Subject: Re: IDL contour
Posted by turet on Tue, 12 Jan 1993 21:02:29 GMT
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In article <1993Jan12.165204.29186@nsisrv.gsfc.nasa.gov> pat@gsfc.nasa.gov (patrick m. ryan)
writes:
> Mirko Vukovic (at913@cleveland.Freenet.Edu) wrote:
>
>> In a previous article, apwang@waikato.ac.nz () says:
>>> Does anyone know how to draw a contour graph in polar
>>> coordinate system without changing to cartician coordinate
>>> by using IDL? Any help will be appreciated very much!
>> I second the request for polar grid contour/surface routine
>
> you can't do it directly. what i do is interpolate
> my polar grid to a cartesian grid and then contour it. i use
> trigrid and triangulate to do the interpolation.
> the problem i still have is that polycontour bites.
> if anyone has a color contouring routine which knows how
> to handle unclosed contours, please post it. if i'm
> feeling inspired one of these days, i translate the NCAR
> CONPACK routines into IDL. they're ugly but they do
> the job.
>

What I've done is use Map_Set using a polar
stereographic projection and then contouring some
data on top of it. In the following example
`matrix1' is a 380 x 15 floating array consisting
of monthly measured heat fluxes at latitudes 50 to
85 deg. N. (see Oort). My data is available on
request. If you just want to try this out, create
an array that varies from about -400 to +400 or so:

```
  restore,'fwall_matrix.dat'
  x = seqa(-180,30,13)
  y = seqa(50.,2.5,15)
  xx = [min(x),x,max(x)]
  yy = [min(y),y,max(y)]
  mostr = ['JAN','FEB','MAR','APR','MAY','JUN',$
 [A'JUL','AUG','SEP','OCT','NOV','DEC']
  lat = 50.5 lon = seqa(-180,30,12)
  latstr = ['55','60','65','70','75','80','85']
  lev = seqa(-400,50,19)
  for iyr=0,25 do begin
    yrstr = '19'+strtrim(iyr+64,2)
    m1 = fltarr(13,15)
    m1(0,0) = matrix1(iyr*12:iyr*12+11,*)
```

```
    m1(12,*) = m1(0,*)
    m2 = make_array(15,17,/float,value=min(m1))
    m2(1,1) = m1
    map_set,/stere,90,-180,lim=[50,-180,85,180]
    xyouts,.5,.98,/norm,align=.5,'F!IWALL!N ('+yrstr+') -Wm!E-2!N',chars=1.3
    contour,m2,xx,yy,/follow,lev=lev,/overplot,path='path.dat'
    polycontour,'path.dat'
    contour,m1,x,y,/follow,lev=lev,/overplot
    map_grid,latdel=5,londel=30
    for i=0,11 do xyouts,lon(i),lat,/data,mostr(i),align=.5,$
 orient=i*30,chars=1.3
    for i=0,6 do xyouts,-180,i*5+55,/data,latstr(i)+'!9%!3N'
endfor
end
```

Good Luck

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