Subject: Re: colour-filling contours over maps
Posted by Andy Loughe on Thu, 17 Oct 1996 07:00:00 GMT
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On 17 Oct 1996, Morwenna Griffiths wrote:

> I'm guessing this is an FAQ, but I couldn't find an faq posting - maybe
> our news reader doesn't keep old enough news?
>
> Is there a way of filling contours which have been plotted over a map?

The best way I know of is the following...

```
map_set, 0, 180
contour, dist(46), indgen(46)*8, indgen(46)*4-90, /cell_fill, /over
map_continents
```

Subject: RE: colour-filling contours over maps
Posted by davidf on Sun, 20 Oct 1996 07:00:00 GMT
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Morwenna Griffiths <morwenna@squall.maths.monash.edu.au> writes:

> Is there a way of filling contours which have been plotted over a map?

> I feel I should be able to do it by setting the edge values to zero
> (or something) that will close them and then all should be fine, but I don't
> seem able to do it - should I persevere? or is there a cleverer way?

If it is really necessary to close the open or edge contours (see below) then you can do it by putting the data array into a slightly larger array whose edge values are set to the minimum data value. Suppose your data was in an array with the variable name "ozone". Your code might look something like this:

```
s = SIZE(ozone)
closedArray = REPLICATE(MIN(ozone), s(1)+2, s(2)+2)
closedArray(1,1) = ozone
```

> These contours are open at each side of the map rather than just like a
> semi-circle with one open edge, does this make a difference?

Sometimes. Have you tried using the CELL_FILL keyword with your CONTOUR command? This keyword is similar to the FILL keyword, but is used expressly for open contours.

Another alternative is to put your contour plot on top of an image of the data. You can easily get the effect of filled contour plots, just by

manipulating your color table. Your code will look something like this:

```
MAP_SET, 40, -100, /ORTHOGRAPHIC
TV, MAP_IMAGE(ozone, xx, yy, /BILINEAR), xx, yy
CONTOUR, ozone, lon, lat, NLEVELS=12, /OVERPLOT, /FOLLOW
MAP_SET, 40, -100, /ORTHOGRAPHIC, /GRID, /CONTINENT, /NOERASE
```

Perhaps this gives you some ideas.

Yours,

David

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