Subject: Re: 3D plot with correct aspect ratio
Posted by rmw092001 on Fri, 27 Sep 2002 01:55:19 GMT
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David Fanning <david@dfanning.com> wrote in message
news:<MPG.17fcda6be56e20b99899c6@news.frii.com>...
> Kristian =?iso-8859-1?Q?Kj=E6r?= (Kristian.Kjaer@Risoe.DK) writes:
>
>> I set up a 3D coordinate system and a projection with
>>
>>
>> range=3D[-7.,7] & az=3D40 & ax=3D35 ;, say
>> surface,dist(4),/nodata,/save,xran=3Drange,yran=3Drange,zran =3Drange,$
>> ax=3Dax, az=3Daz, $
>> xstyle=3D1+4,ystyle=3D1+4,zstyle=3D1+4
>>
>>
>> and then I plot in it with plotS.
>> The x, y and z axes are equivalent and in the same units, =
>>
>> (say, meters) so I want the resulting postscript to be a =
>>
>> true projection (with a known scale factor) of this 3D field.
>> How do I achieve that?
>
> I don't know the answer to this, exactly, without doing
> some research, but I *do* know the answer is NOT to
> pursue this any further with direct graphics. Direct
> graphics uses as 2.5D graphic representation (you notice
> the Z axis is always vertical no matter what rotations you
> do). I think the only way to make this happen is to use
> a true 3D graphics system, which in IDL exists only in
> the object graphics system.
>
> Cheers,
>
> David

3D postscript plots aren't really quantitative - you can't measure stuff at some "depth" in the plot, like you can measure stuff on a 2D plot. I'd just use trial and error, adjusting POSITION, RANGE values to stretch axes until the 3D postscript looks "in proportion". IDL takes care of plotting correctly in whatever 3D axis system you choose.

Object graphics is great for true 3D, interactive, animated visuals (see the examples in IDL demos), and it usually gets recommended by the best programmers in the group :-) It's also a selling point of IDL

over PV-WAVE.

However, for making good 3D postscript plots on paper - no animations, widgets, interactivity wanted - direct graphics will do almost everything...

RW
