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Subject: cgPlotS and cgColorBar issues

Posted by [allisonjaynes](#) on Fri, 15 Mar 2013 20:58:02 GMT

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Hi everyone,

Forgive me if these questions have already been answered.

Let me start with cgPlotS. I am using it to plot 2 color-scaled data curves on top of each other, so I have 2 calls to it in a row, one for each data set. For example,  
cgPlot, [xrange], [yrange], /NODATA, /Window  
if sat NE 'b' then cgPlotS, JDa, La, color=BSCLa, /AddCMD  
if sat NE 'a' then cgPlotS, JDb, Lb, color=BSCLb, /AddCMD

When I have the condition where I want to plot both sets, I can watch cgPlotS plotting data set A in a resizable graphics window. But when it moves on to the second call, it erases what it just plotted and then re-draws the A data set before drawing the B data set on top of it. The end result is correct (2 curves overplotted), but the drawing of the A data set twice is undesirable. For large data intervals, the plotting time ends up being on the order of minutes and the time sink for re-plotting A is driving me nuts. Any idea what causes/fixes this?

The second issue concerns cgColorBar. Below is my call:

```
for z=0, fix(scaleZ) do ticklog=[ticklog, 10L^z]
```

```
cgColorBar, /YLOG, /Vertical, Position=[0.94, 0.05, 0.96, 0.95], title='Electron Flux (cm!e2!n s sr MeV)!e-1!n', YTICKV=ticklog, color='white', /right, range=[1,10L^z], /AddCMD
```

The idea is to have a vertical, log-scaled color bar with divisions of powers of ten. Here is the weird part. Sometimes when I plot this the color bar labels look like so: [1, 10, 10^2, 10^3, 10^4....], where the carrot-raised number actually appears as an exponential. Other times (without changing the code whatsoever) the labels come out like this: [1, 10, 100, 1000, 10000....]. The parameter that determines the display format is the limit of the range - if it goes up to 10^5 or higher, everything stays in exponential format. If the maximum range is 10^4 or lower, it displays in regular format. Suggestions on how to force the exponential display?

Thank you for any guidance!

-Allison

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