Subject: Re: filled contour workaround Posted by afl on Thu, 02 Mar 1995 00:17:27 GMT

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In article <3j2tmn$h1m@ncar.ucar.edu>, caron@acd.ucar.edu (John Caron) writes:
|>
> After putting up with filled contours not working correctly.
|> I finally stumbled upon a work-around. I am plotting global data
> with a world map in /cylindrical projection. So what I used to
l> do was:
|> 1) call map_set to establish coord.system
|> 2) call contour to draw filled contours, using /overplot
|> 3) call map_continents to put world map on top
> only trouble is, often but not always some of the contours would not fill in.
|> RSI fixed some of the problem in a release, but it has never worked right.
|>
|> Here's the workaround:
> 1) call map set to establish coord. system
|> 2) call contour to draw filled contours, without /overplot: now the
> contours are filled correctly, apparently because you let contour routine
> establish its own coord. system
|> 3) call map set again, guessing at the values that make its coord
> system the same as the one mysteriously selected by contour
> 4) call map continents to put world map on top
|>
l> Heres the workaround code, the last three lines to contour are new:
|>
   ; establish projection
|>
   map_set, /cylindrical, /noerase, color = 1, limit = limits, /noborder
|>
   if cc contour filled then begin
|>
     contour, arr, cc_lon(cc_lon0:cc_lon1), cc_lat(cc_lat0:cc_lat1), $
|>
       levels = cc_contour_levels, $
|>
       c_colors = cc_contour_colors, color = 1, $
|>
       max_value = imd_missing_data, $
|>
       /overplot, /fill, /follow, /closed, /noerase
|> :
       xmargin = [0,0], ymargin = [0,0], $
|>
       xstyle = 4, ystyle = 4, $
|>
       /fill, /follow, /closed, /noerase
|>
|>
     ; draw the continents on top of contours
|>
     ; some funny bug: must "guess" at contour parameters
|>
     map set, /cylindrical, title = plot title(level name(cc pv lev idx)),
|>
|> /noerase, $
       color = 1, limit = limits, $
|>
       xmargin = [4,4], ymargin = [3,3]
|>
     map_continents, color = cc_map_color_idx, mlinethick=1
|>
|>
```

```
|>
```

|> Maybe someone can improve on this workaround. The problem is that the coord

> system

|> is only approximately the same (within a charactor!!). I tried manipulating

l>!x.s and

|>!y.s but it didnt seem to work.

I would simply use the /cell fill option with contour.

This seems to solve many of the problems previously encountered with /fill.

NOTE: Don't use /follow with /cell fill!

Here is a simple example, but cell_fill should handle even tougher cases than this.

```
data = dist(91)
x = indgen(91)*4 - 180.
y = indgen(91)*2 - 90.
c_colors = indgen(12)+82 ; Choose your own colors!!
levels = indgen(12)*6
map set, /cyl, /cont, /grid
contour, data, x, y, levels=levels, c_colors=c_colors, /cell_fill, /over
map_continents
map_grid
```

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