Subject: Isurface, inverting the axis without changing default lighting direction
Posted by cameron bowles on Tue, 04 May 2010 01:16:46 GMT
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Hi everyone, long time reader first time poster.

I have run into this problem where I want to plot a surface using the iSurface functionality of IDL 7.0. I want the Y-axis to be inverted (ie. showing the maximum value at the common axes point. I can simply do this with Yrange = [max[Y], min[Y]], but when I do this the lighting vector for the surface flips around the Y=0 plane and the surface is highlighted from some strange angle that doesnt highlight the surface at all.

I tried two other solutions;

The first was trying the Ytickvalues = Ynew, where Ynew was a new vector created to go from Ymax to Ymin with equal length to the Ydata. This keyword had no effect the plotted Yaxis values are still the values of the Yaxis values defined by the iSurface command.

The second was to try to overplot it ontop of another iSurface axis set, but the same issue occurs as the lighting direction is still defined by the axis direction.

Here is some sample code;

```
ISURFACE, Data, Xvalues, Yvalues, $
  Xrange = [(*ptrinfo).Xmin, (*ptrinfo).Xmax], $
  Yrange = [(*ptrinfo).Xmin, (*ptrinfo).Xmax], $
  Zrange = [(*ptrinfo).Zmin, (*ptrinfo).Zmax], $
  clip_planes = [[-1,0,0,(*ptrinfo).Xmin],[0,1,0,Ymin-0.01],
[0,0,-1,Zmin], [1,0,0,-1*(*ptrinfo).Xmax],[0,1,0,Ymax-0.01],
[0,0,1,-1*Zmax]], $
  style = 2, $
  shading = 1, $
  skirt = 0.0, $
  /show_skirt, $
  zero_opacity_skip = 0, $
  color = [225, 184, 0], $
  transparency = 20
```

where Data is a 2D data array, and ptrinfo is just a pointer to my structure array I use to pass variables between different procedures.

I hope someone can help with a solution.

Regards,
Cameron