
Subject: Re: Fanning's LogScl routine + Colorbar??

Posted by [pgrigis](#) on Fri, 23 Jul 2010 20:10:10 GMT

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And one last message for the day :)

The two color bars plotted here

http://hea-www.cfa.harvard.edu/~pgrigis/idl_stuff/colbars.png

represent the same color scaling of table 5 (stretched logarithmically)

but the linear representation does compress the "interesting" bits of the color bar quite strongly on the left side - while the log representation seems to do a better job of display the quick variation at the left end.

Ciao,
Paolo

On Jul 23, 3:38 pm, David Fanning <n...@dfanning.com> wrote:

> Joe Daal writes:

>> I am using the logscl to enhance the contrast of an image, something
>> like:

>

>> loadct,39

>> image = alog10(lin_image)

>> imdisp, logscl(image, min=min(image), max=max(image), Exponent=8,

>> Mean=0.65)

>

>> where image values vary from -1.34 to +2.05, with zeroes included.

>> The image looks nice for what I want, but how do I reflect a correct

>> colorbar, either for real values or the scaled ones? What is

>> logarithmic, the ticks or the colors?

>

> If you are going to display a color bar, wouldn't you

> have to transform the color bar values in the same

> way to transform the image?

>

> I am thinking code like this:

>

> ;*****

> image = LoadData(11)

> freqDomainImage = FFT(image, -1)

> power = SHIFT(ALOG(ABS(freqDomainImage)), 124, 124)

> power = power - Min(power)

>

```

> minmax, power
> ctload, 4, /brewer, /reverse
> tvlct, r, g, b, /get
> rr = scale_vector(float(r), min(power), max(power), $
>   MIN=0, MAX=255)
> gg = scale_vector(float(g), min(power), max(power), $
>   MIN=0, MAX=255)
> bb = scale_vector(float(b), min(power), max(power), $
>   MIN=0, MAX=255)
> rrr = logscl(rr, MEAN=0.45)
> ggg = logscl(gg, MEAN=0.45)
> bbb = logscl(bb, MEAN=0.45)
> tvlct, rrr, ggg, bbb
> cindex
>
> window, xsize=500, ysize=500, Title='Log Display'
> TVImage, LogScl(power, MEAN=0.45), $
>   position=[0.1, 0.1, 0.9, 0.75], /erase
> colorbar, range=[min(power), Max(power)], $
>   division=4, format='(f0.2)'
>
> ctload, 4, /brewer, /reverse
> window, 1, xsize=500, ysize=500, Title='Normal Display'
> TVImage, BytScl(power), position=[0.1, 0.1, 0.9, 0.75], /erase
> colorbar, range=[min(power), Max(power)], $
>   division=4, format='(f0.2)'
> END
> ,*****
>
> Here are the results from running this program:
>
>   http://www.dfanning.com/misc/logscl.png
>
> Cheers,
>
> David
>
> --
> 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.")

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