
Subject: Re: Philosophical Scaling Question
Posted by [Brian Larsen](#) on Mon, 04 Dec 2006 16:51:22 GMT
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This is a good question.

to ask another question... why when you add colorbar after each of the
tvimage calls the colorbar is the same in windows 1 and 2?

Maybe this is my lack of understanding of what logscl does.

Brian

```
Loadct, 33, /Silent
TVLCT, r, g, b, /Get
pmm, r
pmm, g
pmm, b
```

```
image = Loaddata(7)
pmm, image
```

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

```
Window, XSize=400, YSize=350, 1
Loadct, 33, /Silent
TVImage, LogScl(image)
colorbar
```

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

David Fanning wrote:

```
> 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 of 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 logarithmic 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. :-(
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
