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.pn g

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.")
```