
Subject: Re: cgPlotS and cgColorBar issues
Posted by [allisonjaynes](#) on Fri, 15 Mar 2013 21:01:32 GMT
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I should note that, for the cgPlotS problem, it does NOT draw A twice over in the normal IDL display (take out all the /Window and /AddCMDs). There, it plots A once and then B over top, as one would expect.

Subject: Re: cgPlotS and cgColorBar issues
Posted by [Matthew Argall](#) on Fri, 15 Mar 2013 21:41:44 GMT
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> Suggestions on how to force the exponential display?

You can write a function to format your axis labels and then call it with the [xy]tickformat keywords.

Subject: Re: cgPlotS and cgColorBar issues
Posted by [Matthew Argall](#) on Fri, 15 Mar 2013 21:54:30 GMT
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> re-plotting A is driving me nuts. Any idea what causes/fixes this?

In order to be able to resize the plots in the window, the position of each plot has to be recalculated and then each plot has to be re-displayed to the correct size. So, A will be replotted after each re-size.

Anything with /addCMD probably falls into this re-plotting loop.

Subject: Re: cgPlotS and cgColorBar issues
Posted by [Jeremy Bailin](#) on Fri, 15 Mar 2013 22:17:06 GMT
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On 3/15/13 3:58 PM, allison jaynes wrote:

> 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
>
```

To disable updating while you put several data sets on the plot,
temporarily turn updating of the cgwindow off:

```
cgcontrol, execute=0
...do all of your cgplots commands...
cgcontrol, execute=1
```

-Jeremy.

Subject: Re: cgPlotS and cgColorBar issues

Posted by [allisonjaynes](#) on Mon, 18 Mar 2013 03:10:39 GMT

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I thought that YTICKFORMAT should work, but it gives a funny display (labels on both sides of the color bar) so I had considered that it wasn't a compatible keyword with cgColorbar. I'm running 8.2 on a Mac. Does that keyword typically work?

And the cgControl, execute... worked wonderfully. Thank you!

Subject: Re: cgPlotS and cgColorBar issues
Posted by [David Fanning](#) on Mon, 18 Mar 2013 12:58:24 GMT
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allison jaynes writes:

> I thought that YTICKFORMAT should work, but it gives a funny display (labels on both sides of the color bar) so I had considered that it wasn't a compatible keyword with cgColorbar. I'm running 8.2 on a Mac. Does that keyword typically work?

Perhaps I've broken the expectation paradig here, but the FORMAT keyword should work. I've done this so I have one keyword that works with either vertical or horizontal color bars. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thue. ("Perhaps thos speakest truth.")

Subject: Re: cgPlotS and cgColorBar issues
Posted by [allisonjaynes](#) on Mon, 18 Mar 2013 14:03:40 GMT
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Ok, here are a few examples of what is going on.

The FORMAT works as expected with a horizontal color bar:

```
IDL> cgColorBar, range=[1,300], XTICKFORMAT='(F4.0)', /Window
```

And the vertical color bar without FORMAT also looks as you'd want:

```
IDL> cgColorBar, range=[1,300], /Vertical, /Window
```

But add the FORMAT to those Y values and suddenly the tick labels show up on both the right and left of the vertical color bar! (Regardless of using the /right keyword or not):

```
IDL> cgColorBar, range=[1,300], /Vertical, YTICKFORMAT='(F4.0)', /Window
```

What am I doing wrong?

Subject: Re: cgPlotS and cgColorBar issues
Posted by [David Fanning](#) on Mon, 18 Mar 2013 17:43:33 GMT
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allison jaynes writes:

> Ok, here are a few examples of what is going on.
>
> The FORMAT works as expected with a horizontal color bar:
>
> IDL> cgColorBar, range=[1,300], XTICKFORMAT='(F4.0)', /Window
>
>
> And the vertical color bar without FORMAT also looks as you'd want:
>
> IDL> cgColorBar, range=[1,300], /Vertical, /Window
>
>
> But add the FORMAT to those Y values and suddenly the tick labels show up on both the right
and left of the vertical color bar! (Regardless of using the /right keyword or not):
>
> IDL> cgColorBar, range=[1,300], /Vertical, YTICKFORMAT='(F4.0)', /Window
>
> What am I doing wrong?

Humm. Can't check right this minute, but are you using the LATEST
colorbar routine:

<http://www.idlcoyote.com/programs/cgcolorbar.pro>

It is important that your Coyote Library is up to date.

Cheers,

David

--

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Subject: Re: cgPlotS and cgColorBar issues
Posted by [allisonjaynes](#) on Mon, 18 Mar 2013 23:44:01 GMT
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Yep! Up-to-date. And just to be sure, I replaced my cgcolorbar with that one. Anybody able to reproduce the tick labels on both sides of the bar?

Subject: Re: cgPlotS and cgColorBar issues

Posted by [David Fanning](#) on Tue, 19 Mar 2013 00:54:42 GMT

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allison jaynes writes:

> But add the FORMAT to those Y values and suddenly the tick labels show up on both the right and left of the vertical color bar! (Regardless of using the /right keyword or not):

>

> IDL> cgColorBar, range=[1,300], /Vertical, YTICKFORMAT='(F4.0)', /Window

>

> What am I doing wrong?

Yes, when I type *this* command I see labels on both sides of the bar.

But, if I type the command correctly:

```
IDL> cgColorBar, range=[1,300], /Vertical, FORMAT='(F4.0)', /Window
```

It works correctly.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thue. ("Perhaps thos speakest truth.")

Subject: Re: cgPlotS and cgColorBar issues

Posted by [allisonjaynes](#) on Tue, 19 Mar 2013 19:12:58 GMT

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Of course! I kept thinking 'Format' was referencing the first suggestion of 'Ytickformat'.

Thanks for the patience.
