Subject: Re: displaying an image in simple geographic coordinates
Posted by James Kuyper on Fri, 25 May 2007 20:54:14 GMT

Matt wrote:
> does anyone know how i can display an image in simple geographic
> coordinates using IDL? all documentation that i have read deals with
> reprojection images to various projections or reprojecting a window to
> a given image's projection. geographic coordinates is never listed as
> an option in any of these functions. maybe it's because i'm dealing

In IDL, the default projection is cylindrical, which is (almost) the
same thing as what you're calling geographic coordinates. In this
projection, the x coordinate is the longitude in radians, and the y
coordinate is the latitude in radians.

```
IDL> map_set, /continents, /grid
IDL> print,map_proj_forward([-90,90],[-45,45])*!RADEG
     -89.999995     -44.999998
      89.999995      44.999998
```

You can also use MAP_PROJ_INIT, but you have to override the default
sphere radius:

```
IDL> proj = MAP_PROJ_INIT('Equirectangular', SPHERE_RADIUS=1.0)
IDL>  print,map_proj_forward([-90,90],[-45,45],map_structure=proj) *!
RADEG
     -89.999995     -44.999998
      89.999995      44.999998
```

Alternatively, you could simplify by building the conversion factor
into the projection itself:
```
IDL> proj = MAP_PROJ_INIT('Equirectangular', SPHERE_RADIUS=!RADEG)
IDL> print,map_proj_forward([-90,90],
[-45,45],map_structure=proj)
     -89.999995     -44.999998
      89.999995      44.999998
```