Subject: Re: Fanning's LogScl routine + Colorbar??
Posted by David Fanning on Fri, 23 Jul 2010 19:38:48 GMT
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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

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