Subject: CGMAP_GSHHS: problem with land/water colors
Posted by Matteo on Wed, 14 Aug 2013 19:08:27 GMT
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Hi,

I noticed using CGMAP_GSHHS.PRO that if no ocean waters are present on a map, the LAND keyword for the land color does not work properly. Here's a snippet code that reproduces the problem (note that it is very similar to the one included in the examples of the CGMAP_GSHHS header). Just set your PATH to include the CGxxx routines and the correct directory for the gshhs.b file.

```
PRO test_gshhs

!path=[SET PATH HERE]
datafile='./gshhs_h.b' [SET PATH TO GSHHS_H.B HERE]

 ; include some water
 map_limits = [29.,-95.,34.,-88]
 ; land only
 ;map_limits = [31.,-95.,34.,-88]

       cgDisplay, 500, 350
       pos = [0.1,0.1, 0.9, 0.8]

  ; set map projection
 cgmap_set, limit = map_limits, /mercator, position=pos

  ; set a SKYBLUE background
       cgColorfill, [pos[0], pos[0], pos[2], pos[2], pos[0]], $
                 [pos[1], pos[3], pos[3], pos[1], pos[1]], $
                 /Normal, Color='skyblue'

  ; issue CGMAP_GSHHS
       cgMap_GSHHS, datafile, Fill=1, Level=4, Color='black', /Outline, $
        Land='tan', Water_color='skyblue', NoClip=0

  ; overdraw state borders
 cgmap_set, limit = map_limits, /mercator, /continents, position=pos, $
    color='yellow', /usa, /noerase
END
```

Run the program first with map_limits set to include some Gulf waters around Lousiana (map_limits = [29.,-95.,34.,-88]). Then comment in the 'land only' option to exclude the water at the lower latitudes.
In the latter case I obtain a SKYBLUE rather than a TAN background, which is obviously wrong.

Furthermore, the WATER_COLOR keyword only works for inland water bodies, therefore CGCOLORFILL must be used to start from a SKYBLUE background.

You will also notice that having to reissue CGMAP_SET at the end to draw state borders (yellow) over everything leads to imperfect overlap with the black GSHHS shorelines, expected because of the different resolution.

I would appreciate if anybody could take a look at it. Apologies to David if I'm mistaking the correct usage of his routine.

m
