Subject: Re: How to display data
Posted by Erard on Wed, 02 Sep 1998 07:00:00 GMT
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In article <35E71BA7.92776596@atl.mediaone.net>, dewhurst@atl.mediaone.net wrote:

> I have recorded the values of a scalar variable on the surface of a
> sphere. The values are measured on a grid of latitude/longitude
> points. I want to find a way to display the data. I would like to use
> something like shade_surface, but the domain is a sphere. One way would
> be to produce something like a contour map, where the elevation of a
> point on the sphere represents the value of the function, suitably
> scaled. But, I don't know how to do this in IDL. I admit I have never
> gone into any of the mapping routines. Any suggestions?

The simple solution is to use map_set. You need to chose the projection carefully, depending on what you want to display. There is always a spatial deformation when plotting the whole sphere surface on a plane, so you must chose the deformation that better suits you. Plus, some projections will not plot the whole surface of the sphere. Sinusoidal projection will conserve the surface ratio for example and are able to plot the whole surface, while azimuthal projections will preserve angles. You have to identify what you want to show, then pick up the right solution.

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