
Subject: COLORBAR

Posted by [phillipbitzer](#) on Fri, 09 Nov 2007 17:43:04 GMT

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For anyone who's used D Fanning's colorbar program-

When using colorbar pro, how can I get the values of the tickmarks (!
x.tickv doesn't work - return an array of 0's)?

Here's the underlying reason, when annotating the color bar, the
program (seems to one be able to) annotates the major tick marks. I
actually would like my tick labels not on the major tick marks, but
"in the middle" of the color. I think this would correspond to (only)
labelling the minor tick marks.

Maybe a visual would help me be more clear:

Instead of labelling:

```
here  here  here
|-----|-----|
```

I would like:

```
here  here
|-----|-----|
```

I've been fooling around with the parameters, but to no avail. Anyone
else have this need/want before? Anyone have any ideas to accomplish
this?

Thanks,
Phillip

Subject: Re: Colorbar

Posted by [David Fanning](#) on Thu, 13 Jan 2011 19:25:26 GMT

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kisCA writes:

- > I am a new user of IDL (IDL8.0) after spending 7years on matlab...
- > I am trying to make my own colorbar with 20 colors inside with R,G and
- > B vectors.
- > By now I don't know how to use it with the contour function... Could
- > you help me with that?

I'm not sure how you would do this with the Contour function.
With Coyote Graphics routines from the Coyote Library, you would
do it like this:

```
data = Dist(41,41)
nlevels = 20
pos = [0.1, 0.1, 0.9, 0.75]
LoadCT, 33, NColors=nlevels, Bottom=1
FSC_Contour, data, NLevels=nlevels, /Fill, $
    C_Colors=Indgen(nlevels)+1, Position=pos
FSC_Contour, data, NLevels=nlevels, /Overplot, Label=2
FSC_Colorbar, RANGE=[Min(data), Max(data)], $
    NColors=nlevels, Bottom=1, Format='(F0.2)', $
    Divisions=nlevels/2, XMinor=0
```

You can learn more about Coyote Graphics routines here:

http://www.idlcoyote.com/graphics_tips/newoldcmds.html

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Colorbar

Posted by [kisCA](#) on Thu, 13 Jan 2011 19:57:01 GMT

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Thanks David for this quick answer and it help me a lot!

I used for all my graphics this kind of formatting in order to manage it well :

```
!p.font=0 ;use postscript fonts
set_plot, 'ps'
ext='.eps'
device, xsize=6, ysize=6 ;SQUARE one panel, one column figure
cs=1 ;charcter size
!p.thick=3 ;data
!x.thick=2 ;x axis
!y.thick=2 ;y axis
!y.minor=5
device, filename='ENSO'+ext, encapsulated=eps, $
    /helvetica,/isolatin1, xsize=9, ysize=4,font_size=6, landscape=0,
```

color=1

Is there a way to do the same with your commands ?

Also, is there a way to change the range of the contour (and colorbar) to highlight the high values of data ?

Cheers

Subject: Re: Colorbar
Posted by [David Fanning](#) on Thu, 13 Jan 2011 20:07:50 GMT
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kisCA writes:

```
> Thanks David for this quick answer and it help me a lot!  
>  
> I used for all my graphics this kind of formatting in order to manage  
> it well :  
>  
> !p.font=0 ;use postscript fonts  
> set_plot, 'ps'  
> ext='.eps'  
> device, xsize=6, ysize=6 ;SQUARE one panel, one column figure  
> cs=1 ;character size  
> !p.thick=3 ;data  
> !x.thick=2 ;x axis  
> !y.thick=2 ;y axis  
> !y.minor=5  
> device, filename='ENSO'+ext, encapsulated=eps, $  
> /helvetica,/isolatin1, xsize=9, ysize=4,font_size=6, landscape=0,  
> color=1  
>  
> Is there a way to do the same with your commands ?
```

Sure. Just use them. ;-)

```
> Also, is there a way to change the range of the contour (and colorbar)  
> to highlight the high values of data ?
```

I am not sure what you have in mind here. Can you elaborate a bit? Do you mean all values above some threshold have a different color, or something like that?

Cheers,

David

--

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Subject: Re: Colorbar
Posted by [kisCA](#) on Thu, 13 Jan 2011 20:35:30 GMT
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Ok thanks, your commands are quite amazing!

To explain me better maybe an example will help:
The original range of my data is [-1.06371,0.907327].
I would like to draw fill contour from -0.8 to 0.8 with an increment
of 0.1 but keeping the color scale between the original range...
Is it better this way?

Cheers

Subject: Re: Colorbar
Posted by [kisCA](#) on Thu, 13 Jan 2011 21:35:51 GMT
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And I haven't find a command to change the linestyle in FSC_Contour,
is it possible ?

Subject: Re: Colorbar
Posted by [David Fanning](#) on Thu, 13 Jan 2011 21:40:32 GMT
[View Forum Message](#) <> [Reply to Message](#)

kisCA writes:

>
> Ok thanks, your commands are quite amazing!
>
> To explain me better maybe an example will help:
> The original range of my data is [-1.06371,0.907327].
> I would like to draw fill contour from -0.8 to 0.8 with an increment
> of 0.1 but keeping the color scale between the original range...
> Is it better this way?

I would do this:

```
data = Scale_Vector(Dist(41,41), -1.06371 ,0.907327)
levels = [Min(data), Scale_Vector(findgen(17), -0.8, 0.8)]
pos = [0.1, 0.1, 0.9, 0.75]
LoadCT, 33, NColors=16, Bottom=2
TVLCT, FSC_Color('light gray', /Triple), 1
TVLCT, FSC_Color('dark gray', /Triple), 18
FSC_Display, 800, 500
FSC_Contour, data, Levels=levels, /Fill, $
    C_Colors=Indgen(20)+1, Position=pos
FSC_Contour, data, Levels=levels, /Overplot, Label=2
labels = ['<-0.8', String(Scale_Vector(findgen(16), -0.8, 0.7),$
    Format='(F0.1)'), '>0.8']
DCBar, NColors=18, Bottom=1, Labels=labels, charsize=0.75
```

This will give you a light grey color for values less than -0.8 and a dark gray color for values greater than 0.8. Values between -0.8 and 0.8 will be in increments of 0.1 and in normal colors.

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Colorbar

Posted by [David Fanning](#) on Thu, 13 Jan 2011 21:42:13 GMT

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kisCA writes:

> And I haven't find a command to change the linestyle in FSC_Contour,
> is it possible ?

Try C_Linestyle=2. FSC_Contour uses all the normal Contour keywords.

Cheers,

David

--

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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 01:07:15 GMT
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Thanks a lot, these helps me a lot!

When I make my postscript I have a problem with colors: Dark blue become red... Do you have an idea of what happen?

Cheers

Subject: Re: Colorbar
Posted by [ben.bighair](#) on Fri, 14 Jan 2011 01:10:27 GMT
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On 1/13/11 8:07 PM, kisCA wrote:

> Thanks a lot, these helps me a lot!
>
> When I make my postscript I have a problem with colors: Dark blue
> become red... Do you have an idea of what happen?
>
> Cheers

Hi,

Check out... http://dfanning.com/color_tips/redps.html and all of the other things in that treasure chest.

Cheers,
Ben

Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 01:55:10 GMT
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Thanks for the link...
It has worked one time with decomposed=0.

Since I tried to add some legend with oplot an xyouts, red appear again and the lines drew with oplot doesn't appear...
Quiet disappointed

Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 02:22:14 GMT
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kisCA writes:

- > It has worked one time with decomposed=0.
- > Since I tried to add some legend with oplot an xyouts, red appear
- > again and the lines drew with oplot doesn't appear...
- > Quiet disappointed

Try FSC_PlotS for Oplot (or maybe FSC_Plot, /Overplot).
Use FSC_Text in place of XYOuts. The Coyote Graphics routines handle all of these confounding color details for you. :-)

Cheers,

David

--

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Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 02:53:34 GMT
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It works with FSC_PlotS and FSC_text (its looks like you have made idl a matlab like with all these command :)), but the red didn't gone...

Don't know why it has worked one and only one time after I quit IDL and then restart it :(I tried to do the same but nothing change.

I have change a predefined colorbar with XPALETTE and then change it with MODIFYCT, maybe it come from that but I am not sure.

If you see anything in my commands that could explain this thing...

```
!p.font=0
set_plot, 'ps'
ext='.eps'
!p.thick=3 ;data
!x.thick=2 ;x axis
!y.thick=2 ;y axis
device, filename='QBO response'+ext, encapsulated=eps, $
    /helvetica,/isolatin1, xsize=14, ysize=12,font_size=8,
landscape=0, color=1, $
    decomposed=0, bits_per_pixel=8
nlevels = 16
levels = -0.8+indgen(nlevels)*0.1
pos = [0.1, 0.1, 0.9, 0.75]
LoadCT, 3, NColors=nlevels, Bottom=1
FSC_Contour, QBOmod,time,Zproxy, NLevels=nlevels, Levels=levels, /
Fill,C_Colors=Indgen(nlevels)+1, Position=pos
FSC_Contour, Upos,time,zs, NLevels=4, /Overplot, C_linestyle=0,
label=0
FSC_Contour, Uneg,time,zs, NLevels=4, /Overplot, C_linestyle=1,
label=0
FSC_Colorbar, RANGE=[-0.8, 0.8],NColors=nlevels, Bottom=1,
Format='(F0.1)',Divisions=nlevels/2, XMinor=0, color=0
FSC_plots,[1995,1996],[13.9,13.9],linestyle=0,color=0
FSC_text,1996.2,13.9,'Singapore zonal wind (u>0)', color=0
FSC_plots,[1995,1996],[12.4,12.4],linestyle=1,color=0
FSC_text,1996.2,12.4,'Singapore zonal wind (u<0)', color=0
device,/close
```

Cheers

Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 03:04:20 GMT
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And also, sometimes, it's instead of red, I got white...sometimes i
feel like a 5 years old child :)

Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 03:09:07 GMT
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kisCA writes:

> And also, sometimes, it's instead of red, I got white...sometimes i

> feel like a 5 years old child :)

Yes, you are going to need my new book. Out sometime in the next 3-6 weeks. :-)

Cheers,

David

--

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Subject: Re: Colorbar

Posted by [kisCA](#) on Fri, 14 Jan 2011 03:14:56 GMT

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:) no doubt I will get it !

For now I will manage myself with paint or photoshop, this figure is needed for next week ;)

Thanks again for your help

Cheers

Subject: Re: Colorbar

Posted by [kisCA](#) on Fri, 14 Jan 2011 03:15:55 GMT

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Or maybe I will go back to matlab :)

Subject: Re: Colorbar

Posted by [David Fanning](#) on Fri, 14 Jan 2011 03:16:28 GMT

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kisCA writes:

> It works with FSC_PlotS and FSC_text (its looks like you have made idl
> a matlab like with all these command :)), but the red didn't gone...
>

> Don't know why it has worked one and only one time after I quit IDL
> and then restart it :(I tried to do the same but nothing change.
>
> I have change a predefined colorbar with XPALETTE and then change it
> with MODIFYCT, maybe it come from that but I am not sure.
>
> If you see anything in my commands that could explain this thing...

Well, you have loaded a red color table, so I would expect some red colors. :-)

I would set the DECOMPOSED keyword to 1, not 0 on your DEVICE command. And I wouldn't specify COLOR=0. In fact, I would leave the COLOR keyword off your commands. The Coyote Graphics commands will do a good job of figuring things out for you. If you **do** want to use colors, then specify color names, like COLOR='black' or COLOR='red'.

You can see a list of colors you can use by typing this command:

```
color = PickColorName()
```

Just click on a color to learn its name.

Cheers,

David

--

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Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 03:17:27 GMT
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kisCA writes:

> Or maybe I will go back to matlab :)

I feel your pain. :-)

Cheers,

David

--

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Subject: Re: Colorbar

Posted by [kisCA](#) on Fri, 14 Jan 2011 03:30:54 GMT

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I tried as you said with only name for colors but with decomposed=0
still white and decomposed=1 still red...

I give you the picture I got, maybe you will see better...

<http://www.easy-share.com/1913552565/test.jpg>

Subject: Re: Colorbar

Posted by [kisCA](#) on Fri, 14 Jan 2011 03:31:41 GMT

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On Jan 13, 7:17 pm, David Fanning <n...@dfanning.com> wrote:

> kisCA writes:

>> Or maybe I will go back to matlab :)

>

> I feel your pain. :-)

>

Thanks, about 2 days to make this...

Subject: Re: Colorbar

Posted by [David Fanning](#) on Fri, 14 Jan 2011 03:41:53 GMT

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kisCA writes:

> Thanks, about 2 days to make this...

I'm starting my 20th year. I just learned how to

write color independent IDL programs. :-)

I tried to look at your image, but the web page
is trying to download software onto my machine.
I don't like that. :-(

Have you tried something other than a red color
table. I think that might be the source of your
red colors, just off hand.

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 03:48:15 GMT
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David writes:
> Have you tried something other than a red color
table. I think that might be the source of your
red colors, just off hand.

I thought of that too, but with the rainbow it's the same...

It's a blue-white-white-red home made colorbar with 256 colors looks
like in http://acmg.seas.harvard.edu/gamap/doc/Chapter_3.html

Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:05:49 GMT
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kisCA writes:

> I give you the picture I got, maybe you will see better...
>
> <http://www.easy-share.com/1913552565/test.jpg>

I you could FTP this image here, I could have a look at it:

`ftp://ftp.dfanning.com/pub/dfanning/incoming`

I ran your code (I had to make up data, of course) and saw a red color bar. But, you are using a red color table so... When I tried it with another color table, I saw other colors, so it appears to work for me.

If you want to make a save file of your data, so I can run your code, put that in the same location.

Thanks,

David

--

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Subject: Re: Colorbar

Posted by [kisCA](#) on Fri, 14 Jan 2011 04:16:20 GMT

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I have send via ftp the colorbar and the data I use.

Thanks again for all this time

Cheers

Subject: Re: Colorbar

Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:26:20 GMT

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kisCA writes:

> I have send via ftp the colorbar and the data I use.

Well, humm. I don't see it there. I followed the link, just to be sure I didn't type it wrong. It went to the

right place.

Anonymous FTP to ftp.dfanning.com and in the directory /pub/dfanning/incoming.

Sorry.

David

--

David Fanning, Ph.D.
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Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:28:10 GMT
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kisCA writes:

> I have send via ftp the colorbar and the data I use.

Hang on. I do see it. I'm in the process of switching domains, so things are a little crazy around here. :-)

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:31:21 GMT
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kisCA writes:

> I tried as you said with only name for colors but with decomposed=0

> still white and decomposed=1 still red...
>
> I give you the picture I got, maybe you will see better...
>
> <http://www.easy-share.com/1913552565/test.jpg>

OK, I see this picture (or at least the one you put on my FTP site). It looks correct to me. What do you think is wrong with it?

David

--

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Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 04:36:33 GMT
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I have send another one to explain.

The white part on test (red on test2) should be darker blue because it's the places where my data are minimum.

Cheers

Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 04:37:55 GMT
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the spot I am talking about are for 2002 and 1999 near 30 km...

Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:40:21 GMT
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kisCA writes:

> I tried as you said with only name for colors but with decomposed=0
> still white and decomposed=1 still red...

>
> I give you the picture I got, maybe you will see better...

OK, I ran the code you sent me with the data you sent me, and everything looks like it is working perfectly.

I don't know what to tell you. Maybe I should try this in IDL 8. That is the version you are using, right?

Do you have the latest version of the Coyote Library?

Ah, maybe this is the problem. I notice you referred me to a page that I am certain is using some of my software. That is probably OLD software!

Try putting the Coyote Library first on your IDL path. Here is the easiest way to do this.

```
.Reset  
CD, 'whereverCoyoteLibraryIs'  
Addpath
```

Now try your program again and see what happens. I'll bet it works perfectly now. :-)

Cheers,

David

--
David Fanning, Ph.D.
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Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 04:45:52 GMT
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kisCA writes:

>
> I have send another one to explain.
>
> The white part on test (red on test2) should be darker blue because

> it's the places where my data are minimum.

OK, well, on your first FSC_CONTOUR command you are using both NLEVELS=nlevels and LEVELS=LEVELS keywords. That's a mistake (maybe I should check for that, but it never occurred to me anyone would do this :-). Take the NLEVELS keyword off that command. Does that help?

David

--

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Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 04:53:27 GMT
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All the software I use where downloaded directly from your website one by one...

Anyway I have downloaded the whole package and reinstall it.

No success still the same thing. Furthermore I don't know why it had worked one time...

I work with IDL8.0 for windows 7 64bit version.

I will try tomorrow with an other version. Hope it will work

Could you send me by ftp the ps you have done and the version you used ?

Thanks a lot for your time

Cheers

Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 05:03:10 GMT
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Ok, that's that... with this commands I didn't make the contour below
-0.8. But, I wonder why it has not made the same problem with positive
value above 0.8...

Thanks again for your help... two hours, my bet !

Cheers

Subject: Re: Colorbar
Posted by [David Fanning](#) on Fri, 14 Jan 2011 05:10:09 GMT
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kisCA writes:

> Ok, that's that... with this commands I didn't make the contour below
> -0.8. But, I wonder why it has not made the same problem with positive
> value above 0.8...
>
> Thanks again for your help... two hours, my bet !

I've modified your code a little bit to do what I think
you are after. The color table is still a little flakey,
but I need to go to bed. :-)

I'll zip it up and put it here:

`ftp://ftp.dfanning.com/pub/dfanning/outgoing/kisca.zip`

Give me about five minutes.

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Colorbar
Posted by [kisCA](#) on Fri, 14 Jan 2011 05:18:52 GMT
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Well recieved!

I will eat and sleep to :-)

Again, thanks!

Cheers
