
Subject: Problem with triangulate/trigridd 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/trigridd. 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/trigridd 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 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=trigridd(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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