NEI_2011_radm

1.0

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Chapter 1

Modules Index

1.1 Modules List

Here is a list of all modules with brief descriptions:

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

Chapter 3

Module Documentation

3.1 var_nei Module Reference

Functions/Subroutines

- subroutine check (status)

  Verifies no error in netcdf function call.
- subroutine lee_nml (IX, JX, KX)

  Reads dimensions from namelist file.

Variables

- integer zlev
- integer hh
- integer nradm
- integer, parameter nh =24
- integer, parameter radm =32
- integer, parameter ndims =6
- real, dimension(:,:,:,:,:), allocatable emiss3d
- real, dimension(:,:), allocatable dlat
- real, dimension(:,:), allocatable dlon
- real, dimension(:,:,:), allocatable xlon
- real, dimension(:,:,:), allocatable xlat
- integer grid_id
- integer julyr
- integer julday
- integer mapproj
- integer iswater
- integer islake
- integer isice
- integer isurban
- integer isoilwater
- real cenlat
- real cenlon
- real dx
- real dy
- real trulat1

- real trulat2
- real moadcenlat
- real stdlon
- real pollat
- real pollon
- real gmt
- real num_land_cat
- character(len=3) cday
- character(len=9), dimension(:), allocatable ename1
- character(len=10), dimension(:), allocatable ename
- character(len=19) mminlu
- character(len=19) map_proj_char
- character(len=19) itime
- character(len=38) title
- character(len=19), dimension(1, 1) times
- character(len=19), dimension(ndims) sdim =(/"Time ", "DateStrLen ","west_east ","south_north ","bottom_top ","emissions_zdim_stag"/)
- character(len=19), dimension(radm) cname =(/'Sulfur Dioxide ', 'Nitrogen oxide ','Aldehydes ','HCHO ','Acetic Acid ', 'Ammonia ','Butanes ','Pentanes ','Alkane ', 'Ethane ','Carbon Monoxide ','Alkanes ','Terminal Alkenes', 'Alkenes ','Toluene ','Xylene ','Acetone ', 'Cresol ','Isoprene ','Methane ','PM25I ', 'PM25J ','SulfatesI ','SulfatesJ ','Nitrates ', 'NitratesJ ','OrganicI ','OrganicJ ','Elemental Carb I', 'Elemental Carb J','PM_10 ','Nitrogen Dioxide'/)
- character(len=19) current_date
- character(len=19) mecha

3.1.1 Function/Subroutine Documentation

3.1.1.1 check()

```
subroutine var_nei::check (
             integer, intent(in) status )
```

Verifies no error in netcdf function call.

Parameters

status	NetCDF functions return a non-zero status codes on error.

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3.1.1.2 lee_nml()

```
subroutine var_nei::lee_nml (
             integer, intent(out) IX,
```

```
            integer, intent(out) JX,
            integer, intent(out) KX )
```

Reads dimensions from namelist file.

Obtains from domain.nml file dimension of domain dimensions.

Author

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Date

01/22/2021

Version

1.0

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Parameters

IX	number of cell grid in W-E direction
JX	number of cell grid in S-N direction
KX	number of cell grid in vertical direction

3.1.2 Variable Documentation

3.1.2.1 cday

```
character(len=3) var_nei::cday
```

3.1.2.2 cenlat

```
real var_nei::cenlat
```

3.1.2.3 cenlon

```
real var_nei::cenlon
```

3.1.2.4 cname

```
character(len= 19), dimension(radm) var_nei::cname =(/'Sulfur Dioxide ', 'Nitrogen oxide ','Aldehydes
','HCHO ','Acetic Acid ', 'Ammonia ','Butanes ','Pentanes ','Alkane ', 'Ethane ','Carbon Monoxide
','Alkanes ','Terminal Alkenes', 'Alkenes ','Toluene ','Xylene ','Acetone ', 'Cresol ','Isoprene
','Methane ','PM25I ', 'PM25J ','SulfatesI ','SulfatesJ ','Nitrates ', 'NitratesJ ','OrganicI
','OrganicJ ','Elemental Carb I', 'Elemental Carb J','PM_10 ','Nitrogen Dioxide'/)
```

3.1.2.5 current_date

```
character (len=19) var_nei::current_date
```

3.1.2.6 dlat

```
real, dimension(:,:), allocatable var_nei::dlat
```

3.1.2.7 dlon

```
real, dimension(:,:), allocatable var_nei::dlon
```

3.1.2.8 dx

```
real var_nei::dx
```

3.1.2.9 dy

```
real var_nei::dy
```

3.1.2.10 emiss3d

```
real, dimension(:,:,:,:,:), allocatable var_nei::emiss3d
```

3.1.2.11 ename

```
character (len=10), dimension(:), allocatable var_nei::ename
```

3.1.2.12 ename1

```
character (len= 9), dimension(:), allocatable var_nei::ename1
```

3.1.2.13 gmt

```
real var_nei::gmt
```

3.1.2.14 grid_id

```
integer var_nei::grid_id
```

3.1.2.15 hh

```
integer var_nei::hh
```

3.1.2.16 isice

```
integer var_nei::isice
```

3.1.2.17 islake

```
integer var_nei::islake
```

3.1.2.18 isoilwater

```
integer var_nei::isoilwater
```

3.1.2.19 isurban

```
integer var_nei::isurban
```

3.1.2.20 iswater

```
integer var_nei::iswater
```

3.1.2.21 itime

```
character(len=19) var_nei::itime
```

3.1.2.22 julday

```
integer var_nei::julday
```

3.1.2.23 julyr

```
integer var_nei::julyr
```

3.1.2.24 map_proj_char

```
character(len=19) var_nei::map_proj_char
```

3.1.2.25 mapproj

```
integer var_nei::mapproj
```

3.1.2.26 mecha

```
character (len=19) var_nei::mecha
```

3.1.2.27 mminlu

```
character(len=19) var_nei::mminlu
```

3.1.2.28 moadcenlat

```
real var_nei::moadcenlat
```

3.1.2.29 ndims

```
integer, parameter var_nei::ndims =6
```

3.1.2.30 nh

```
integer, parameter var_nei::nh =24
```

3.1.2.31 nradm

```
integer var_nei::nradm
```

3.1.2.32 num_land_cat

```
real var_nei::num_land_cat
```

3.1.2.33 pollat

```
real var_nei::pollat
```

3.1.2.34 pollon

```
real var_nei::pollon
```

3.1.2.35 radm

```
integer, parameter var_nei::radm =32
```

3.1.2.36 sdim

```
character (len=19), dimension(ndims) var_nei::sdim =(/"Time ", "DateStrLen ","west_east ","south↩
_north ","bottom_top ","emissions_zdim_stag"/)
```

3.1.2.37 stdlon

```
real var_nei::stdlon
```

3.1.2.38 times

```
character(len=19), dimension(1,1) var_nei::times
```

3.1.2.39 title

```
character(len=38) var_nei::title
```

3.1.2.40 trulat1

```
real var_nei::trulat1
```

3.1.2.41 trulat2

```
real var_nei::trulat2
```

3.1.2.42 xlat

```
real, dimension(:,:,:), allocatable var_nei::xlat
```

3.1.2.43 xlon

```
real, dimension(:,:,:), allocatable var_nei::xlon
```

3.1.2.44 zlev

```
integer var_nei::zlev
```

Chapter 4

File Documentation

4.1 source/convierte.F90 File Reference

Functions/Subroutines

- program nei_2011

4.1.1 Function/Subroutine Documentation

4.1.1.1 nei_2011()

```
program nei_2011
```

4.2 source/guarda.F90 File Reference

Functions/Subroutines

- subroutine guarda_emisiones
- subroutine crea_attr (ncid, idm, dimids, svar, cname, id_var)
- subroutine crea_attr2 (ncid, idm, dimids, svar, cname, id_var)

4.2.1 Function/Subroutine Documentation

4.2.1.1 crea_attr()

```
subroutine guarda_emisiones::crea_attr (
             integer, intent(in) ncid,
             integer, intent(in) idm,
             integer, dimension(idm), intent(in) dimids,
             character(len=*), intent(in) svar,
             character(len=*), intent(in) cname,
             integer, intent(out) id_var )
```

4.2.1.2 crea_attr2()

```
subroutine guarda_emisiones::crea_attr2 (
             integer, intent(in) ncid,
             integer, intent(in) idm,
             integer, dimension(idm), intent(in) dimids,
             character(len=*), intent(in) svar,
             character(len=*), intent(in) cname,
             integer, intent(out) id_var )
```

4.2.1.3 guarda_emisiones()

```
subroutine guarda_emisiones
```

4.3 source/lee_NEI.F90 File Reference

Functions/Subroutines

- subroutine lee_nei

4.3.1 Function/Subroutine Documentation

4.3.1.1 lee_nei()

```
subroutine lee_nei
```

4.4 source/lee_wrfinput.F90 File Reference

Functions/Subroutines

- subroutine lee_wrfinput

4.4.1 Function/Subroutine Documentation

4.4.1.1 lee_wrfinput()

```
subroutine lee_wrfinput
```

4.5 source/module_var_nei.F90 File Reference

Modules

- module var_nei

Functions/Subroutines

- subroutine var_nei::check (status)

  Verifies no error in netcdf function call.
- subroutine var_nei::lee_nml (IX, JX, KX)

  Reads dimensions from namelist file.

Variables

- integer var_nei::zlev
- integer var_nei::hh
- integer var_nei::nradm
- integer, parameter var_nei::nh =24
- integer, parameter var_nei::radm =32
- integer, parameter var_nei::ndims =6
- real, dimension(:,:,:,:,:), allocatable var_nei::emiss3d
- real, dimension(:,:), allocatable var_nei::dlat
- real, dimension(:,:), allocatable var_nei::dlon
- real, dimension(:,:,:), allocatable var_nei::xlon
- real, dimension(:,:,:), allocatable var_nei::xlat
- integer var_nei::grid_id
- integer var_nei::julyr
- integer var_nei::julday
- integer var_nei::mapproj
- integer var_nei::iswater
- integer var_nei::islake
- integer var_nei::isice
- integer var_nei::isurban
- integer var_nei::isoilwater
- real var_nei::cenlat
- real var_nei::cenlon
- real var_nei::dx
- real var_nei::dy
- real var_nei::trulat1

- real var_nei::trulat2
- real var_nei::moadcenlat
- real var_nei::stdlon
- real var_nei::pollat
- real var_nei::pollon
- real var_nei::gmt
- real var_nei::num_land_cat
- character(len=3) var_nei::cday
- character(len=9), dimension(:), allocatable var_nei::ename1
- character(len=10), dimension(:), allocatable var_nei::ename
- character(len=19) var_nei::mminlu
- character(len=19) var_nei::map_proj_char
- character(len=19) var_nei::itime
- character(len=38) var_nei::title
- character(len=19), dimension(1, 1) var_nei::times
- character(len=19), dimension(ndims) var_nei::sdim =(/"Time ", "DateStrLen ","west_east ","south_north ","bottom_top ","emissions_zdim_stag"/)
- character(len=19), dimension(radm) var_nei::cname =(/'Sulfur Dioxide ', 'Nitrogen oxide ','Aldehydes ','HCHO ','Acetic Acid ', 'Ammonia ','Butanes ','Pentanes ','Alkane ', 'Ethane ','Carbon Monoxide ','Alkanes ','Terminal Alkenes', 'Alkenes ','Toluene ','Xylene ','Acetone ', 'Cresol ','Isoprene ','Methane ','PM25I ', 'PM25J ','SulfatesI ','SulfatesJ ','Nitrates ', 'NitratesJ ','OrganicI ','OrganicJ ','Elemental Carb I', 'Elemental Carb J','PM_10 ','Nitrogen Dioxide'/)
- character(len=19) var_nei::current_date
- character(len=19) var_nei::mecha

4.6 source/testsuite/t_check.F90 File Reference

Functions/Subroutines

- program test_check

4.6.1 Function/Subroutine Documentation

4.6.1.1 test_check()

```
program test_check
```

4.7 source/testsuite/test_nml.F90 File Reference

Functions/Subroutines

- program nml_read

  Program to obtain the domain's dimensions.

4.7.1 Function/Subroutine Documentation

4.7.1.1 nml_read()

```
program nml_read
```

Program to obtain the domain's dimensions.

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Date

01/22/2021

Version

1.0

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