Subject: Philosophical Scaling Question
Posted by David Fanning on Mon, 04 Dec 2006 16:15:35 GMT
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Folks,

With no answers to my weekend questions about logarithmic color bars I'm flying blind this morning. And I seem to be running into theoretical difficulties. Can anyone help?

Suppose I had a color table (color table 33 comes to mind) where each color vector had a min of 0 and a max 0f 255.

```
IDL> Loadct, 33, /Silent
IDL> TVLCT, r, g, b, /Get
IDL> MinMax, r
  0 255
IDL> MinMax, g
  0 255
IDL> MinMax, b
  0 255
```

And suppose I also have an image that is scaled in the same way:

```
IDL> image = Loaddata(7)
IDL> MinMax, image
     0  255
```

And finally, suppose I have a way to scale such data sets in a logametric way, say a function LOGSCL.

```
IDL> .compile LOGSCL
Compiled module: LOGSCL.
```

My hypothesis is that there are two ways to display this data "logarithmically". I can leave the color table vectors alone, and scale the image data. Or, I can leave the image alone and scale the color vectors. Either way should result in exactly the same display.

The problem is, it doesn't. :-(

```
Window, XSize=400, YSize=350, 0
Loadct, 33, /Silent
TVImage, image

Window, XSize=400, YSize=350, 1
```

```
Loadct, 33, /Silent
TVImage, LogScl(image)

Window, XSize=400, YSize=350, 2
Loadct, 33, /Silent
TVLCT, r, g, b, /Get
TVLCT, LogScl(r), LogScl(g), LogScl(b)
TVImage, image
```

Does anyone have a good idea for why not?

Cheers,

David

P.S. And please don't tell me there is something wrong
with LOGSCL, as this is *not* the answer I want to
hear. :-(

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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
