Subject: 3d displaying with x=longitude, y=latitude, z=altitude, but not yet working (T_T)
Posted by kim20026 on Wed, 02 May 2007 12:57:02 GMT
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Good day, everyone. I would like to ask a question on 3d displaying.

I have this data file.

dat1.txt:
Sokcho   38.2500 128.5667 17.8
Cheorwon   38.1500 127.3000 154.2
Dongducheon 37.9000 127.0667 112.5
Daeguallyeong 37.6833 128.7667 842.5
Chuncheon   37.9000 127.7333 76.8

I read this file as follows.
readcol, 'dat1.txt', city, lat, lon, alt, format = 'A, 3F'

And then I am going to display these data into 3d.
x = lon,
y = lat,
z = alt

Based on the a procedure on www.dfanning.com, I tried this way below
but the results was not what I wanted to. Is there anyone to help
me?

Harry

 --- ---------------------
PRO SCATTER3D_altitude

  ; Read the data file.

readcol, 'dat1.txt', city, lat, lon, alt, format='A, 3F7.2'
n=n_elements(lat)

vsym, 24 , /fill

  ; Load a color table and create colors for the scatterplot.

LOADCT, 38, NCOLORS=!D.N_COLORS-1
TVLCT, 70, 70, 70, !D.N_COLORS-1
zcolors = BYTSCL(alt, TOP=!D.N_COLORS-2)

  ; Set the 3D coordinate space with axes.

```
SURFACE, DIST(5), /NODATA, /SAVE, XRANGE=[125,132], $
   YRANGE=[33,39], ZRANGE=[0, 900], CHARSIZE=1.5, COLOR=!D.N_COLORS-2,
BACKGROUND=!D.N_COLORS-1, $

   ; Plot the random points in 3D space with a diamond shape.

PLOTS, lon, lat, alt, PSYM=4, COLOR=zcolors, /T3D

   ; Connect the data points to the XY plane of the plot.

FOR j=0, n-1 DO PLOTS, [lon(j), lon(j)], [lat(j), lat(j)], [0,
alt(j)], COLOR=zcolors(j), /T3D

END
```

Subject: Re: 3d displaying with x=longitude, y=latitude, z=altitude, but not yet working (T_T)

Posted by David Fanning on Wed, 02 May 2007 22:17:55 GMT

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DirtyHarry writes:

> David, What I want to do is to display altitude in 3d:
>
> x = lon
> y = lat
> z = alt
>
> and if it is possible, I want to present this on the Korean map...
>
> I found the scatter3D routine in your website, and tried to do this
> with it, but still not working. Please give me some suggestions.

Well, the code is "working" in the sense that it more or
less does what code like that is suppose to do: illustrate
a technique. You don't see the largest line, since it is
being drawn in the same color as the background color. :-(

What I would do is set up a 3D transformation, using something
like SCALE3D. Then use MAP_SET with the /T3D keyword set
to draw your map in the XY plane. Then just use the PLOTS
portion of this code (with better colors) to draw your
height lines.

Should work great. :-)

Cheers,

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