**SCRIPT**

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/gsn\_code.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/gsn\_csm.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/contributed.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/shea\_util.ncl"

diri = "/srv/ccrc/data07/z3426738/Reanalyses/NCEP1/"

fils = systemfunc("ls /srv/ccrc/data07/z3426738/Reanalyses/NCEP1/air.20\*.nc")

f = addfiles(fils, "r")

 ListSetType (f, "cat")

 air= f[:]->air

 printVarSummary (air)

system("/bin/rm -f air1.nc")

fout=addfile("air1.nc","c")

fout@title="air1\_1\*1"

fout->air=air

print(dimsizes(air))

printVarSummary(air)

fili ="/home/z3426738/WRF/WRFV3/WPS/air1.nc"

a = addfile("/home/z3426738/WRF/WRFV3/WPS/air1.nc","r")

printVarSummary(air)

newlevel =fspan (100.00,10.00,17)

newlat=fspan(0.00,-3.00,3)

newlon=fspan(6.00,53.00,47)

newlat@units = "degrees\_south"

newlon@units = "degrees\_east"

newlevel@units = "mb"

regrid=linint2(air&lon,air&lat,air,True,newlon,newlat,0)

regrid!0 = "time"

regrid!1 = "level"

regrid!2 = "LAT"

regrid!3 = "LON"

regrid&level = newlevel

regrid&LAT = newlat

regrid&LON = newlon

printVarSummary(regrid)

system("/bin/rm -f Regrid03.nc")

fout=addfile("Regrid03.nc","c")

fout@title="Regrid03\_1\*1"

fout->regrid=regrid

printVarSummary(regrid)

fn = "Regrid03.nc"

in = addfile("/home/z3426738/WRF/WRFV3/WPS/Regrid03.nc","r")

linlog = 2

regrid = in->regrid

level = in->level

level2 = (/ 1000., 950., 850., 750., 650., 550., 450., 350., 250., 150., 50./)

level2!0 = "p"

level2@units = "mb"

air03 = int2p\_n\_Wrap(level,regrid,level2,linlog,1)

printVarSummary(air03)

system("/bin/rm -f Air03.nc")

fout=addfile("Air03.nc","c")

fout@title="Air03"

printVarSummary(air03)

**RESULTS**

z3426738@cyclone:WPS$ ncl hybrid.ncl

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 University Corporation for Atmospheric Research

 NCAR Command Language Version 6.0.0

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 See http://www.ncl.ucar.edu/ for more details.

Variable: air

Type: short

Total Size: 1305611424 bytes

 652805712 values

Number of Dimensions: 4

Dimensions and sizes: [time | 3653] x [level | 17] x [lat | 73] x [lon | 144]

Coordinates:

 time: [17549208..17636856]

 level: [1000..10]

 lat: [90..-90]

 lon: [ 0..357.5]

Number Of Attributes: 18

 long\_name : mean Daily Air temperature

 unpacked\_valid\_range : ( 150, 350 )

 actual\_range : ( 181.15, 317.2 )

 units : degK

 add\_offset : 477.66

 scale\_factor : 0.01

 missing\_value : 32766

 precision : 2

 least\_significant\_digit : 1

 GRIB\_id : 11

 GRIB\_name : TMP

 var\_desc : Air temperature

 dataset : NCEP Reanalysis Daily Averages

 level\_desc : Multiple levels

 statistic : Mean

 parent\_stat : Individual Obs

 valid\_range : ( -32766, -12766 )

 \_FillValue : 32766

(0) 3653

(1) 17

(2) 73

(3) 144

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Type: short

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 dataset : NCEP Reanalysis Daily Averages

 level\_desc : Multiple levels

 statistic : Mean

 parent\_stat : Individual Obs

 valid\_range : ( -32766, -12766 )

 \_FillValue : 32766

Variable: regrid

Type: float

Total Size: 35024964 bytes

 8756241 values

Number of Dimensions: 4

Dimensions and sizes: [time | 3653] x [level | 17] x [LAT | 3] x [LON | 47]

Coordinates:

 level: [100..10]

 LAT: [ 0..-3]

 LON: [ 6..53]

Number Of Attributes: 1

 \_FillValue : 32766

Variable: regrid

Type: float

Total Size: 35024964 bytes

 8756241 values

Number of Dimensions: 4

Dimensions and sizes: [time | 3653] x [level | 17] x [LAT | 3] x [LON | 47]

Coordinates:

 level: [100..10]

 LAT: [ 0..-3]

 LON: [ 6..53]

Number Of Attributes: 1

 \_FillValue : 32766

**warning:int2p\_n: 515073 input array(s) contained all missing data. No interpolation performed on these arrays**

Variable: air03

Type: float

Total Size: 22663212 bytes

 5665803 values

Number of Dimensions: 4

Dimensions and sizes: [time | 3653] x [p | 11] x [LAT | 3] x [LON | 47]

Coordinates:

 p: [1000..50]

 LAT: [ 0..-3]

 LON: [ 6..53]

Number Of Attributes: 1

 \_FillValue : 32766

Variable: air03

Type: float

Total Size: 22663212 bytes

 5665803 values

Number of Dimensions: 4

Dimensions and sizes: [time | 3653] x [p | 11] x [LAT | 3] x [LON | 47]

Coordinates:

 p: [1000..50]

 LAT: [ 0..-3]

 LON: [ 6..53]

Number Of Attributes: 1

 \_FillValue : 32766

z3426738@cyclone:WPS$