
Subject: MAP_SET and Polar Stereographic Projections
Posted by [Peter Hollemans](#) on Wed, 26 Jul 1995 07:00:00 GMT
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PROBLEM: We have a set of data that was sampled on a polar stereographic grid, along with two 2-dimensional arrays of the latitudes and longitudes for the sampling points. To make a contour plot of the data, we use MAP_SET followed by CONTOUR. For MAP_SET, we use the /STEREO keyword, and specify (90, 0) as the center of the projection. We also use LIMITS to specify the extents of the data. The resulting plot is a "pie-slice" of the globe rather than a clipped-down version of just the data region. If we assume that the data region is square as projected onto the stereographic plot (ie. it follows the horizontal and vertical directions of the plotting device) then how could we plot just the area of interest?

POSSIBLE

SOLUTIONS: i) Use some sort of image-clipping routine after plotting the data to the screen, but this would be device and resolution dependant. As well, how can we find the edges of our data?

ii) Plot the data to another projection (ie: cylindrical) and doctor the boundaries of the data to be square. We don't really want to lose or gain data that way, but we do want a square plot because it's easier to look at and compare to other plots.

iii) Use CONTOUR with the data and draw in the continental boundaries using the "supmap.dat" XDR data file. We can be assured of a rectangular region this way.

We're investigating this route, but we're concerned about RSI changing the format of "supmap.dat" in the future.

iv) Get RSI to change the LIMITS option so that it takes a complete polygon instead of assuming a LAT-LON square.
