Subject: Re: Y axis where Z axis is by default w/ surface
Posted by davidf on Fri, 15 Oct 1999 07:00:00 GMT

Todd Bowers (tbowers@nrlssc.navy.mil) writes:

> ok, simple question
> in a surface plot (or shade_surf), how do I make my Y axis
> run down the left side like the Z axis does by default
> [...]
> I've played mercilessly with the Ax, Az keywords to rotate the
> damn thing, but I need an Ay to get the desired effect! I thought
> I could just rotate about the x axis 90 degrees with Ax keyword,
> but this doesn't really rotate about x, it tilts the plot toward or
> away from you (poor behavior IMO). Really, I just want my Y
> and Z axes (axes?) to switch places.
> Can someone be my savior, please before I resort to extreme
> violence in the workplace?

Bad news, Todd. I don't think you are going to be
allowed to do this. I think it will have to
result in an "illegal 3D transformation" every
time.

I played around a bit with the T3D routine, which allows
you to exchange the Y and Z axes with the YZEXCH keyword.
Once you have the 3D transportation matrix the way you
want it, you apply it to the SURFACE command by setting
the T3D keyword there. But nothing I do can get what
you want.

And I think the fundamental reason is that IDL does
not support a true 3D representation in direct graphics.
The technical term for what is supported is 2.5D. One
of the limitations of this method is that you cannot
get the kind of transformation you desire. This limitation
was one of the primary reasons RSI developed the object
graphics system, which is a true 3D system.

Have you played with something like my object graphics
XSURFACE program with your data to see if you can get
the rotation you desire there?

   http://www.dfanning.com/programs/xsurface.pro

That's about the only hope I can hold out for you.

Cheers,

David

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