Subject: INTERPOLATION TECHNIQUES HELP
Posted by Marcos Portabella Arn[1] on Tue, 12 Nov 1996 08:00:00 GMT
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Hi,

I need some help about the idl interpolation functions. I have tried all of them and I could not get any satisfactory result. I supose this is due to my lack of knowledge about them and this is the reason I am writing to this newsgroup list. I am using IDL version 4.0.1 (vms alpha). My problem is the following:

I have three data vectors. The first two are X and Y position coordinates (longitude and latitude) and the third one is the magnitude mesured at each point (in my case, wind measurements). These points have not any order (irregularly gridded points) . In order to make an interpolation of these points in a regurlar grid (with a x and y spacing of half degree, for example) I have tried all three idl functions that allow this type of interpolation. The first one, the TRIGRID function, is very fast but the results are poor (moreover, at the grid border, where it oftenly needs to extrapolate, the results are incredibily wrong, even if I set the EXTRAPOLATE keyword). The second one, the KRIG2D function, gives much better results but the major problem is the execution time: the time increases exponentially with the number of points. I do not know if changing the function parameters (A, CO, C1) may reduce the execution time, but as far as I have tested with the idl help examples I could no get any better result. The third and last one, the MIN_CURVE_SURF function, has the same time restriction as the KRIG2D function.

I would like to know if there is any other interpolating function for irregularly gridded points that gives better time results; or, if using more addequatly the KRIG2D or MIN_CURVE_SURF functions I can get better time results as well.

Thank you very much,

Marcos Portabella