Subject: Re: trouble with map projections
Posted by chris.orphanides on Fri, 21 Jun 2013 00:05:34 GMT
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On Thursday, June 20, 2013 5:20:27 PM UTC-4, David Fanning wrote:
> chris writes:
>
>
>
>> David, thank you for your quick response. I didn't think that I could do a Cylindrical map projection with a WGS 84 Ellipsoid because in the map_proj_init() help page it lists Sphere as the only available ellipsoid when using IDL's own map projections. In the GCTP map projections it says that Equirectangular only takes a sphere as well and doesn't say you can specify the semimajor or semiminor axes. What am I missing here? Does the below work even though it doesn't seem
>
> like it should?
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>
>> g1_prj = MAP_PROJ_INIT('Equirectangular', ELLIPSOID='WGS 84', /GCTP, LIMIT=[-80, -180, 80, 180])
>
>>
>
>> It runs successfully, and when peeking at the result some of it looks right, but I am hesitant.
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>
> Ah, yes, I guess I was thinking of a Cylindrical Equal Area projection,
>
> which was introduced in IDL 8.0.
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>
> Yeah, you're probably screwed. :-)
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>
> You probably have to use ENVI to get your map projections right. I have
>
> NO idea my MAP_PROJ_INIT allows that ellipsoid, although in the back on
>
> my mind I seem to remember a change that allowed any ellipsoid with map
>
> projections. But, I can't find any mention of it anywhere. Sorry!
>
>

> I guess your only solace is that on a map with those limits, the
>
> difference between a sphere and a WGS84 ellipsoid are going to be very
>
> small. I've seen a hell of a lot worse in scientific papers. :-)
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> Cheers,
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> David
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> --
>
> David Fanning, Ph.D.
>
> Fanning Software Consulting, Inc.
>
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
>
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

OK. Thanks. If I print the result of the map_proj_init() and look at some of the !MAP fields, the array in P (whatever that is ) appears to have the semi-major and semi-minor ellipse axes for WGS 84 in the first two values. (Officially the help menu lists P as: "A 16-element, double-precision floating point array indicating additional projection parameters"). Not too helpful. Whether IDL actually uses these additional parameters for anything, I don't know. When I ran it I was surprised that it didn't give me an error and tell me I couldn't use that ellipse. Maybe it stores those ellipse numbers in that field but doesn't do anything with them, I don't know.

I'll try to actually get the mapping to work with a sphere tomorrow, hopefully I can figure that out.