
Subject: Re: contour over a map and 180 degrees off or problems with dateline

Posted by [teich](#) on Wed, 02 May 2007 18:41:57 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi, here are the commands. If you want to see the file, I can put those on my public_html or email directly fo you. Note, there are some routines in here that will be foreign to anyone unfamiliar with my idl library (winset, colorbar_w), but they do not relate to my question. The lat and lon coordinates are called and the subroutine is after the main program.

Thanks,

Howie

```
;Sample to read binary, unformatted, sequential access, starting  
;with an 80-byte title, followed by a REAL*4 array(72,46) of data;
```

```
field=fltarr(72,46)  
title=strarr(80)
```

```
OPENR, 10, 'CO_IASA_DOM', /F77_UNFORMATTED  
  READU, 10, title, field  
CLOSE, 10  
help,field
```

```
lat=fltarr(46)  
lon=fltarr(72)
```

```
;Now call module getcoord to get GISS 4x5 lats and lons
```

```
getcoord,lat,lon
```

```
;May need to change lon to 0 to 360?
```

```
;lon=lon+180.
```

```
winset ;set printing device
```

```
loadct,39
```

```
ncolors=10  
print,'number of levels used is: ',ncolors+1
```

```
;levels=[0,10,20,30,40,50,60,80,100,120,150,200,500,1000,2000,50000]
```

```
colors=60+findgen(ncolors)*(254-60)/(ncolors-1)
```

```

;levels=min(field)+findgen(16)*(max(field)-min(field)/ncolors)

levels=min(field)+findgen(ncolors+1)*((200000.-0.)/ncolors)

map_set,0,0,title='CO_IIASA_DOM!C',$
position=[0.15,0.35,0.85,0.65]

contour,field,lon,lat,c_color=colors,$
levels=levels,/cell_fill,/closed,/overplot

map_continents

lats = [-90, -60, -30, 0, 30, 60,90]
lons = [-180,-135,-90,-45,0,45,90,135,180]
; Create string equivalents of latitudes:
latnames = strtrim(lats, 2)
lonnames = strtrim(lons, 2)
; Label the equator:
;latnames(where(lats eq 0)) = '0'
; Draw the grid:
;MAP_GRID,/BOX_AXES, LABEL=2, LATS=lats, LATNAMES=latnames, LATLAB=15,
$
;LONLAB=-2.5, LONDEL=20, LONS=-15, ORIENTATION=-30
MAP_GRID,/BOX_AXES, LABEL=1, LATS=lats, LATNAMES=latnames, $
LONS=lons, LONNAMES=lonnames,LATLAB=7,LONLAB=20

!p.position=[0.2,0.3,0.8,0.7]
colorbar_w,c_color=colors,levels=levels,format='(f10.1)'

END

PRO getcoord,lat,lon

im=72
jm=46

lon(0)=-177.5

for i=1,im-1 do begin
    lon(i)= lon(i-1)+5.0
endfor

lat(0)= -89.0
lat(1)= -86.0

for j=2,jm-2 do begin

```

```
lat(j)= lat(j-1)+4.0
endfor
```

```
lat(45)= 89.0
```

```
END
```

On May 2, 2:07 pm, David Fanning <n...@dfanning.com> wrote:

> t...@atmsci.msrb.sunysb.edu writes:

>> I want to contour data on a map projection and have something like

>> this:

>

>> field=fltarr(72,46)

>> lon=fltarr(72)

>> lat=fltarr(46)

>

>> My lon array is indexed from -177.5 to +177.5. My lat array is

>> indexed from -89.0, -86.0, ..., +86.0, +89.0.

>

>> After mapset (using default map and centered at 0,0), I do

>> contour,field,lon,lat. What I get is displaced by 180 degrees. If I

>> change my lon to go from 0.25 to 357.5, then the map looks correct,

>> but the contours do not connect at the dateline.

>

>> Can anyone help with this?

>

> Can we see the commands you are using to display the map

> projection and the contour?

>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")