Subject: Reprojecting Posted by dsteinberg on Thu, 08 Apr 2004 14:09:36 GMT

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I am having trouble reprojecting images within IDL. I want to be able to reproject the image arrays permanently, i.e. not just for display. In other words, I would like to be able to read in EOS-HDF or GeoTIFF files, reproject them into a desired projection and write them out as new GeoTIFF's (in their new projection). So far I have run into a lot of problems, and I am a bit stuck. If anyone has any leads (or ideally .pro's) it would be greatly appreciated. Thanks.

-Dan

Subject: Re: Reprojecting

Posted by JD Smith on Fri, 09 Apr 2004 18:32:37 GMT

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On Thu, 08 Apr 2004 07:09:36 -0700, Dan Steinberg wrote:

- > I am having trouble reprojecting images within IDL. I want to be able
- > to reproject the image arrays permanently, i.e. not just for display.
- > In other words, I would like to be able to read in EOS-HDF or GeoTIFF
- > files, reproject them into a desired projection and write them out as
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- > of problems, and I am a bit stuck. If anyone has any leads (or
- > ideally .pro's) it would be greatly appreciated. Thanks.

As Ben mentioned last week, the MAP\_PROJ\_\* routines let you access the internal projection code (both forward and in reverse), and I've used them successfully with INTERPOLATE to construct huge (~1Gpix) tiled mappings directly with no display device:

. . .

map=map\_proj\_init('Aitoff',SPHERE\_RADIUS=180.0D/!DPI, \$
LIMIT=[quad\_lat\_min,quad\_lon\_min, \$
quad\_lat\_max,quad\_lon\_max])

. .

lonlat=map\_proj\_inverse(x,y,MAP\_STRUCTURE=map)
x=reform((lonlat[0,\*]-lonmin)/scale,width,height,/OVERWRITE)
y=reform((lonlat[1,\*]-latmin)/scale,width,height,/OVERWRITE)
projected\_result=interpolate(array,x,y,MISSING=!VALUES.F\_NAN)

That particular SPHERE\_RADIUS value is set to map x,y coordinates in

degrees of longitude and latitude (as my input images contain). Otherwise x & y refer to physical coordinates on the surface of the Earth (which might also be useful to you). See MAP\_PROJ\_INIT for more.

JD