

plot hovmuller

Categories: PNG hoevmuller AMSU OLR

Params: dataset : *in, required, type='string'*
dataset to plot

canal : *in, optional, type='string'*
canal of AMSU
only used if AMSU dataset

iyear : *in, required, type='integer'*
year

Keywords: DATASETTYPE : *default='for AMSU ++, for OLR ++'*

dataset type name. For each dataset, there are several file type (year vs total, global vs regional). ++

AXE : *default='latitude'*

geographical axe to be use for hovmuller can be either 'latitude' or 'longitude'

UBOX : *type='1D array of 4 items'*

latitudes and longitudes of the box in this order : ulon1 ulon2 ulat1 ulat2

OVERWRITE : *default=false*

to overwrite the output image file if exists.

Useless if NOSAVE is set.

NOSAVE : *default=false*

to NOT save the output image in a file

might be usefull if several plots are needed on the same figure.

file if exist might be overwritten if OVERWRITE is set to 1.

EXTRA :

Used to declare that this routine accepts inherited keywords

see example with SMALL keyword

Restrictions:

- Requires SAXO

Returns: [pltt](#)

[cm_4cal](#)

[forout.pro](#)

Pre: [varamma_profile.sh](#)

for AMSU dataset be sure to have `cx.anyyyy.nc` in the directory defined in `${VARAMMA_ID}/`

for OLR dataset be sure to have `olr.day.mean_yyyy_ng.nc` in the directory defined in `${VARAMMA_ID}/`

Post: [varamma_profile.sh](#)

Todo:

- ++ check ubox (lat and lon) validity
- find from where come this error
 - % Type conversion error: Unable to convert given STRING to Long.
- ++ parametrisation date début date fin
- ++ exploitation du champ info des fichiers OLR
- ++ gros souci avec les longitude OLR !!!!
- ++ split read and plot
- ++ saveimage or openps (for image to provide to publisher)
- ++ filename si small idiot car peut contenir plusieurs figures donc pas canal+year...

To plot AMSU a4 hovmuller latitude plot for 2006 and produce a PNG file:

Examples: IDL> hovmuller, 'AMSU', 'a4', 2006L, AXE='latitude', ubox=[-30.,+40.,-30.,45.]

To plot AMSU a4 and a5 hovmuller latitude plots for 2006 on the same figure:

```
IDL> hovmuller, 'AMSU', 'a4', 2006L, AXE='latitude', ubox=[-30.,+40.,-30.,45.], /nosave
IDL> hovmuller, 'AMSU', 'a5', 2006L, AXE='latitude', ubox=[-30.,+40.,-30.,45.], /noerase
```

++ les deux dessins n'occupent pas la même taille.

To plot OLR hovmuller latitude plot for 2006 and produce a PNG file:

```
IDL> hovmuller, 'OLR', 'n.a.', 2006L, AXE='latitude', ubox=[-30.,+40.,-30.,45.]
```

To plot OLR hovmuller longitude plot for 2006 and produce a PNG file:

```
IDL> hovmuller, 'OLR', 'n.a', 2006L, AXE='longitude', ubox=[-30.,+40.,-30.,45.]
```

To plot AMSU a4 hovmuller latitude plot climatology and produce a PNG file:

```
IDL> hovmuller, 'AMSU', 'a4', 0000L, DATASETTYPE='varamma_t3', AXE='latitude', ubox=[-30.,+40.,-30.,45.]
```

- History:**
- fplod 2008-12-23T13:49:03Z aedon.locean-ipsl.upmc.fr (Darwin)
 - add latitude and longitude boundaries in keywords (UBOX)
 - fplod 2008-08-14T15:31:11Z aedon.locean-ipsl.upmc.fr (Darwin)
 - j'ajoute la possibilité de travailler avec les fichiers de climato en ajoutant un motcle datasettype (ceux qui peut permettre même pour OLR par exemple de travailler soit avec les fichiers splités soit avec le fichiers original ... enfin c'est l'idée.

- j'ai compris que 1) il faut /timestep pour AMSU (parce l'axe des temps ne fait pas partie de ceux gérés par ncdftime) 2) qu'il y a un gros avec les longitudes OLR
- fplod 2008-08-13T08:02:19Z aedon.locean-ipsl.upmc.fr (Darwin)
 - replace hovmuller_latitude by hovmuller
 - add AXE keyword
 - change terminology of latitude image file hov by hovy
 - check parameters (type and value)
 - parametrization of xaxisname, yaxisname and timevar
- fplod 2008-08-12T14:17:14Z aedon.locean-ipsl.upmc.fr (Darwin)
 - add _EXTRA keyword
 - change format of colorbar f5.1 to I3.3, 1/10th is useless in legend and I rather like have a *big* font than a dot.
 - add OVERWRITE keyword
 - add NOSAVE keyword
 - subtitle = '' to avoid text between plot and color bar
 - usage of _forout
- fplod 2008-08-05T09:59:15Z aedon.locean-ipsl.upmc.fr (Darwin)
 - change font
- fplod 2008-07-31T12:59:17Z aedon.locean-ipsl.upmc.fr (Darwin)
 - Start to add OLR dataset
 - add dataset parameter
- fplod 20080718
 - extract from ananewvaramma3.pro 20080718 :

```

hovmuller latitude
canal='a7'
mois=['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep','Oct','Nov','Dec']
mo_lon=[31,28,31,30,31,30,31,31,30,31,30,31]

imo=4 &im1=10 ; no du mois
file='stagiaire/'+canal+'.an2006.nc'
initncdf, file, xaxisname = 'xlon', yaxisname = 'ylat'
domdef,-10,5,-30,45 ;domdef,0,5,-30,45
j1=total(mo_lon(0:imo-2)) & J2=total(mo_lon(0:im1-1))
data=read_ncdf('moyenne_tb', j1,j2,/timestep,timevar = 'jours', file = file)
time=julday(imo,1,2006)+lindgen(jpt) ; redefinition axe temps
pltt>window=0, data, 'yt',title='latitude - time '+canal;,min=250,max=295
saveimage, 'sorties/'+canal+'20060410-hov-10-5.png',/png ;capture d'ecran

```

Version: \$Id: hovmuller.pro 8 2008-12-23 16:13:30Z pinsard \$