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Subject: Re: TV, AXIS, T3D, Coordinate Systems  
Posted by [David Fanning](#) on Wed, 05 Feb 2003 13:44:54 GMT  
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Tobias Umbliia (bias@planet-interkom.de) writes:

> First thank you, but i must admit that i still have problems with  
> understanding.  
>  
> I actually thought i had set up the transformation when i called  
> SCALE3 and used it by setting the T3D keyword with AXIS.  
> The TV command doesn't seem to have any influence to !P.T and so  
> i thought i could draw the axis right away.  
>  
> The problem is, as you pointed out, that !X.S, !Y.S and !Z.S have  
> to be generated in the correct manner. The SURFACE procedure does  
> that but SURFR and SCALE3 seem not to, although the help says that  
> SURFR 'duplicates ... the features of the SURFACE routine'.  
>  
> So my question is what would you suggest to correctly calculating  
> !X.S etc. before calling AXIS?  
>  
> the according piece of program looks like this:  
>  
> S = SIZE( x )  
> SCALE3, XRANGE=[0,S[1]], YRANGE=[0,S[2]], ZRANGE=[0,S[3]]  
> SHADE\_VOLUME, x, level, v, p  
> TV, POLYSHADE( v, p, /T3D )  
> ;SURFACE, x[\*],0], /NODATA, /NOERASE, /T3D ; <--- this does work  
> ;SURFR... ;<--- these do  
> ;SCALE3... ;<--- not  
> AXIS, ZAXIS = 0, /NOERASE, /T3D

This is probably not entirely your fault. The way SCALE3 works, the optional XRANGE, YRANGE, and ZRANGE keywords are \*required\*. (Don't ask me why.) If you leave them off, then axis scaling is unchanged, which is exactly what you are trying to avoid. :-)

Cheers,

David

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