Subject: Re: contouring data over a map
Posted by newbie16 on Fri, 09 Jun 2006 15:48:51 GMT
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twh18@yahoo.com wrote:
> Hello,
>
> I am trying to contour a data set in the form of [lat lon value] onto a
> map. I have no problems plotting individual data locations, or
> contouring the data set without the map. I have tried to contour the
> data set on the map first using the overplot keyword with contour, then
> using sph_scat. Both methods fail, saying only "TRIANGULATE: spherical
> triangulation failed".
>
> I can successfully contour a set of 999 randomly generated points onto
> my map. When I increase to 1000 random points, it says "TRI-GRID:
> points are co-linear, no solution". Increasing to 75000 points (the
> size of my data set) returns "TRIANGULATE: spherical triangulation
> failed" again.
>
> There are several posts that hint at similar issues from around ten
> years ago, but I hvaen't found anything that talks about my problem
> specifically. Is there a (very small) upper limit on the number of
> points triangulate can handle? I'm an IDL newby and I would appreciate
> any advice very much.
>
> Thanks,
> Tim

Hello Tim:

I also found myself overplotting a contoured data set onto a map projection. Mind you, my data set spanned a couple of degrees and I am not sure how wide your data area is (such as the whole sphere). In general, what I have used for small areas is the following procedure for a data set of 10,000 points.

Create the following arrays:

XVALUES (longitude)
YVALUES (latitude)
DATA_VALS (corresponding data array for the above locations.)

I then rebinned by a factor of 15 (takes a while though), then:

(1) Create MAP_SET space to be plotted.

(2) Create my own Contour level intervals

(3) Overplot using CONTOUR

(4) Overplot MAP_GRID, continents, rivers, etc.....

Hope it helps....

t.
