
Subject: Satellite projection contour plots

Posted by [Matt\[3\]](#) on Wed, 30 Mar 2011 16:10:46 GMT

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Hi All,

I'm trying to create a few contour plots on a satellite map projection. Mostly they look great, but from some viewing angles (the lon/lat that the 'satellite' is over), there seems to be some strange artifacts in my eps and png output. For example, I've put a plot up here (<http://dl.dropbox.com/u/13779929/h00200.png>) which looks good in the tropics, but goes a little crazy at the high-latitudes.

I've checked the output with antialiasing turned off (or on, whichever it is), but same result. There are hints of similar behavior for other projections, but not as severe as with the satellite. Other color tables and number of contour levels etc. seem to lead to the same result.

The map has been created using Dave Fanning's routines and the old fashioned map_set (see below). If there's something I'm missing, or if there's a better way to do this with the new graphics, I'd love to hear it!

Cheers,

Matt

```
ps_start, filename=outeps, /nomatch, ysize=ysize, xsize=xsize,  
xoffset=0., yoffset=0.
```

```
!p.multi=[0, 2, 1]  
pos=[0.05, 0.1, 0.8, 0.9]  
cgloadct, 0
```

```
MAP_SET, angle_lat, angle_lon, 0., position=pos, /noborder, /  
satellite, SAT_P=[3., 0., 0.]
```

```
cgLoadCT, 25, /brewer, nColors=CtN, /reverse
```

```
cgcontour, IM_append, lon_append, lat, levels=indgen(ctN)+ctB, /  
fill, /overplot  
;IM_append is the image, scaled to be a floating point number  
between 0. and 255. (CtN=256, CtB=0).
```

```
cgloadct, 0  
map_continents, thick=2
```

;Color bar plotted here

ps_end, /png

Subject: Re: Satellite projection contour plots

Posted by [David Fanning](#) on Tue, 05 Apr 2011 00:04:05 GMT

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Matt writes:

> I only just got around to trying this, but it seems like you're right,
> using /cell_fill is the answer here! Everything looks OK at the date
> line for me too (I've added an extra longitude to my data so that it
> 'wraps around', but I'm assuming you did this in your plot?).

No, the "wrapping around," which I tried first turned out to be unnecessary when the data is gridded correctly. As I say, I'm working on an article to explain all this. (The darn book needs updating, too. Sigh...)

The gridding also apparently has a lot to do with the "scratch marks" in the PostScript file. I have some extremely interesting figures I am trying to understand right now. Big basketball game tonight, but maybe I'll finish this in the morning. :-)

Cheers,

David

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David Fanning, Ph.D.

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

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