
Subject: Re: SCALE3.pro isn't doing it's job
Posted by [David Fanning](#) on Fri, 31 Jul 2009 02:12:46 GMT
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Brian Daniel writes:

```
> I'm using the SCALE3 procedure to initialize the !P.T variable for a
> 3D scatter plot with the following commands:
>
> xRange = [min(rot_image[0,*]),max(rot_image[0,*])]
> yRange = [min(rot_image[1,*]),max(rot_image[1,*])]
> zRange = [min(rot_image[2,*]),max(rot_image[2,*])]
> print,'X Range:',xRange
> print,'Y Range:',yRange
> print,'Z Range:',zRange
> Scale3,XRange=xRange,$
> YRange=yRange,$
> ZRange=zRange,$
> Ax=45, Az=80
>
> The problem is when I plot the axes using the "AXIS" command, they
> plot as if their range is zero (little stubby nubs of an axis).
```

The "default" range for the AXIS command is 0 to 1. The AXIS command is not going to get its values from the transformation information set up by Scale3, although it will get its position from there (assuming you use the T3D keyword when you call it). See this article for how to build a 3D scatterplot:

http://www.dfanning.com/tip_examples/scatter3d.pro

You will have to set the [XYZ]Range keywords on your AXIS commands to get the right range for the axes. Here I use the SURFACE command to set up the transformation matrix, but I could have used SCALE3:

```
SURFACE, DIST(5), /NODATA, /SAVE, XRange=[0,100], $
  YRange=[-50,50], ZRange=[0, max(z)], XStyle=1, $
  YStyle=1, ZStyle=1, CharSize=1.5, $
  Position=[0.1, 0.1, 0.95, 0.95, 0.1, 0.95], $
  XTICKLEN=1, YTICKLEN=1, XGRIDSTYLE=1, YGRIDSTYLE=1
AXIS, XAxis=1, /T3D, CharSize=1.5, XRange=[0,100]
AXIS, YAxis=1, /T3D, CharSize=1.5, YRange=[-50,50]
```

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
