Subject: Re: set_shading question
Posted by Dick Jackson on Thu, 05 Jul 2001 18:19:51 GMT
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It's so nice having my news server working again, I can't help posting again...

"Paul van Delst" <paul.vandelst@noaa.gov> wrote in message news:3B44A99F.5D58EC6@noaa.gov...
> Hey there,
>
> Can anyone enlighten me as to the LIGHT keyword to set_shading? The online docs state:
>
> LIGHT
> A three-element vector that specifies the direction of the light source. The default light
> source vector is [0,0,1], with the light rays parallel to the Z axis.
>
> How does one change the direction of illumination? I want to change the shading so I can
> specify a source point (say [1,0,1] in a unit cube) and a "destination" point (say,
> [0,1,1]) to define the light source direction, i.e. where the light is going *to*. Or is
> this stuff like wind direction, i.e. you specify where the light is coming *from*?

It does appear that way, that light is shining from the specified point in your *viewing* frame of reference (nothing to do with the data coordinates) toward the origin at the centre of the window. Try these illuminating examples:

```
IDL> set_shading,light=[1,0,0]  & shade_surf,dist(50)
IDL> set_shading,light=[-1,0,0] & shade_surf,dist(50)
IDL> set_shading,light=[0,0,1]  & shade_surf,dist(50)
IDL> set_shading,light=[0,0,-1] & shade_surf,dist(50)
```

Cheers,
--
-Dick

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Calgary, Alberta, Canada

Subject: Re: set_shading question
Posted by Paul van Delst on Thu, 05 Jul 2001 18:58:13 GMT
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Ahh, I see (I think). The light source shines FROM [x,y,z] to [0,0,0] where the latter is the centre of the window. +/-x is right/left side of window, +/-y is top/bottom of window, +/-z is above/below window (relative to monitor screen).

I don't do a lot of volume rendering/shading so maybe to the experienced out there this seems quite normal, but to poor old shading neophyte me, it seems quite ridiculous - mostly because it's not pointed out in the docs. Argh.

Thanks very much for the clarification Dick. I'm glad your news server is working again!

paulv

--
Paul van Delst A little learning is a dangerous thing;
CIMSS @ NOAA/NCEP Drink deep, or taste not the Pierian spring;
Ph: (301)763-8000 x7274 There shallow draughts intoxicate the brain,
Fax:(301)763-8545 And drinking largely sobers us again.
Alexander Pope.
