
Subject: Contour plots on maps

Posted by [Simon de Vet](#) on Mon, 15 May 2000 07:00:00 GMT

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I have been trying to plot some contour maps onto different map projections, and for the most part, it is working. I have been having some troubles, however...

Sometimes, contours try to connect across the map, cutting diagonally across other lines, instead of terminating at the edges. These lines are not at the borders of the data, merely at the borders of the current projection.

I have also had troubles with filled contours on map projections (Mercator, in my case). While filled plots look nice with no map projection used, with Mercator they are overwritten with white blocks at times, leaving only a few spots of colour. The help says that using map projections can cause filled contour troubles... Are there any workarounds?

Thanks

Simon, a new user.

Subject: Re: Contour plots on maps

Posted by [Martin Schultz](#) on Mon, 22 May 2000 07:00:00 GMT

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Hi Simon,

what helped me often in these situations is to make sure that the data and your map projection are "aligned" correctly, i.e. for a regional plot (using the LIMIT keyword to MAP_SET) you shouldn't have (much) more data than what fits onto the map, and in case you wrap your map around the dateline or play similar tricks, you should also shift your data accordingly. Although CELL_FILL covers many of these situations, I still consider it a somewhat dirty trick and I am only happy after my plots appear similar with or without CELL_FILL.

David: here is what could be the tip of the year 2000 (although not as simpel and short as the decomposed thing): "Why are my (filled) contours so messy?"

Cheers,
Martin

Simon de Vet wrote:

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>
> David Fanning wrote:
>
>> There are several articles that you will really want to
>> read on my web page, but I would start with this one,
>> because you definitely have "holes" in your contour plots:
>
> I found this site, and already have incorporated the solution into my code.
> If I plot my filled contours without a map projection, it plots beautifully,
> with no holes or gaps.
>
> This is the problem: first, the lowest few contours are filled in. Then they
> are all overwritten in white, and the next are filled in. These are also
> whited out, and the last couple are plotted. Only the last ones are visible
> when the plotting is complete.
>
> I am outputting all my plots to postscript files, and not to the screen
>
> I have also tried changing the centre of the plot, as you mentioned, so that
> the data border corresponds to the plot border (Greenwich on the edge,
> instead of the middle.) This eliminates the odd diagonal lines, but does
> nothing to the filled contour troubles.
>
> These problems occur for all map projection types, and never if map
> projection is turned off.
>
> Simon
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```

Subject: Re: Contour plots on maps
Posted by [davidf](#) on Mon, 22 May 2000 07:00:00 GMT
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Martin Schultz (martin.schultz@dkrz.de) writes:

- > David: here is what could be the tip of the year 2000 (although not as
- > simpel and short as the decomposed thing): "Why are my (filled) contours
- > so messy?"

We could use a whole tutorial on filled contour plots. I'd be willing to write some notes up in PDF format (so we could use color), if some of you folks who do this for a living want to jot some down for me. :-)

Cheers,

David

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