Subject: Re: Error in coyote's colorbar
Posted by R.G.Stockwell on Thu, 11 Oct 2007 16:53:39 GMT
View Forum Message <> Reply to Message

"Brian Larsen" <balarsen@gmail.com> wrote in message
news:1192119579.974652.297380@o80g2000hse.googlegroups.com.. .
> David et al,
...
> IDL> colorbar, zrange=[0.,70.7107], /ylog, /vertical,

Not David but, do you mean yrange? Try:

colorbar, yrange=[0.001,70.7107]

Cheers,
bob

Subject: Re: Error in coyote's colorbar
Posted by Brian Larsen on Thu, 11 Oct 2007 17:00:15 GMT
View Forum Message <> Reply to Message

> Not David but, do you mean yrange? Try:
>

Bob, thanks I think I do mean range not zrange but it doesn't change
the error.

IDL> colorbar, range=[0.,70.7107], /ylog, /vertical, $
ytickv=LogLevels([0.,70.7107])
% PLOT: Warning: Infinite plot range.
% AXIS: Data coordinate system not established.
% Error occurred at: COLORBAR 412 /Users/balarsen/Documents/
idl/larsen/fanning/colorbar.pro
% $MAIN$
% Execution halted at: $MAIN$

Cheers,

Brian

Brian Larsen

Subject: Re: Error in coyote's colorbar
Posted by R.G.Stockwell on Thu, 11 Oct 2007 17:32:17 GMT
View Forum Message <> Reply to Message

"Brian Larsen" <balarsen@gmail.com> wrote in message
news:1192122015.534351.251220@r29g2000hsg.googlegroups.com.. .
>
>> Not David but, do you mean yrange? Try:
>>
>
> Bob, thanks I think I do mean range not zrange but it doesn't change
> the error.
>
> IDL> colorbar, range=[0.,70.7107], /ylog, /vertical, $

change the lower limit in range to something other than 0.
You are trying to plot from -inf to 70.
That should do it.

Cheers,
bob

Subject: Re: Error in coyote's colorbar
Posted by Paul Van Delst[1] on Thu, 11 Oct 2007 17:37:23 GMT
View Forum Message <> Reply to Message

Brian Larsen wrote:
>> Not David but, do you mean yrange? Try:
>>
>
> Bob, thanks I think I do mean range not zrange but it doesn't change
> the error.
>
> IDL> colorbar, range=[0.,70.7107], /ylog, /vertical, $
> ytickv=LogLevels([0.,70.7107])
> % PLOT: Warning: Infinite plot range.
> % AXIS: Data coordinate system not established.
> % Error occurred at: COLORBAR 412 /Users/balarsen/Documents/
> idl/larsen/fanning/colorbar.pro
> % $MAIN$
> % Execution halted at: $MAIN$

What is the output of

LogLevels([0.,70.7107])

?

Is it acceptable for ytickv input? Is it consistent with

range=[0.,70.7107]

?

Subject: Re: Error in coyote's colorbar
Posted by Brian Larsen on Thu, 11 Oct 2007 17:45:14 GMT
View Forum Message <> Reply to Message

> change the lower limit in range to something other than 0.
> You are trying to plot from -inf to 70.
> That should do it.

I agree, but the issue is that in general (or kinda general) you don't really know how far above zero to go, like sometimes .1 is far enough and others .001 is what it takes for the plot. I was hoping to let loglevels and idl figure out the right answer,

colorbar, yrange=[0.1,70.7107], /ylog, /vertical,$
ytickv=LogLevels([0.1,70.7107])

does work but it doesn't look right.

How does idl properly handle?
plot, alog10(findgen(100)/10.)
since that is also -inf to ~1

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Error in coyote's colorbar

Posted by Brian Larsen on Thu, 11 Oct 2007 17:49:03 GMT
View Forum Message <> Reply to Message

> What is the output of
>
> LogLevels([0.,70.7107])
this is from http://www.dfanning.com/tip_examples/loglevels.pro

IDL> print, LogLevels([0.,70.7107])
    0.10000000   1.0000000   10.000000

this seems consistent to me as it is inside the range.

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Error in coyote's colorbar
Posted by R.G.Stockwell on Thu, 11 Oct 2007 17:56:39 GMT
View Forum Message <> Reply to Message

"Brian Larsen" <balarsen@gmail.com> wrote in message
news:1192124714.944888.178400@v3g2000hsg.googlegroups.com...
>> change the lower limit in range to something other than 0.
>> You are trying to plot from -inf to 70.
>> That should do it.
>
> I agree, but the issue is that in general (or kinda general) you don't
> really know how far above zero to go, like sometimes .1 is far enough
> and others .001 is what it takes for the plot. I was hoping to let
> loglevels and idl figure out the right answer,
>
> colorbar, yrange=[0.1,70.7107], /ylog, /vertical,$
> ytickv=LogLevels([0.1,70.7107])
>
> does work but it doesn't look right.
>
> How does idl properly handle?
> plot, alog10(findgen(100)/10.)

this is ploting an array with -inf in it, which is ignored by plot.
It then is plotting the next value (for instance -1) so it is fine.

You are explicilty telling the plot command to plot from -inf to 70,
which it cannot do.

how about setting range = [min(loglevels[0,70.7107]),
max(loglevels[0,70.7107])] ?

Cheers,
bob

Subject: Re: Error in coyote's colorbar
Posted by Brian Larsen on Thu, 11 Oct 2007 18:08:15 GMT
View Forum Message <> Reply to Message

> this is ploting an array with -inf in it, which is ignored by plot.
> It then is plotting the next value (for instance -1) so it is fine.
> You are explicilty telling the plot command to plot from -inf to 70,
> which it cannot do.

ok, that makes sense.

> how about setting range = [min(loglevels[0,70.7107]),
> max(loglevels[0,70.7107])] ?

oddly, this has the same error:
IDL> colorbar, range=[min(loglevels([0,70.7107])),
max(loglevels([0,70.7107]))], /ylog, /vertical,
ytickv=LogLevels([0,70.7107])
% AXIS: Data coordinate system not established.
% Error occurred at: COLORBAR 412 /Users/balarsen/Documents/
idl/larsen/fanning/colorbar.pro
% $MAIN$
% Execution halted at: $MAIN$

this however, does work:
colorbar, range=[0,70.7107], /ylog, /vertical, /minor, $
ticknames=LogLevels([0,70.7107]), $
divisions=n_elements(LogLevels([0,70.7107]))

except there is n+1 ticks so there is one extra label (and in the
wrong place)

this is the equilivant that you can run without loglevels():
colorbar, range=[0,70.7107], /ylog, /vertical, /minor,$
ticknames=[.1,1,10], divisions=3

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Error in coyote's colorbar
Posted by Loren Anderson on Fri, 12 Oct 2007 15:38:15 GMT
View Forum Message <> Reply to Message

Another way to approach this problem may be to scale the colors and not the image, especially since you are working with a small dynamic range.

```
TVLCT, r, g, b, /Get
rnew = logscl(r)   ;These are David Fanning routines as well
bnew = logscl(g)
gnew = logscl(b)
TVLCT, rnew, gnew, bnew
colorbar, minrange = 0, maxrange = 70.7107, format = '(f6.2)', /
vertical, /right
```

The colors in the colorbar are logarithmic, but the values are linear, if that makes any sense. I don't like scaling the images because it can take a long time for the images I work with. I think it's easier to read too.

-Loren

Subject: Re: Error in coyote's colorbar
Posted by Brian Larsen on Fri, 12 Oct 2007 18:20:56 GMT
View Forum Message <> Reply to Message

> Not David but, do you mean yrange? Try:
>
> colorbar, yrange=[0.001,70.7107]

hmm, now here is some oddness...

```
 colorbar, range=[0.,70.7107], /ylog, /vertical,
ytickv=LogLevels([0.,70.7107]) , yticks=0
```

works just fine (just have to play with the format keyword)

and

colorbar, range=[0.,70.7107], /ylog, /vertical,
ytickv=LogLevels([0.,70.7107])
errors...

So the difference is just the yticks=0 keyword.

What does that mean? Now I am confused.

Cheers,

Brian

---------- ----------
Brian Larsen
Boston University
Center for Space Physics