Subject: Re: weird contour lines
Posted by Brian McNoldy on Mon, 02 Nov 2009 16:07:32 GMT
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>> Libo Wang writes:
>>> Thanks, David. I've read helpful tips in your website. It is actually
>>> a bit of both aesthetic problem and a science problem! A meteorologist
>>> would probably tell me that my map is not what a standard pressure
>>> field plot should look like!
>
>>> I tried to expand my data from 144*37 to 1440*370 using cubic=-0.5 in
>>> Congrid,the contour map did improved in some parts, but some parts got
>>> worse:
>
>>> http://picasaweb.google.com/lh/photo/pbT1Ftfbx0nqS9O3uw0tGg? feat=dire...
>
>>> The NCEP data is low in resolution: 2.5 degree spacing. What else
>>> could I try?
>

The reason the results look so choppy is because the NCEP data are at 2.5-degree resolution and are near the pole; that results in a rather irregularly spaced grid (still a regular lat/lon grid, but the longitudes converge to a singularity). Anyway, have you tried using SMOOTH on the data like David suggested a couple days ago? This might be too simple, but could actually do the job. Try a variety of widths: 3, 5, 7. Secondly, over what time period are the surface pressure data averaged? Is it a daily field, monthly? Daily fields at 2.5 degrees are generally quite choppy by nature due to poor input data in very high latitudes. Here's a link to a plot I generated on ESRL's website of January 2009 surface pressure:
http://einstein.atmos.colostate.edu/~mcnoldy/tmp/slp_jan2009 .png

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