Subject: Re: Projection Parameters in ENVI
Posted by envi35 on Thu, 21 Oct 2004 17:36:57 GMT

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Hi,Thank you both very much. Is there a way I can convert this process
in an ENVI Or IDL program? e.g.use ENVI_MAP_INFO_CREATE routine?

Regards,Jenny

savoie@nsidc.org wrote in message news:<ywkuvfd68r5r.fsf@snowblower.colorado.edu>...
> I'm posting this for a colleague.
>
>
> Jenny:
>
> I think the definition of the map parameters will make better sense if you
> enter them through the Map Info dialogs rather than simply editting the
> header. Open the image file (for which no corresponding .hdr file exists)
> from the ENVI main menu by selecting File->Open Image File. Select the image
> file. You should get a Header Info dialog. Enter the number of samples
> (columns), lines (rows), bands (typically 1), Offset (typically 0 if there is
> no header in the file), xstart and ystart (typically 1), Data Type, and Byte
> Order (Little Endian = Host (Intel) or Big Endian = Network (IEEE)). Then
> before you click Ok, click Edit Attributes, and select Map Info....For Image
> Coord X and Image Coord Y, enter 1.0, 1.0 if you know the lat/lon or meters
> from the projection center for the upper left corner of the upper left pixel,
> or 1.5, 1.5 for the center of the upper left pixel. Enter the Pixel Size in
> meters for X and Y. Map Rotation is typically 0.0 since it refers to rotation
> around the center of the map not the center of the projection. Click Change
> Proj...and then click Select New Projection New....From the Customized Map
> Projection Definition, Enter a name for your projection (e.g. Polar
> Stereographic North), and select Polar Stereographic from the list of
> Projection Types. Then select your Datum from the Projection Datum list, or
> toggle Projection Datum to specify a Projection Ellipsoid which, if you
> select User Defined, will allow you to enter your own A and B (the semi-major
> and semi-minor axes). Enter False easting and northing (typically 0), click
> Toggle DMS <-> DD and enter 70 for Latitude of true scale and -45 for
> Longitude down below pole (which should read Longitude up above pole if
> Latitude of true scale is negative). Then click Ok. You'll be given an option
> to save the parameters in your existing map_proj.txt (for which you may not
> have write access) or you can specify a new map_proj.txt. If you do the
> latter, you should eventually edit your Preferences (from the ENVI main menu,
> select File->Preferences->User Defined Files and enter the new path for Map
> Projection File; you should then save the configuration file to a location
> from which you will start ENVI). Then click OK in the Projection Selection
> Dialog. You should see the your new projection name in the Proj : field. If
> you have meters for your upper left corner, enter them as the X value
> (negative if left of projection center) in the E box and the Y value

> (negative if below the projection center) in the N box. If you have lat-lon
> for the upper left corner, click the toggle button next to the Proj :
> name. Click Ok in the Edit Map Information dialog, and Ok in the Header Info
> dialog. You should see a Map Info icon in the Available Bands List, and a
> .hdr file should have been created. You can then verify that the geolocation
> looks good by selecting Tools->Cursor Location/Value. You can also now look
> at the values in the header file.
>
> For more information on map projections, see "Map Projections -- A Working
> Manual", John P. Snyder, US Geological Survey Professional Paper 1935, United
> States Government Printing Office, Washington,: 1987.
>
> Hope this helps.
> --Terry
>
>
> envi35@yahoo.ca (Jenny) writes:
>
>
>> Hi,
>> Could anyone tell me about the meaning of the parameters in the ENVI
>> map projections table? In the online help of ENVI, there is a table
>> including all the map projections in ENVI, such as projection name and
>> description and ENVI projection number. For example, for the Polar
>> Stereographic projection (31), a,b,lat0,lon0,x0,y0,[datum],name, are
>> the requred parameters. I've searched hard to try to find the
>> explanations for these parameters, but failed. I know the a and b are
>> semi-major and semi-minor axis. But how can I know if the lat0/lon0
>> are for the center or for the origin of the map? Do those parameters
>> always have the same meanings for all the projections in the table?
>>
>> My image data is centered on the north pole, the reference lon/lat is
>> (-45,70), and I know the lon/lat pairs for all pixels. I tried to set
>> the params for ENVI_MAP_INFO_CREATE differently, but when I opened the
>> image in envi, it is never right.
>>
>> Any hints are welcome & appreciated,
>> Jenny