Subject: Re: 3D-Plot with geographical coordinates in xy-direction
Posted by David Fanning on Fri, 17 Oct 2003 13:51:59 GMT
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Klemens Barfus writes:

> Once again the question from above:
> I try to visualize 3d-data of an atmospheric model. Coordinates in x-
> and y-direction are in geographical coordinates and z is in m.
> I thought of using SCALE3D and Map_set to generate the
> Coordinate-System. This doesn't work, because vertikal lines in the
> coordianate system are not plotted. Horizontal lines look fine, though I
> do not know if it is a buck from the program that it works.
> Does anybody of you working atmospheric data has a tip or some example
> code for me ?

I don't know exactly how to do this, but I do know
I would NOT be using IDL direct graphics to do it.
That's a fool's game, it seems to me. :-)

I think I would try to do something like the Fly-Through
demo, with some kind of map as the base of the elevation
data. Presumably RSI knows how to create map projections
in object graphics. Maybe you could get them to share
that information with the rest of us. :-)

Cheers,

David

P.S. Actually, I think I know how to get something like
a map (I.e., filled continents) in object graphics, but
it is just damn hard and the visualization never gives
me a great deal of confidence in the map's accuracy. :-(

--
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: 3D-Plot with geographical coordinates in xy-direction
Posted by Rick Towler on Fri, 17 Oct 2003 19:35:26 GMT
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"David Fanning" wrote in message...

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> that information with the rest of us. :-)

I agree with David that object graphics would be far more flexible but I can't claim it will be easier than a direct graphics approach. Then again, it might. I dropped direct graphics a long time ago.

What sort of visualization are you going for? How many layers in z? Do you just want to plot a surface where x/y are in geographical coords or something more complicated?

Regardless of the details, use the MAP_PROJ_* routines (IDL 5.6+) to convert your x/y data to and from cartesian coords suitible for use in object graphics.

If you want to plot some surfaces, use this converted data to create an IDLgrSurface object. Assuming x,y, and z contain your data and you have scaled them appropriatly:

```
oSurface = OBJ_NEW('IDLgrSurface', x, y, z, $
   COLOR=[100,100,100], STYLE=1)
oModel = OBJ_NEW('IDLgrModel')
oModel -> Add, oSurface

XOBJVIEW, oModel, /BLOCK

OBJ_DESTROY, oModel
```

The above will get you started. If you have 6.0 and you want to plot a few surfaces and annotate then try using the iTools. If you don't have 6.0 or are opposed to the iTools then look at David's fscSurface program (www.dfanning.com). And if you are looking to do something entirely different, at lest the MAP_PROJ_* routines will get you started.

-Rick

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Subject: Re: 3D-Plot with geographical coordinates in xy-direction
Posted by Klemens Barfus on Tue, 21 Oct 2003 06:14:50 GMT
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Hello together,

thanks for your help ! I think I will convert my geographical coordinates to rectangular coordinates and will plot them.

Klemens

Rick Towler wrote:
> "David Fanning" wrote in message...
>
>> Klemens Barfus writes:
>>
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>
> -Rick
>
>
>

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