Subject: Re: drawing a shaded sphere
Posted by davidf on Mon, 06 Apr 1998 07:00:00 GMT
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John Boccio (boccio@swarthmore.edu) writes:

> The IDL code at the end of this message when saved as a file cosmic.pro
> will plot the trajectory of a cosmic ray in the earth's magnetic field in
> 3 dimensions. It plots the trajectory as it is happening(not at the end),
> which is the way one should do during a simulation.
>
> I would like to draw a shaded sphere (even better a sphere with earth map
> on its surface) of radius rearth so that the subsequent cosmic ray trajectory
> in the earth's magnetic field appears properly in relation to that sphere.

I couldn't get John's code to run (missing some functions),
but here is an example with simulated data and XInterAnimate
that I coded up in about 5 minutes. Loading the animation
pixmaps takes awhile, but the animation is very fast. You
can, of course, load the pixmaps out of sight if you like.

Cheers,

David

```
PRO Particle_Track

   ; Fake latitude and longitude data of simulated particle.

x = Findgen(100)* 2 - 100
y = Findgen(100) * (50/99.)
TVLCT, 255, 255, 0, 1

   ; Run the animation in XInterAnimate

XInterAnimate, Set=[300,300, 50], /Showload

xx = [x[0]]
yy = [y[0]]
count = 0
FOR j=1, 99, 2 DO BEGIN

      ; Draw map projection with particle track overlayed.

   Map_Set, /Orthographic, /Continents, /Grid, y[j], x[j]
   xx = [xx, x[j]]
   yy = [yy, y[j]]
```

```
   PlotS, xx, yy, Color=1
   PlotS, xx[count+1], yy[count+1], PSym=4, Color=1

      ; Copy it into XInterAnimate pixmaps.

   XInterAnimate, Frame=count, Window=!D.Window
   count = count + 1
ENDFOR

   ; Run the animation.

XInterAnimate, 20
END
```

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