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Subject: Axes for 3D volumes

Posted by [Richard Edgar](#) on Wed, 07 Feb 2007 20:32:13 GMT

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Greetings,

I am attempting to produce 3D isosurfaces in IDL, and I'd like to add proper axes to the output. I've been following the example on [http://www.dfanning.com/tips/volume\\_axes.html](http://www.dfanning.com/tips/volume_axes.html) and with that, I can get axes which are labeled by cell number:

```
Surface, Dist(30), /NoData, $  
  xtitle="Radius", ytitle="Azimuth", ztitle="Z", $  
  XRange=s1, YRange=s2, ZRange=s3, $  
  /NoErase, /Save
```

```
SHADE_VOLUME, dens, densSurface, vertices, polys, /LOW
```

```
image = POLYSHADE(vertices, polys, /T3D, XSIZE=600, YSIZE=600)
```

where dens[i,j,k] is the 3D array I want to construct the isosurface from, and s1=[0,imax] etc.

I'd like the axes labeled by the physical dimensions of dens. I have these available, in rRange, phiRange and zRange (they're actually polar co-ordinates, but I'm happy to treat them as cartesian). If I try

```
Surface, Dist(30), /NoData, $  
  xtitle="Radius", ytitle="Azimuth", ztitle="Z", $  
  XRange=rRange, YRange=phiRange, ZRange=zRange, $  
  /NoErase, /Save
```

I get

% POLYSHADE: Polygon 0 is degenerate, more may exist.  
and an empty set of axes.

I have the impression that something, somewhere, is not communicating the axis scaling correctly, but I'm at a loss as to what. The {xyz}range keywords to SHADE\_VOLUME don't seem to be the answer.

What extra incantation(s) do I need to get the axes labeled properly?

Thanks in advance,

Richard Edgar

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