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

Posted by [pgrigis](#) on Fri, 23 Jul 2010 19:53:29 GMT

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On Jul 23, 3:51 pm, Paolo <pgr...@gmail.com> wrote:

> 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
>
> Hi David,
> it looks like two different color tables have been used for the two
> images:
> the one on the left looks more green and the one on the right looks
> more blue.
> This makes it harder to see what is really going on.
>
> I tried your commands with black and white colors, but the bar looks
> then identical in both plots...

```

OK - i see why - you scaled the colors and not the data.
Still I would argue that using log scaling should not alter the
original colors?

Ciao,
Paolo

```

>
> Ciao,
> Paolo
>
>
>
>> 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.")
>
>
