
Subject: Trouble plotting GSHHS shapefile

Posted by [timothyja123](#) on Mon, 24 Mar 2014 21:46:17 GMT

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Hi Guys,

I'm having trouble plotting the GSHHS shapefile as found here:

<http://www.ngdc.noaa.gov/mgg/shorelines/data/gshhg/latest/>

I believe its go something to do with the way I'm using mapset but I cant figure it out basically my code seems to have trouble drawing the antarctic region. The result also means I cant use polyfill to colour the land as it just draws over everything due to the same issues with plot.

I've replaced my plotting code with a call to the coyote drawshapes routine but it has the same issue. Anyway here is my code any help is greatly appreciated.

```
pro plot_gshhs_shapefile
```

```
    limit = [-90, 0, 90, 360]
```

```
    POLON  = 0; limit[1] + 0.5*(limit[3] - limit[1])
```

```
    POLAT  = 0 ; default
```

```
    map_set, POLAT, POLON, 0, /cylindrical, ISOTROPIC=1, LIMIT=limit, noborder=1, noerase=1,  
    xmargin = 0, ymargin = 0
```

```
    Stack = Scope_Traceback(/Structure)
```

```
    Filename = Stack[N_elements(Stack) - 2].Filename
```

```
    If (Arg_Present(BaseName)) then Begin
```

```
        BaseName = File_BaseName(Filename)
```

```
    EndIf
```

```
    sourcePath = File_DirName(Filename, _Extra = Extra)
```

```
    colour = '476A34'
```

```
    file = filepath('GSHHS_i_L1.shp', root_dir=sourcePath,  
    subdir=['data','gshhg_shapefiles','GSHHS_shp','i'])
```

```
    ;drawshapes, file
```

```
    oGshhsShape = obj_new('idlffshape', file)
```

```
    oGshhsShape -> getproperty, n_entities = num_ent
```

```
    entities = oGshhsShape -> GetEntity(/All, /Attributes)
```

```
    ; Add the data from the shape file.
```

```

FOR i = 0L, N_Elements(entities)-1 do begin

    entity = entities[i]

    lats = reform((*entity.vertices))[1,*])
    lons = reform((*entity.vertices))[0,*])

    parts = *entity.parts

    FOR iPart = 0, n_elements(parts)-1 DO BEGIN

        startVertIdx = parts[iPart]
        endVertIdx = (iPart EQ entity.n_parts-1) ? (N_ELEMENTS(lats)-1) : (parts[iPart+1]-1)

        part_lons = lons[startVertIdx:endVertIdx]
        part_lats = lats[startVertIdx:endVertIdx]

        ;polyfill, part_lons, part_lats, /data, color=colour
        plots, part_lons, part_lats, /data
    ENDFOR

    PTR_FREE, entity.vertices
    PTR_FREE, entity.measure
    PTR_FREE, entity.parts
    PTR_FREE, entity.part_types
    PTR_FREE, entity.attributes

ENDFOR

end

```

Subject: Re: Trouble plotting GSHHS shapefile
Posted by [timothyja123](#) on Tue, 25 Mar 2014 02:28:58 GMT
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ok so it turned out I needed to use map_proj_init() to use the correct projection but now how do I move the map so its centered in a different location like I can do with map_set?

I tried setting the center_longitude param but then again things are not plotted correctly.

```

pro plot_gshhs_shapefile

```

```

limit = [-90, 0, 90, 360]
POLON  = limit[1] + 0.5*(limit[3] - limit[1])
POLAT  = 0 ; default

```

```

junk = MAP_PROJ_INIT( 'Cylindrical', ELLIPSOID=24, CENTER_LONGITUDE=POLON)
uv_box = junk.uv_box
Plot, uv_box[[0, 2]], uv_box[[1, 3]], Position=[0.1,0.1,0.9,0.9], $
  /Nodata, XStyle=5, YStyle=5, /NoErase

```

```

Stack = Scope_Traceback(/Structure)
Filename = Stack[N_elements(Stack) - 2].Filename
If (Arg_Present(BaseName)) then Begin
  BaseName = File_BaseName(Filename)
EndIf
sourcePath = File_DirName(Filename, _Extra = Extra)

```

```

colour = '476A34'

```

```

file = filepath('GSHHS_i_L1.shp', root_dir=sourcePath,
subdir=['data','gshhg_shapefiles','GSHHS_shp','i'])

```

```

oGshhsShape = obj_new('idlffshape', file)

```

```

oGshhsShape -> getproperty, n_entities = num_ent

```

```

entities = oGshhsShape -> GetEntity(/All, /Attributes)

```

```

; Add the data from the shape file.
FOR i = 0L, N_Elements(entities)-1 do begin

```

```

  entity = entities[i]

```

```

  lats = reform((*entity.vertices))[1,*])
  lons = reform((*entity.vertices))[0,*])

```

```

  parts = *entity.parts

```

```

  FOR iPart = 0, n_elements(parts)-1 DO BEGIN

```

```

    startVertIdx = parts[iPart]
    endVertIdx = (iPart EQ entity.n_parts-1) ? (N_ELEMENTS(lats)-1) : (parts[iPart+1]-1)

```

```

    part_lons = lons[startVertIdx:endVertIdx]
    part_lats = lats[startVertIdx:endVertIdx]

```

```

    result = MAP_PROJ_FORWARD(part_lons, part_lats, MAP_STRUCTURE=junk)

```

```

    polyfill, result, color=colour
    plots, result
  ENDFOR

```

```
PTR_FREE, entity.vertices  
PTR_FREE, entity.measure  
PTR_FREE, entity.parts  
PTR_FREE, entity.part_types  
PTR_FREE, entity.attributes
```

```
ENDFOR
```

```
end
```
