Subject: Re: AVHRR Image Mapping Problem
Posted by Paul Van Delst[1] on Fri, 15 Dec 2006 16:11:45 GMT
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David Fanning wrote:
> Folks,
>
> Does anyone have any experience working with AVHRR NDVI
> image data or Albers map projection? I have obtained
> the data, which is of the African continent from here:
>
> ftp://ftp.glcf.umiacs.umd.edu/glcf/GIMMS/Regional/Albers/Afr ica
>
> The image is in an Albers Conical equal area projection
> and the centers of the four corner pixels are known from
> the documentation:
>
> ; YX coordinates of the four corners (LL, UL, UR, LR)
> longitude = [-23.49, -24.6, 64.523, 63.414]
> latitude = [-42.243, 43.711, 43.712, -42.242]
>
> This is a GeoTiff file, so I also pull the Standard
> Parallels out of the geotiff information stored in
> the file (they are -19 and 21).
>
> I follow the method outlined on this page (which has
> worked perfectly for a polar stereo map projection),
> using instead of a Stereo projection, an Albers
> projection with standard parallels:
>
> http://www.dfanning.com/map_tips/precipmap.html
>
> The method *ALMOST* works! :-)
>
> But the continental outlines do not QUITE line up properly.
> You can see my result here:
>
> http://www.dfanning.com/misc/africa.jpg
>
> Do you think this might be an Albers projection problem?
> A difference between MAP_PROJ_INIT and MAP_SET? (I have
> tried different DATUMS with no change in effect.)
>
> Or, do you think this might just be right? :-(

Not my area of expertise, but it sure looks like some sort of projection problem. If it was an issue with the data (e.g. AVHRR geolocate issue) then I think it would be shifted in one direction everywhere. Your test plot shows a eastward shift on the northern east

coasts, a westward shift on the northern west coast, and a much smaller westward shift on the southern west coast. That suggests to me the data near your standard parallels are more "accurate" (by whatever measure) but things get smudged out more and more as you move away from them.

paulv

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Paul van Delst Ride lots.
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