
Subject: Re: map_proj_init

Posted by [David Fanning](#) on Sun, 08 Apr 2007 18:43:43 GMT

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marit writes:

```
> Has anyone run into the problem that subsequent calls to map_proj_init
> using a GCTP projection interfere with previously defined maps? Here
> is an example:
>
> south_proj=MAP_PROJ_INIT('Polar Stereographic' ,/GCTP ,$
>   semimajor_axis=6378273.0,semiminor_axis=6356889.4,$
>   center_lon=0,center_lat=-70.0,false_easting=0,false_northing =0)
>
> print,map_proj_forward([0,0],[-90.0,-89.0],map_structure=sou th_proj)
>   0.0000000    0.0000000
>   0.0000000    108332.24
>
> north_proj=MAP_PROJ_INIT('Polar Stereographic' ,/GCTP ,$
>   semimajor_axis=6378273.0,semiminor_axis=6356889.4,$
>   center_lon=0,center_lat=70.0,false_easting=0,false_northing= 0)
>
> print,map_proj_forward([0,0],[-90.0,-89.0],map_structure=sou th_proj)
>   0.0000000 -2.0002841e+23
>   0.0000000 -1.4035070e+09
>
> I haven't yet seen this occur if the second projection is an IDL
> projection; however the IDL projections are not usually useful since
> they can't be set up like a normal projections with false easting and
> false northing and they are mostly spherical not ellipsoidal.
```

Interestingly, in research preparatory to writing an article about this for my web page, I discovered that if you use the map projection *index*, instead of the map projection name and GCTP keyword, then all is well:

```
IDL> south_proj=MAP_PROJ_INIT(106, semimajor_axis=6378273.0,$
IDL>   semiminor_axis=6356889.4, center_lon=0,center_lat=-70.0,$
IDL>   false_easting=0,false_northing=0)
IDL> print,map_proj_forward([0,0],[-90.0,-89.0],$
IDL>   map_structure=south_proj)
    0.00000000    0.00000000
    0.00000000    108332.24
IDL> north_proj = MAP_PROJ_INIT(106, semimajor_axis=6378273.0,$
IDL>   semiminor_axis=6356889.4,center_lon=0,center_lat=-70.0,$
IDL>   false_easting=0,false_northing=0)
IDL> print,map_proj_forward([0,0],[-90.0,-89.0],$
IDL>   map_structure=south_proj)
```

0.00000000	0.00000000
0.00000000	108332.24

I wonder if this indicates that the bug lies in NOT selecting the GCTP library routines, and hence, setting something in !MAP.

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
