Subject: Re: how to make lat/long grid for MODIS in IDL
Posted by David Fanning on Thu, 14 Nov 2013 13:55:11 GMT
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dm_gty88 writes:

> It's in the limits keyword. Did I use it correctly?

No, you don't need the LIMITS keyword. Get rid of it. :-)

> MinLon = 111.6969
> MaxLon = 127.7102
> MinLat = 10
> MaxLat = 20

Writing values like this suggests these are NOT the corner pixels. Are they? How do you know this? You need to get the image into a rectangular box. You can do this if you know the CORNER PIXEL values of your image in latitute and longitude. These are EXTREMELY unlikely to be the minimum and maximum values of latitude and longitude for a sinusoidal projection. Once you know these, here are the rest of the directions again.

;** **
Now, set up your map projection with Map_Proj_Init. Take your CORNER PIXEL lat/lon values and forward transform them into projected meter space. Take these numbers (four lats and four lons, converted into projected meters) and label the paper with the image on it. Draw some axes while you are at it along the left and bottom of the image.

When you are finished, take your pen and connect the four corner pixels in clockwise order. You are looking, are you not, at a rectangular box in a XY coordinate system. And, you know the values of all four corners of the box. If you remember fourth grade math at all, it should be possible to figure how how to assign [x,y] position values to each of the screen grid cells inside the rectangle, given that you know *exactly* how many of them there are. If you don't, ask the image how big it is.

Each pixel now has a "location" in the XY grid. But, you want each pixel's "location" in latitude and longitude. Simply take your handy-dandy map projection object or function and *inverse* transform those XY locations back to latitude/longitude locations.
;** **

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thue. ("Perhaps thos speakest truth.")
