
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:

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>
> 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
> 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
>
> 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 character!!). I tried manipulating  
> !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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```
