Subject: Re: Need GOES Image Expert
Posted by Mark Conner on Thu, 20 Mar 2008 17:08:37 GMT
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On Mar 17, 7:13 pm, kBob <KRD...@gmail.com> wrote:
> On Mar 17, 5:21 pm, David Fanning <n...@dfanning.com> wrote:
>> David Fanning writes:
>>> The MAP_PATCH method gets me closer. (And looks a lot better
>>> if I wear my old glasses.) If I pretend not to notice the
>>> bottom of the map, I may be OK.
>
>> I'll probably write an article about this, but I think
>> the bottom line is there is no good way to do this
>> exactly. The MAP_PROJ_INIT method is even worse than
>> the MAP_SET method, and for exactly the reason I mentioned
>> the other day: MAP_PROJ_INIT doesn't give you the ability
>> to specify the eight-element LIMIT you need to create the
>> proper map projection space.
>
>> I hate to be getting on a new soapbox, but we need
>> better map projection support in IDL. :-(
>
>> Cheers,
>
>> David
>> --
>> David Fanning, Ph.D.
>> Fanning Software Consulting, Inc.
>> Coyote's Guide to IDL Programming:http://www.dfanning.com/
>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
>
> Don't base your experience with GOES that ITTVIS needs better map
> projection support. GOES is a notorious wobbler. NOAA provides GOES
> image as raw data. That is why NASA GSFC provides complex algorithm to
> do the navigation and they don't work all the time, either. Loop some
> GOES data and watch the clouds dance. Especially after they do some
> station keeping.
>
> EUMETSAT does a great job remapping their METEOSAT data before they
> releasing it to the public. Navigation wise, working with METEOSAT
> data is a dream and GOES data can be a pain most of the time.
>
> Kelly Dean
> Fort Collins, CO- Hide quoted text -
>
> - Show quoted text -

There isn't really a way to map GOES data using an IDL map projection

(or any other, such as ESRI). To do a proper job on it, you need to remap the data. I've never been thrilled with IDL's MAP_* for remapping/regridding, so I pretty much do my own. The best way to do it is to have a lat/lon-to-i/j function so that for each point in your desired grid, you get to the i/j coordinates in the original data. This generally requires the full GVAR data stream which contains the necessary metadata. If you have only already-computed lats/lons, then you're kinda stuck with a search mechanism.

If you want the complete gory details on how to do this for GVAR data, look at the ELUG document at this page:
http://www.osd.noaa.gov/gvar/gvardownload.htm

The FORTRAN code in this document has been translated to IDL here:
http://www.ncdc.noaa.gov/oa/rsad/satfaq/class-goes-nav.html (download the tarball towards the bottom of the page, look at the mcidas_nav.pro file)

Bottom line is that it's not an easy solution.

METEOSAT (1st and 2nd generation) and MTSAT are much easier because they are in a normalized geostationary projection that might even be directly compatible with the geostationary projection in IDL (haven't tried it).

- Mark

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