
Subject: Re: Problem Plotting Symbols on a Map?

Posted by [afl](#) on Tue, 06 Jun 1995 07:00:00 GMT

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In article <3r28t9\$4bpe@enzu.unm.edu>, rdhunt@unm.edu writes:

```
|>
|> I am having trouble drawing filled circles on a map in IDL 4.0.
|> Here is an example.
|>
|> IDL> map_set, /CYLINDRICAL, /GRID, /CONTINENTS
|> IDL> a = 2*findgen(1+long(180))/!radeg
|> IDL> xx=180+10*cos(a)
|> IDL> yy=10*sin(a)
|> IDL> plots,xx,yy,/data
|> IDL> polyfill, xx, yy, /DATA
|>
|> This should fill the circle which wraps around to the other side
|> of the map but it is doing the opposite. I think I know why it
|> happens but has anybody found a way to solve it?
|>
|> Any help is greatly appreciated.
|>
|> Rich
|>
```

If you devise a solution, I would love to know what it is.

Thanks!

--

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Subject: Re: Problem Plotting Symbols on a Map?

Posted by [grunes](#) on Wed, 07 Jun 1995 07:00:00 GMT

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In article <3r28t9\$4bpe@enzu.unm.edu> rdhunt@unm.edu writes:

```
> I am having trouble drawing filled circles on a map in IDL 4.0.
```

...

Actually your problem quite simple. Assuming RSI hasn't yet fixed their map_set routine, it simply doesn't draw things ere it says they are--e.g., features are drawn at the wrong coordinates.

I devised a junky solution, which served my own needs, bypassing map_set altogether, and using a very simple projection.

-----CUT HERE-----

```
;-----
; Routine to Draw a map.
;-----
pro draw_map,latmin,latmax,lonmin,lonmax,title

    ;Draw a map. It will then be possible to
    ; plot over the map using
    ;   PLOTS,LON,LAT,NOCLIP=0
    ; (LON and LAT are arrays in degrees).

    ;latmin,latmax=minimum,maximum latitude (>0=north)
    ;lonmin,lonmax=minimum,maximum longitude (>0=east)
    ;title=plot title

    ;By Mitchell Grunes.
    ;Simplified from userlib procedure map_set.pro,
    ; because I could not figure out a way to get
    ; map_set.pro to give a simple rectangular
    ; projection, and because it seemed to be drawing
    ; things in the wrong places.

latmin2=latmin
latmax2=latmax
lonmin2=lonmin
lonmax2=lonmax

    ;Adjust aspect, lat and lon boundaries so that
    ;the lat and lon scales will be the same at map
    ;center. Approximately valid for default postscript
    ;in landscape mode.
aspect=8.3125/6.125/cos((latmin+latmax)/2.*!pi/180)
if (lonmax-lonmin) lt (latmax-latmin)*(aspect*.98) then begin
    d=(latmax-latmin)*aspect-(lonmax-lonmin)
    lonmin2=lonmin2-d/2
    lonmax2=lonmax2+d/2
endif else if (latmax-latmin) lt (lonmax-lonmin)/(aspect*.98) then begin
    d=(lonmax-lonmin)/aspect-(latmax-latmin)
    latmin2=latmin2-d/2
    latmax2=latmax2+d/2
endif
xticks=fix(lonmax2-lonmin2)
yticks=fix(latmax2-latmin2)
if xticks lt 3 or xticks gt 15 or lonmin2 ne fix(lonmin2) $
or lonmax2 ne fix(lonmax2) then xticks=0
if yticks lt 3 or yticks gt 15 or latmin2 ne fix(latmin2) $
```

```

or latmax2 ne fix(latmax2) then yticks=0
plot,[lonmin2,lonmin2,lonmax2,lonmax2,lonmin2], $
  [latmin2,latmax2,latmax2,latmin2,latmin2],xstyle=1,ystyle=1, title=title, $
  ticklen=1,xticks=xticks,yticks=yticks
close,1
openr,1,FILEPATH('supmap.dat',subdir = "maps"),/xdr,/stream
fbyte = [ 0, 71612L, 165096L]
nsegs = [ 283, 325, 594 ]
ij=2          ;0=course resolution map,1=U.S. only,2=All
point_lun, 1, fbyte(ij)
for i=1,nsegs(ij) do begin
  npts = 0L
  maxlat=0. & minlat=0. & maxlon=0. & minlon=0.
  readu,1,npts,maxlat,minlat,maxlon,minlon
  npts = npts / 2      ;# of points
  xy = fltarr(2,npts)
  readu,1,xy
  if (maxlat lt latmin2) or (minlat gt latmax2) then goto,skipit
  if (maxlon lt lonmin2) or (minlon gt lonmax2) then BEGIN
    if (lonmax2 gt 180 and maxlon + 360 ge lonmin2) then goto,goon
    if ( lonmin2 lt -180 and minlon -360 le lonmax2) then goto,goon
    goto, skipit
  endif
goon:
  lat = xy(0,*) & lon = xy(1,*)
  plots, lon,lat,NOCLIP=0,color=3*d.n_colors/9
  empty
skipit:
endfor
end

```

Subject: Re: Problem Plotting Symbols on a Map?
 Posted by [rdhunt](#) on Mon, 12 Jun 1995 07:00:00 GMT
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I have found a crude but quick solution to plotting filled circles on a map projection. The trick is to identify the lat/lon location for the center of the circle, convert this to device coordinates, then plot and fill the circle using the /DEVICE option instead of the /DATA option.

Rich

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                Richard D. Hunt
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