Subject: Problem with triangulate/trigrid using unevenly distributed data
Posted by Mila Mitra on Thu, 23 May 1996 07:00:00 GMT
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I am facing a problem with regridding/interpolation using
triangulate/trigrid. I am working on a irregular grid which is very
sparsely and irregularly distributed over the globe. For instance
there may be many points over N. America, and only two over Asia
(as these are observing stations). If I try to triangulate/trigrid
over the whole world, the data is interpolated all the way between
N. America to Asia (because of the 2 points therein Asia),when really
there should be 2 separate regions of interpolation in this case.

  Does anyone know if there is a way to define radius of search
or something like that will will enable me to break these into
separate areas, or if my only choice is to manually break these up
into separate small arrays, and then do the regridding/interpolation
and plot them individually back on the continent map.

  Also if I do a map_set and then overplot a contour with commands
like:

1. triangulate,lon,lat,tri,b
(where lon, lat are the individual lon, lat of the observing sites).

2. result=trigrid(lon,lat,data,[1,1])

3. map_set,/grid,/continent

4. contour,result,x,y
where x is an array that runs from min(lon) to max(lon) with a
specing of 1, and y is similarly built from lat.

  The problem is that the contours do not fit back on the
continent boundaries exactly, they jut out. Does anyone know of
a way to solve this?

I would appreciate ideas on these problems...

Thanks,
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