Subject: Re: Best routines for mapping satellite images
Posted by Liam E. Gumley on Thu, 30 Oct 2014 16:20:41 GMT
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On Wednesday, October 29, 2014 4:08:27 PM UTC-5, Steve Super wrote:
> On Monday, August 25, 2014 3:13:01 PM UTC-4, Steve Super wrote:
>> Does anyone have any suggestions for which routines are best for projecting satellite images? I have an un-projected image array, along with associated lat/lon arrays that I would like to map and then add some other layers/annotations.
>>
>> I have tried many different approaches (i.e., old IDL procedures, new IDL graphics functions, CG) with varying, but insufficient results.
>>
>> Thanks,
>> Steve
>
> Sorry I missed all these replies, I put this problem aside for while and forgot to check back.
>
> To answer some of the questions:
>
> -Yes the coordinates are in degrees and are not evenly spaced (non-gridded data).
> -The lat/lon arrays have the same dimensions as the image data.
>
> The data I am working with is NPP VIIRS M-band data, which I am attempting to use to create a true-color image. My desired outcome is to have a warped image that retains the original dimensions of the data. I want to then focus on a subset of the image and highlight pixels of interest, as well as plot the path of CALIPSO overpass, which is based on lat/lon as well.
>
> So far the closest I have come to what I believe is a good result was done using the 'map_set' and 'map_patch' procedures. However, in this case boundaries and coastlines do not quite match up, and there is no way to specify that the image dimensions remain the same as the input array.
>
> Thanks for the comments and help.
> -Steve

Steve,

The POLAR2GRID package will ingest VIIRS M-band SDR HDF5 files (image and geolocation) and create high quality true color images in GeoTIFF format. Several different map projections are available, including Google Earth. Once you have the imagery in GeoTIFF format, it should be straightforward to load and georeference the image in IDL. POLAR2GRID provides similar features for MODIS Level 1B HDF4 files.

POLAR2GRID is freely available here:

http://cimss.ssec.wisc.edu/cspp/npp_polar2grid_v1.2.shtml

You will need a 64-bit Linux system to run the software.

Cheers,
Liam.
Practical IDL Programming
http://www.gumley.com/