Subject: Re: GOES Follow-up Question
Posted by David Fanning on Tue, 18 Mar 2008 18:10:01 GMT
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David Fanning writes:

> Clearly, the xscale and yscale values are wrong, since
> the tie point (the 2nd value) is in the right place.
>
> Why are they wrong?
>
> The one assumption I make that I cannot prove is
> that the corners of the warped image have the same
> lat/lon value as the corners of the unwarped GOES
> image and the same center. Is this assumption valid?
>
> If not, how can I determine the corner lat/lons of
> the warped image?

I might have known the one assumption I was making would screw me up. But even then, IDL had more curve balls to throw at me. :-(

OK, I needed to warp the latitude and longitude arrays, in the same way I warped the image. I don't know how to do this, other than to use MAP_PATCH, so I tried that:

```
warp = Map_Patch(peruimage, peru_lon, peru_lat)
warp_lat = Map_Patch(peru_lat, peru_lon, peru_lat)
warp_lon = Map_Patch(peru_lon, peru_lon, peru_lat)
```

This worked OK, except for the fact that the first column of warp_lat and warp_lon contain all zeros, instead of values they were suppose to have. After I extrapolated from columns 1 and 2, to fill in column 0, then I could calculate the latitude and longitude corners of the warped image. They are NOT the same as the latitude and longitude of the original image.

Original lat/lon corners

```
-99.3065     -19.4763
-98.1629      11.8074
-51.9875      11.8052
-50.8531     -19.4725
```

Warped lat/lon corners

```
 -97.460799      -19.244392
```

-97.690084 12.663992
-52.490521 12.664713
-52.718553 -19.243647

Using the warped corners to produce the scale factor
and tie points in UV space, gave me a perfect fit
in the GeoTiff output.

I'll write an article, because no one should have to go
through this by themselves. :-(

Does anyone have ANY idea why the first column of
warped latitude and longitudes are screwed up? That's
sort hard to explain in an article.

Cheers,

David
--
David Fanning, Ph.D.
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
