Reference

Modules

- module bstring

Functions/Subroutines

- subroutine bstring::findFirstWord (line, delimiters, istart, iend)
- character bstring::getFirstNonBlankChar (chararr)
- logical bstring::isComment (line)
- subroutine test_bstring
- subroutine test_findFirstWord

6.2.1 Function Documentation

6.2.1.1 subroutine test_bstring ( )

Definition at line 112 of file bstring.f90.

6.2.1.2 subroutine test_findFirstWord ( )

Definition at line 122 of file bstring.f90.

6.3 /home/bob/proj/DEMAGOQUE/work2/trunk/src/class_ArrayList.f90 File Reference

Data Types

- type class_ArrayList::dArrayList

Modules

- module class_ArrayList

Functions/Subroutines

- type(dArrayList) class_ArrayList::make_dArrayList (initLength)
- subroutine class_ArrayList::dArrayList_add (list, newValue)
- subroutine class_ArrayList::dArrayList_ensureCapacity (list, newCapacity)
- real ∗8 class_ArrayList::dArrayList_get (list, indix)
- subroutine class_ArrayList::dArrayList_set (list, indix, val)
- integer class_ArrayList::dArrayList_size (list)

Variables

- integer, parameter, private class_ArrayList::INITIAL_LENGTH = 10

6.4 /home/bob/proj/DEMAGOQUE/work2/trunk/src/compareAB.f90 File Reference

Functions/Subroutines

- program compareAB

6.4.1 Function Documentation

6.4.1.1 program compareAB ( )

Definition at line 23 of file compareAB.f90.

6.5 /home/bob/proj/DEMAGOQUE/work2/trunk/src/cons_laws.f90 File Reference

Modules

- module cons_laws

Variables

- real(Long) cons_laws::ekin
- real(Long) cons_laws::ekerr
- real(Long) cons_laws::ek0
- real(Long) cons_laws::ek0err
- real(Long), dimension(:), allocatable cons_laws::potx
- real(Long) cons_laws::epot
- real(Long) cons_laws::eperr
- real(Long) cons_laws::ep0
- real(Long) cons_laws::ep0err
- real(Long) cons_laws::nnum

6.6 /home/bob/proj/DEMAGOQUE/work2/trunk/src/dmtdhf.f90 File Reference

Functions/Subroutines

- program dmtdhf
- subroutine getStdIn

6.6.1 Function Documentation

6.6.1.1 program dmtdhf ( )

Definition at line 1 of file dmtdhf.f90.

6.6.1.2 subroutine getStdIn ( )

Definition at line 310 of file dmtdhf.f90.

6.7 /home/bob/proj/DEMAGOQUE/work2/trunk/src/ener.f90 File Reference

Functions/Subroutines

- subroutine ener_k
- subroutine ener_x

6.7.1 Function Documentation

6.7.1.1 subroutine ener_k ( )

Definition at line 23 of file ener.f90.

6.7.1.2 subroutine ener_x ( )

Definition at line 68 of file ener.f90.

6.8 /home/bob/proj/DEMAGOQUE/work2/trunk/src/fft_nag.f90 File Reference

Functions/Subroutines

- subroutine FT (Nx, Ny, xre, xim)
- subroutine IFT (Nx, Ny, xre, xim)

6.8.1 Function Documentation

6.8.1.1 subroutine FT (integer *Nx,* integer *Ny,* real (Long),dimension(nx,ny) *xre,* real (Long),dimension(nx,ny) *xim*)

Definition at line 8 of file fft_nag.f90.

6.8.1.2 subroutine IFT (integer *Nx,* integer *Ny,* real (Long),dimension(nx,ny) *xre,* real (Long),dimension(nx,ny) *xim*)

Definition at line 62 of file fft_nag.f90.

6.9 /home/bob/proj/DEMAGOQUE/work2/trunk/src/format.f90 File Reference

Modules

- module format

Variables

- integer format::dummy

6.10 /home/bob/proj/DEMAGOQUE/work2/trunk/src/formatting.f90 File Reference

Modules

- module formatting

Variables

- character(len=20), parameter formatting::fr5 = "(5E17.9)"

6.11 /home/bob/proj/DEMAGOQUE/work2/trunk/src/initial.f90 File Reference

Functions/Subroutines

- subroutine calcInitial
- subroutine initialState
- subroutine copyExtra
- subroutine boost
- subroutine displaceLeft (nx)
- subroutine displaceRight (nx)
- subroutine flipclone
- subroutine getX12 (ixa, ixr, x1, x2)
- subroutine getrX12 (xa1, xr1, x1, x2)
- subroutine getK12 (ika, ikr, k1, k2)

6.11.1 Function Documentation

6.11.1.1 subroutine boost ( )

Definition at line 186 of file initial.f90.

6.11.1.2 subroutine calcInitial ( )

Definition at line 25 of file initial.f90.

6.11.1.3 subroutine copyExtra ( )

Definition at line 141 of file initial.f90.

6.11.1.4 subroutine displaceLeft (integer,intent(in) *nx*)

Definition at line 254 of file initial.f90.

6.11.1.5 subroutine displaceRight (integer,intent(in) *nx*)

Definition at line 284 of file initial.f90.

6.11.1.6 subroutine flipclone ( )

Definition at line 316 of file initial.f90.

6.11.1.7 subroutine getK12 (integer,intent(in) *ika,* integer,intent(in) *ikr,* real∗8,intent(out) *k1,* real∗8,intent(out) *k2*)

Definition at line 443 of file initial.f90.

6.11.1.8 subroutine getrX12 (real∗8,intent(in) *xa1,* real∗8,intent(in) *xr1,* real∗8,intent(out) *x1,* real∗8,intent(out) *x2*)

Definition at line 422 of file initial.f90.

6.11.1.9 subroutine getX12 (integer,intent(in) *ixa,* integer,intent(in) *ixr,* real (Long),intent(out) *x1,* real (Long),intent(out) *x2*)

Definition at line 392 of file initial.f90.

6.11.1.10 subroutine initialState ( )

Definition at line 50 of file initial.f90.

6.12 /home/bob/proj/DEMAGOQUE/work2/trunk/src/input_parameters.f90 File Reference

Modules

- module input_parameters

Variables

- integer input_parameters::potInitial
- integer input_parameters::potFinal
- real(Long) input_parameters::ea
- integer input_parameters::ntime
- REAL(Long) input_parameters::delt
- integer input_parameters::Nevt
- logical input_parameters::useImCutoff
- real(Long) input_parameters::cutoff_w0
- real(Long) input_parameters::cutoff_x0
- real(Long) input_parameters::cutoff_d0
- real(Long) input_parameters::initialSeparation
- logical input_parameters::initState_gaussianNuclear
- REAL(long) input_parameters::w
- REAL(long) input_parameters::whm
- INTEGER input_parameters::Nmax
- logical input_parameters::initState_cosine
- integer input_parameters::initState_cosine_number
- real(Long) input_parameters::initState_cosine_norm
- real(Long) input_parameters::initState_cosine_shift
- logical input_parameters::initState_plane
- integer input_parameters::initState_plane_number
- real(Long) input_parameters::initState_plane_norm
- real(Long) input_parameters::initState_plane_shift
- logical input_parameters::initState_kdelta
- real(Long) input_parameters::initState_kdelta_norm
- real(Long) input_parameters::initState_kdelta_x0
- integer input_parameters::splitOperatorMethod
- logical input_parameters::useImEvol
- integer input_parameters::Nimev
- logical input_parameters::useFlipClone
- logical input_parameters::useAdiabatic
- integer input_parameters::iadib
- integer input_parameters::Nad
- real(Long) input_parameters::tad
- real(Long) input_parameters::wtad

6.13 /home/bob/proj/DEMAGOQUE/work2/trunk/src/integra.f90 File Reference

Functions/Subroutines

- subroutine dint_simp1 (n, f, h, sum, err)

6.13.1 Function Documentation

6.13.1.1 subroutine dint_simp1 (INTEGER,intent(in) *n,* REAL (Long),dimension(n),intent(in) *f,* REAL (Long),intent(in) *h,* REAL (Long),intent(out) *sum,* REAL (Long),intent(out) *err*)

Definition at line 1 of file integra.f90.

6.14 /home/bob/proj/DEMAGOQUE/work2/trunk/src/interp.f File Reference

Functions/Subroutines

- subroutine SPLINE (x, y, n, yp1, ypn, y2)
- subroutine SPLINT (xa, ya, y2a, n, x, y)
- subroutine SPLIN2 (xa, ya, y2a, n, x, y, ki)
- subroutine SPINT (xa, ya, na, xb, yb, nb)
- subroutine LIN_INT (xa, ya, n, x, y, ki)
- subroutine LININT (xa, ya, na, xb, yb, nb)
- subroutine LIN_INT2D (xa, nx, ya, ny, za, x, y, z, kx, ky)
- subroutine SPLINE2D (nx, ya, ny, za, z2a)
- subroutine SPLINT2D (xa, nx, ya, ny, za, z2a, xf, yf, zf)
- subroutine POL_INT (xa, ya, n, Npol, x, y, dy, nchng, ki)
- subroutine POLINT (xa, ya, n, x, y, dy)

6.14.1 Function Documentation

6.14.1.1 subroutine LIN_INT (DOUBLE PRECISION,dimension(n) *xa,* DOUBLE PRECISION,dimension(n) *ya,* INTEGER *n,* DOUBLE PRECISION *x,* DOUBLE PRECISION *y,* INTEGER *ki*)

Definition at line 161 of file interp.f.

6.14.1.2 subroutine LIN_INT2D (DOUBLE PRECISION,dimension(nx) *xa,* INTEGER *nx,* DOUBLE PRECISION,dimension(ny) *ya,* INTEGER *ny,* DOUBLE PRECISION,dimension(nx,ny) *za,* DOUBLE PRECISION *x,* DOUBLE PRECISION *y,* DOUBLE PRECISION *z,* INTEGER *kx,* INTEGER *ky*)

Definition at line 231 of file interp.f.

6.14.1.3 subroutine LININT (DOUBLE PRECISION,dimension(na) *xa,* DOUBLE PRECISION,dimension(na) *ya,* INTEGER *na,* DOUBLE PRECISION,dimension(nb) *xb,* DOUBLE PRECISION,dimension(nb) *yb,* INTEGER *nb*)

Definition at line 214 of file interp.f.

6.14.1.4 subroutine POL_INT (DOUBLE PRECISION,dimension(n) *xa,* DOUBLE PRECISION,dimension(n) *ya,* INTEGER *n,* INTEGER *Npol,* DOUBLE PRECISION *x,* DOUBLE PRECISION *y,* DOUBLE PRECISION *dy,* INTEGER *nchng,* INTEGER *ki*)

Definition at line 388 of file interp.f.

6.14.1.5 subroutine POLINT (DOUBLE PRECISION,dimension(n) *xa,* DOUBLE PRECISION,dimension(n) *ya,* INTEGER *n,* DOUBLE PRECISION *x,* DOUBLE PRECISION *y,* DOUBLE PRECISION *dy*)

Definition at line 456 of file interp.f.

6.14.1.6 subroutine SPINT (DOUBLE PRECISION,dimension(na) *xa,* DOUBLE PRECISION,dimension(na) *ya,* INTEGER *na,* DOUBLE PRECISION,dimension(nb) *xb,* DOUBLE PRECISION,dimension(nb) *yb,* INTEGER *nb*)

Definition at line 143 of file interp.f.

6.14.1.7 subroutine SPLIN2 (DOUBLE PRECISION,dimension(n) *xa,* DOUBLE PRECISION,dimension(n) *ya,* DOUBLE PRECISION,dimension(n) *y2a,* INTEGER *n,* DOUBLE PRECISION *x,* DOUBLE PRECISION *y,* INTEGER *ki*)

Definition at line 97 of file interp.f.

6.14.1.8 subroutine SPLINE (DOUBLE PRECISION,dimension(n) *x,* DOUBLE PRECISION,dimension(n) *y,* INTEGER *n,* DOUBLE PRECISION *yp1,* DOUBLE PRECISION *ypn,* DOUBLE PRECISION,dimension(n) *y2*)

Definition at line 12 of file interp.f.

6.14.1.9 subroutine SPLINE2D (INTEGER *nx*, DOUBLE PRECISION,dimension(ny) *ya*, INTEGER *ny*, DOUBLE PRECISION,dimension(nx,ny) *za*, DOUBLE PRECISION,dimension(nx,ny) *z2a*)

Definition at line 317 of file interp.f.

6.14.1.10 subroutine SPLINT (DOUBLE PRECISION,dimension(n) *xa*, DOUBLE PRECISION,dimension(n) *ya*, DOUBLE PRECISION,dimension(n) *y2a*, INTEGER *n*, DOUBLE PRECISION *x*, DOUBLE PRECISION *y*)

Definition at line 58 of file interp.f.

6.14.1.11 subroutine SPLINT2D (DOUBLE PRECISION,dimension(nx) *xa*, INTEGER *nx*, DOUBLE PRECISION,dimension(ny) *ya*, INTEGER *ny*, DOUBLE PRECISION,dimension(nx,ny) *za*, DOUBLE PRECISION,dimension(nx,ny) *z2a*, DOUBLE PRECISION *xf*, DOUBLE PRECISION *yf*, DOUBLE PRECISION *zf*)

Definition at line 346 of file interp.f.

6.15 /home/bob/proj/DEMAGOQUE/work2/trunk/src/interp.f90 File Reference

Functions/Subroutines

- subroutine LIN_INT_1D (xx, zz, nx, x, z)
- subroutine LIN_INT_2D (xx, yy, zz, nx, ny, x, y, z)
- subroutine find_points (xx, n, x, x1, x2)

6.15.1 Function Documentation

6.15.1.1 subroutine find_points (real(Long),dimension(n),intent(in) *xx*, integer,intent(in) *n*, real(Long),intent(in) *x*, integer,intent(out) *x1*, integer,intent(out) *x2*)

Definition at line 94 of file interp.f90.

6.15.1.2 subroutine LIN_INT_1D (real (Long),dimension(nx),intent(in) *xx*, real (Long),dimension(nx),intent(in) *zz*, integer,intent(in) *nx*, real (Long),intent(in) *x*, real (Long),intent(out) *z*)

Definition at line 23 of file interp.f90.

6.15.1.3 subroutine LIN_INT_2D (real (Long),dimension(nx),intent(in) *xx*, real (Long),dimension(ny),intent(in) *yy*, real (Long),dimension(nx,ny),intent(in) *zz*, integer,intent(in) *nx*, integer,intent(in) *ny*, real (Long),intent(in) *x*, real (Long),intent(in) *y*, real (Long),intent(out) *z*)

Definition at line 48 of file interp.f90.

6.16 /home/bob/proj/DEMAGOQUE/work2/trunk/src/interp_test.f90 File Reference

Functions/Subroutines

- program interp_test

6.16.1 Function Documentation

6.16.1.1 program interp_test ( )

Definition at line 1 of file interp_test.f90.

6.17 /home/bob/proj/DEMAGOQUE/work2/trunk/src/lib_fftpack.f90 File Reference

Modules

- module lib_fftpack

Functions/Subroutines

- subroutine lib_fftpack::FT (L, M, xre, xim)
- subroutine lib_fftpack::IFT (L, M, xre, xim)
- subroutine lib_fftpack::FFT2C (L, M, xre, xim, fb)
- subroutine lib_fftpack::FFT1 (L, M, xre, xim, fb)
- subroutine lib_fftpack::fft_initial (N)

Variables

- INTEGER, dimension(2) lib_fftpack::lensav
- INTEGER, dimension(2) lib_fftpack::lenwrk
- REAL(Long), dimension(:,:), allocatable lib_fftpack::work
- REAL(Long), dimension(:,:), allocatable lib_fftpack::wsavec
- REAL(Long), dimension(:,:), allocatable lib_fftpack::wsaves

6.18 /home/bob/proj/DEMAGOQUE/work2/trunk/src/lib_fftw.f90 File Reference

Modules

- module lib_fftw

Functions/Subroutines

- subroutine lib_fftw::ft_z2z_1d (arrayin, arrayout, num)
- subroutine lib_fftw::ift_z2z_1d (arrayin, arrayout, num)
- subroutine lib_fftw::ft_re_1d (arrayin, arrayout, num)
- subroutine lib_fftw::ft_ro_1d (arrayin, arrayout, num)

Variables

- logical lib_fftw::ft_re_1d_init

6.19 /home/bob/proj/DEMAGOQUE/work2/trunk/src/lib_lapack.f90 File Reference

Modules

- module lib_lapack

Functions/Subroutines

- subroutine lib_lapack::getEigenSq (mat, num, evals, evecs)
- subroutine lib_lapack::getInvMat (mat, num, matinv)

6.20 /home/bob/proj/DEMAGOQUE/work2/trunk/src/mesh.f90 File Reference

Modules

- module mesh

Functions/Subroutines

- integer mesh::getNearestIndexX (xx)
- subroutine mesh::initializeMesh

- complex ∗16 mesh::getDen (i1, i2)
- complex ∗16 mesh::getDenDiagK (ika)
- complex ∗16 mesh::getDenX (ixa, ixr)
- subroutine mesh::mesh_reflectLR ()
- subroutine mesh::mesh_setReflectedLR (reflect)
- subroutine mesh::setDenX (ixa, ixr, value)
- complex ∗16 mesh::getDenW (ixa, ika)
- subroutine mesh::setDenW (ixa, ika, this_value)
- complex ∗16 mesh::getDenK (ikr, ika)
- subroutine mesh::setDenK (ikr, ika, val)
- subroutine mesh::getDenEigens (evals, evecs)
- subroutine mesh::setState (state)
- subroutine mesh::transform_x_to_wigner_trig
- subroutine mesh::transform_x_to_wigner_dumb
- subroutine mesh::transform_x_to_w_dumb_kshift
- subroutine mesh::transform_w_to_x_norepeat_fft
- subroutine mesh::transform_w_to_x_norepeat_fft_bad
- subroutine mesh::transform_wigner_to_x_trig
- subroutine mesh::transform_wigner_to_x_dumb
- subroutine mesh::transform_k_to_wigner_trig
- subroutine mesh::transform_wigner_to_k_trig
- subroutine mesh::transform_wigner_to_k_dumb
- subroutine mesh::transform_wigner_to_k_fft_exp
- subroutine mesh::transform_k_to_wigner_dumb
- subroutine mesh::transform_k_to_wigner_fft_exp
- subroutine mesh::transform_x_to_k_norepeat
- subroutine mesh::transform_x_to_w_norepeat
- subroutine mesh::transform_x_to_w_norepeat_fft
- subroutine mesh::transform_w_to_k_norepeat

Variables

- REAL ∗8 mesh::xLa
- REAL ∗8 mesh::xLr
- real ∗8 mesh::kLa
- INTEGER mesh::Nxa
- INTEGER mesh::Nxr
- INTEGER mesh::Nxa2
- INTEGER mesh::Nxr2
- INTEGER mesh::Nka
- integer mesh::Nkr
- INTEGER mesh::Nkr2
- INTEGER mesh::Nka2
- integer mesh::Nxam
- integer mesh::Nxax
- integer mesh::Nxrm

- integer mesh::Nxrx
- integer mesh::Nkam
- integer mesh::Nkax
- integer mesh::Nkrm
- integer mesh::Nkrx
- REAL ∗8 mesh::delxa
- REAL ∗8 mesh::delxr
- REAL ∗8 mesh::delka
- REAL ∗8 mesh::delkr
- real(Long) mesh::norm_thy
- REAL ∗8 mesh::facd
- REAL ∗8, dimension(:), allocatable mesh::xa
- REAL ∗8, dimension(:), allocatable mesh::ka
- REAL ∗8, dimension(:), allocatable mesh::xr
- REAL ∗8, dimension(:), allocatable mesh::kr
- REAL ∗8, dimension(:,:), allocatable mesh::den_re
- REAL ∗8, dimension(:,:), allocatable mesh::den_im
- complex ∗16, dimension(:,:), allocatable mesh::denmat
- complex ∗16, dimension(:,:), allocatable mesh::denmat2
- integer mesh::denState
- integer, parameter mesh::SPACE = 0
- integer, parameter mesh::WIGNER = 1
- integer, parameter mesh::MOMENTUM = 2
- logical mesh::isReflectedLR
- INTEGER, allocatable mesh::iNkr2
- INTEGER, allocatable mesh::iNka2
- real ∗8, allocatable mesh::potDiag
- real ∗8 mesh::maxxim

6.21 /home/bob/proj/DEMAGOQUE/work2/trunk/src/outAnalHarmonic.f90 File Reference

Functions/Subroutines

- subroutine outAnalHarmonic
- real ∗8 calcHarmonicEv (xx, tt)

6.21.1 Function Documentation

6.21.1.1 real∗8 calcHarmonicEv (real∗8,intent(in) *xx*, real∗8,intent(in) *tt*)

Definition at line 36 of file outAnalHarmonic.f90.

6.21.1.2 subroutine outAnalHarmonic ( )

Definition at line 1 of file outAnalHarmonic.f90.

6.22 /home/bob/proj/DEMAGOQUE/work2/trunk/src/output.f90 File Reference

Functions/Subroutines

- subroutine output
- subroutine outX
- subroutine outW
- subroutine outK
- subroutine outDenMat (fileim_u, filere_u)
- subroutine outDenMatKPhys ()
- subroutine outDenMatXPhys ()
- subroutine outDiagK
- subroutine outDiagX
- subroutine outEner
- subroutine outDenUnf
- subroutine inDenUnf

6.22.1 Function Documentation

6.22.1.1 subroutine inDenUnf ( )

Definition at line 318 of file output.f90.

6.22.1.2 subroutine outDenMat (INTEGER,intent(in) *fileim_u,* INTEGER,intent(in) *filere_u*)

Definition at line 118 of file output.f90.

6.22.1.3 subroutine outDenMatKPhys ( )

Definition at line 148 of file output.f90.

6.22.1.4 subroutine outDenMatXPhys ( )

Definition at line 177 of file output.f90.

6.22.1.5 subroutine outDenUnf ( )

Definition at line 298 of file output.f90.

6.22.1.6 subroutine outDiagK ( )

Definition at line 204 of file output.f90.

6.22.1.7 subroutine outDiagX ( )

Definition at line 231 of file output.f90.

6.22.1.8 subroutine outEner ( )

Definition at line 256 of file output.f90.

6.22.1.9 subroutine outK ( )

Definition at line 103 of file output.f90.

6.22.1.10 subroutine output ( )

Definition at line 23 of file output.f90.

6.22.1.11 subroutine outW ( )

Definition at line 91 of file output.f90.

6.22.1.12 subroutine outX ( )

Definition at line 71 of file output.f90.

6.23 /home/bob/proj/DEMAGOQUE/work2/trunk/src/phys_cons.f90 File Reference

Modules

- module phys_cons

Variables

- complex ∗16, parameter phys_cons::imagi = cmplx(0.d0, 1.d0, 8)
- REAL(long), parameter phys_cons::pi = 4d0∗atan(1d0)
- real(long), parameter phys_cons::invpi = 1d0/pi
- real(long), parameter phys_cons::invsqrt2pi = 1d0/sqrt(2d0∗pi)
- REAL(long), parameter phys_cons::rho0 = 0.16d0

- REAL(long), parameter phys_cons::hbc = 197.326963d0
- REAL(long), parameter phys_cons::hbc2 = hbc∗hbc
- REAL(long), parameter phys_cons::mp = 938.272013d0
- REAL(long), parameter phys_cons::mn = 939.565560d0
- REAL(long), parameter phys_cons::m0 = (mp+mn)∗0.5d0
- REAL(Long), parameter phys_cons::a0 = 931.494028d0
- REAL(long), parameter phys_cons::hm = hbc∗hbc/(2.d0∗m0)
- REAL(long), parameter phys_cons::deg = 4.d0

6.24 /home/bob/proj/DEMAGOQUE/work2/trunk/src/prec_def.f90 File Reference

Modules

- module prec_def

Variables

- INTEGER, parameter prec_def::long = 8
- integer, parameter prec_def::stderr = 102

6.25 /home/bob/proj/DEMAGOQUE/work2/trunk/src/procden.f90 File Reference

Functions/Subroutines

- program procden

6.25.1 Function Documentation

6.25.1.1 program procden ( )

Definition at line 1 of file procden.f90.

6.26 /home/bob/proj/DEMAGOQUE/work2/trunk/src/procdenextra.f90 File Reference

Functions/Subroutines

- program procdenextra

6.26.1 Function Documentation

6.26.1.1 program procdenextra ( )

Definition at line 1 of file procdenextra.f90.

6.27 /home/bob/proj/DEMAGOQUE/work2/trunk/src/renormalizeDM.f90 File Reference

Functions/Subroutines

- subroutine renormalizeDM

6.27.1 Function Documentation

6.27.1.1 subroutine renormalizeDM ( )

Definition at line 1 of file renormalizeDM.f90.

6.28 /home/bob/proj/DEMAGOQUE/work2/trunk/src/skyrme_params.f90 File Reference

Modules

- module skyrme_params

Variables

- real ∗8, parameter skyrme_params::t0 = -2150.1d0
- real ∗8, parameter skyrme_params::t3 = 14562d0
- real ∗8, parameter skyrme_params::sig = 0.257d0

6.29 /home/bob/proj/DEMAGOQUE/work2/trunk/src/test-dm.f90 File Reference

Functions/Subroutines

- program testdm
- subroutine getStdIn

6.29.1 Function Documentation

6.29.1.1 subroutine getStdIn ( )

Definition at line 139 of file test-dm.f90.

6.29.1.2 program testdm ( )

Definition at line 1 of file test-dm.f90.

6.30 /home/bob/proj/DEMAGOQUE/work2/trunk/src/testbmath.f90 File Reference

Functions/Subroutines

- program testbmath

6.30.1 Function Documentation

6.30.1.1 program testbmath ( )

Definition at line 1 of file testbmath.f90.

6.31 /home/bob/proj/DEMAGOQUE/work2/trunk/src/testfft.f90 File Reference

Functions/Subroutines

- program testfft

6.31.1 Function Documentation

6.31.1.1 program testfft ( )

Definition at line 1 of file testfft.f90.

6.32 /home/bob/proj/DEMAGOQUE/work2/trunk/src/testfft1d.f90 File Reference

Functions/Subroutines

- program testfft1d
- subroutine ft_z2z_1d_naive (arrayin, arrayout, num)

6.32.1 Function Documentation

6.32.1.1 subroutine ft_z2z_1d_naive (complex∗16,dimension(0:num-1),intent(in) *arrayin,* complex∗16,dimension(0:num-1),intent(out) *arrayout,* integer,intent(in) *num*)

Definition at line 47 of file testfft1d.f90.

6.32.1.2 program testfft1d ( )

Definition at line 1 of file testfft1d.f90.

6.33 /home/bob/proj/DEMAGOQUE/work2/trunk/src/testint.f90 File Reference

Functions/Subroutines

- program testint

6.33.1 Function Documentation

6.33.1.1 program testint ( )

Definition at line 1 of file testint.f90.

6.34 /home/bob/proj/DEMAGOQUE/work2/trunk/src/testprog.f90 File Reference

Functions/Subroutines

- program testprog

6.34.1 Function Documentation

6.34.1.1 program testprog ( )

Definition at line 1 of file testprog.f90.

6.35 /home/bob/proj/DEMAGOQUE/work2/trunk/src/time.f90 File Reference

Modules

- module time

Variables

- INTEGER time::it
- REAL ∗8 time::t
- INTEGER time::Nt
- logical time::firstOutput

6.36 /home/bob/proj/DEMAGOQUE/work2/trunk/src/time_evol.f90 File Reference

Functions/Subroutines

- subroutine time_evolution
- subroutine evol_k (dtim)
- subroutine makeMomentumHermitian ()
- subroutine evol_x (dtim)
- subroutine makeSpaceHermitian ()
- subroutine calcPotDiag ()
- subroutine getImCutoff (cutfac, ixr, dtim)
- real ∗8 getWeight ()
- subroutine getPotX (potX, potType, ix)
- subroutine potHO (potX, ix)
- subroutine potHOexact (potX, ix)
- subroutine potHOmf (potX, ixa1)
- subroutine potSkyrme (potX, ix)
- real ∗8 skyContact (rho)

6.36.1 Function Documentation

6.36.1.1 subroutine calcPotDiag ( )

Definition at line 411 of file time_evol.f90.

6.36.1.2 subroutine evol_k (real∗8,intent(in) *dtim*)

Definition at line 113 of file time_evol.f90.

6.36.1.3 subroutine evol_x (real∗8,intent(in) *dtim*)

Definition at line 226 of file time_evol.f90.

6.36.1.4 subroutine getImCutoff (real∗8,intent(out) *cutfac,* integer,intent(in) *ixr,* real∗8,intent(in) *dtim*)

Definition at line 458 of file time_evol.f90.

6.36.1.5 subroutine getPotX (real (Long),intent(out) *potX,* integer,intent(in) *potType,* integer,intent(in) *ix*)

Definition at line 503 of file time_evol.f90.

6.36.1.6 real∗8 getWeight ( )

Definition at line 490 of file time_evol.f90.

6.36.1.7 subroutine makeMomentumHermitian ( )

Definition at line 205 of file time_evol.f90.

6.36.1.8 subroutine makeSpaceHermitian ( )

Definition at line 389 of file time_evol.f90.

6.36.1.9 subroutine potHO (real∗8,intent(out) *potX,* integer,intent(in) *ix*)

Definition at line 533 of file time_evol.f90.

6.36.1.10 subroutine potHOexact (real∗8,intent(out) *potX,* integer,intent(in) *ix*)

Definition at line 553 of file time_evol.f90.

6.36.1.11 subroutine potHOmf (real (Long),intent(out) *potX,* integer,intent(in) *ixa1*)

Definition at line 569 of file time_evol.f90.

6.36.1.12 subroutine potSkyrme (real∗8,intent(out) *potX,* integer,intent(in) *ix*)

Definition at line 619 of file time_evol.f90.

6.36.1.13 real∗8 skyContact (real∗8,intent(in) *rho*)

Definition at line 665 of file time_evol.f90.

6.36.1.14 subroutine time_evolution ( )

Definition at line 23 of file time_evol.f90.

6.37 /home/bob/proj/DEMAGOQUE/work2/trunk/src/wfnho.f90 File Reference

Functions/Subroutines

- real ∗8 wfnho (x, n, whm)
- real ∗8 Hn (x, n)

6.37.1 Function Documentation

6.37.1.1 real∗8 Hn (real (long),intent(in) *x,* integer,intent(in) *n*)

Definition at line 36 of file wfnho.f90.

6.37.1.2 real∗8 wfnho (real (long) *x,* integer *n,* real (long) *whm*)

Definition at line 4 of file wfnho.f90.

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