Subject: map_set, contour, path_filename norm to lon,lat coord
Posted by mckie on Sun, 10 May 1998 07:00:00 GMT
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After using MAP_SET and then CONTOUR to draw contour lines on a map projection, I am trying to find a reasonable way to obtain lists of longitude and latitude coordinates along the contours that were drawn.

Calling CONTOUR a second time with the PATH_FILENAME options gives normalized coordinates along all contour lines. (The PATH_INFO and PATH_XY options to CONTOUR do not seem to work well, because they apparently only return info about closed contours. Using the /CLOSED option to CONTOUR makes things worse with stray contour lines crossing the center of the plot from the extreme boundaries.)
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So the less efficient PATH_FILENAME option to CONTOUR generates an unformatted file with all the normal coodinates, and I can then input this info. But how do I then convert these lists of normalized coordinates to longitude and latitude for the projection as specified in the most recent call to MAP_SET?

The CONVERT_COORD routine does not seem to do the job, as a request to convert from normalized TO_DATA results in normalized coordinates.

There are hints in various idl documentation that the !MAP system variable may be involved, but I have been unable to locate any details about how to use !MAP to convert normal coord back to lon lat in a general way for any projection.

Does a NORMAL_TO_LON_LAT routine exist for use after a call to MAP_SET? I'm hoping to use this with !P.MULTI for multiple maps on each frame, so I am guessing it needs to handle normalized coordinates relative to the entire frame, and not relative to the frame subset for each map.

Thanks
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