
Subject: Re: how to draw contour with continue color?

Posted by [R.G. Stockwell](#) on Sun, 16 Nov 2008 03:57:23 GMT

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"xqinshan" <xqinshan@tom.com> wrote in message

news:704ac982-d7be-4e4f-b0f0-af9002afa778@v5g2000prm.googlegr oups.com...

> Hi, I use "contour...nlevels=.../fill" to get contour plot. The color
> variation is separated. Although if I set nlevels=50 or more it looks
> better, but the contour color is not continuous. When I donot set
> nlevels for "colorbar", the color of colorbar is continuous. But how can
> I do for contour?
> Best,
> Xqinshan

sounds like you do not want a contour plot.

Check out tvimage (from dfanning.com)

Or you could do a shade_surf with az=0, ax=90, shade=bytescl(data) type thing
(with the z axis ticknames = a blank array).

Cheers,
bob

Subject: Re: how to draw contour with continue color?

Posted by [David Fanning](#) on Sun, 16 Nov 2008 04:13:43 GMT

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xqinshan writes:

> Hi, I use "contour...nlevels=.../fill" to get contour plot. The color
> variation is separated. Although if I set nlevels=50 or more it looks
> better, but the contour color is not continuous. When I donot set
> nlevels for "colorbar", the color of colorbar is continuous. But how can
> I do for contour?

You want an image, not a filled contour plot.

```
data = Dist(300)
step = (Max(data) - Min(data)) / 16.
levels = Indgen(16) * step + Min(data)
Device, Decomposed=1
CTLoad, 4, /Brewer
pos = [0.15, 0.15, 0.9, 0.75]
Erase, Color=FSC_Color('ivory')
TVImage, BytScl(data), POSITION=pos
Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, $
  LEVELS=levels, COLOR=FSC_Color('black'), $
```

```
C_LABEL=Replicate(1, 16)
Colorbar, NCOLORS=256, RANGE=[Min(data), Max(data)], DIVISIONS=4, $
POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=FSC_Color('black')
```

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.")

Subject: Re: how to draw contour with continue color?

Posted by [xqinshan](#) on Sun, 16 Nov 2008 08:57:15 GMT

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> xqinshan writes:

>> Hi, I use "contour...nlevels=.../fill" to get contour plot. The color
>> variation is seperated. Although if I set nlevels=50 or more it looks
>> better, but the contour color is not continuous. When I donot set
>> nleves for "colorbar", the color of colorbar is continuous. But how can
>> I do for contour?

>

> You want an image, not a filled contour plot.

>

```
> data = Dist(300)
> step = (Max(data) - Min(data)) / 16.
> levels = Indgen(16) * step + Min(data)
> Device, Decomposed=1
> CTLoad, 4, /Brewer
> pos = [0.15, 0.15, 0.9, 0.75]
> Erase, Color=FSC_Color('ivory')
> TVImage, BytScl(data), POSITION=pos
> Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, $
>   LEVELS=levels, COLOR=FSC_Color('black'), $
>   C_LABEL=Replicate(1, 16)
> Colorbar, NCOLORS=256, RANGE=[Min(data), Max(data)], DIVISIONS=4, $
>   POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=FSC_Color('black')
```

>

> 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.")

Thanks very much!

Subject: Re: how to draw contour with continue color?
Posted by [xqinshan](#) on Sun, 16 Nov 2008 13:34:25 GMT
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>
>
>
>
>
>
>> xqinshan writes:
>>> Hi, I use "contour...nlevels=.../fill" to get contour plot. The color
>>> variation is seperated. Although if I set nlevels=50 or more it looks
>>> better, but the contour color is not continuous. When I donot set
>>> nleves for "colorbar", the color of colorbar is continuous.But how can
>>> I do for contour?
>
>> You want an image, not a filled contour plot.
>
>> data = Dist(300)
>> step = (Max(data) - Min(data)) / 16.
>> levels = Indgen(16) * step + Min(data)
>> Device, Decomposed=1
>> CTLoad, 4, /Brewer
>> pos = [0.15, 0.15, 0.9, 0.75]
>> Erase, Color=FSC_Color('ivory')
>> TVImage, BytScl(data), POSITION=pos
>> Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, \$
>> LEVELS=levels, COLOR=FSC_Color('black'), \$
>> C_LABEL=Replicate(1, 16)
>> Colorbar, NCOLORS=256, RANGE=[Min(data), Max(data)], DIVISIONS=4, \$
>> POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=FSC_Color('black')
>
>> 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.")

>
> Thanks very much!-

Thanks David. That work well for screen (set_plot,'win'), but for ps (set_plot,'ps'),
device,decomposed=1
dosnot work. There is a white line in the image and colorbar. I hope pictures of ps form can be the same as on screen. How to do that?

Best
Xqinshan

Subject: Re: how to draw contour with continue color?
Posted by [David Fanning](#) on Sun, 16 Nov 2008 14:02:56 GMT
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xqinshan writes:

> Thanks David. That work well for screen (set_plot,'win'), but for ps
> (set_plot,'ps'),
> device,decomposed=3D1
> dosnot work. There is a white line in the image and colorbar. I hope
> pictures of ps form can be the same as on screen. How to do that?

Take the DEVICE and ERASE commands out. Should work fine then.

Cheers,

David

--

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

Subject: Re: how to draw contour with continue color?
Posted by [xqinshan](#) on Sun, 16 Nov 2008 15:12:20 GMT
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> xqinshan writes:
>> Thanks David. That work well for screen (set_plot,'win'), but for ps
>> (set_plot,'ps'),
>> device,decomposed=3D1
>> dosnot work. There is a white line in the image and colorbar. I hope

>> pictures of ps form can be the same as on screen. How to do that?
>
> Take the DEVICE and ERASE commands out. Should work fine then.
>
> 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.")

This is the program:

```
set_plot,'ps'  
device,filename='f:\image.ps',bits=8,/color  
  
data = Dist(300)  
step = (Max(data) - Min(data)) / 16.  
levels = Indgen(16) * step + Min(data)  
;Device, Decomposed=1  
CTLoad, 14, /Brewer  
pos = [0.15, 0.15, 0.9, 0.75]  
;Erase, Color=FSC_Color('ivory')  
TVImage, BytScl(data), POSITION=pos  
Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, $  
    LEVELS=levels, COLOR=FSC_Color('black'), $  
    C_LABEL=Replicate(1, 16)  
Colorbar, NCOLORS=256, RANGE=[Min(data), Max(data)], DIVISIONS=4,  
$  
    POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=FSC_Color  
('black')  
  
device,/close  
end
```

The result is there is a black line between 106 to 159 on the colorbar. I donot know why.

Best
Xqinshan

Subject: Re: how to draw contour with continue color?
Posted by [David Fanning](#) on Sun, 16 Nov 2008 15:35:44 GMT
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xqinshan writes:

> The result is there is a black line between 106 to 159 on the
> colorbar. I donot know why.

Well, the rule with 8-bit devices is "load the colors before you use them". The black color in your color bar is coming from the previous drawing of the contour lines. Repeat the CTLOAD command just before you draw your COLORBAR. (And, although this won't case any problems now, change the COLOR keyword on the Colobar command to ANNOTATECOLOR.

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.")

Subject: Re: how to draw contour with continue color?
Posted by [David Fanning](#) on Sun, 16 Nov 2008 15:51:37 GMT
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xqinshan writes:

> Thanks David. That work well for screen (set_plot,'win'), but for ps
> (set_plot,'ps'),
> device,decomposed=3D1
> dosnot work. There is a white line in the image and colorbar. I hope
> pictures of ps form can be the same as on screen. How to do that?

Here is a version of the program that works on the display and in PostScript. In the future, if you want something in PostScript just say so, or write an e-mail to ITTVIS asking them to PLEASE get to work on updating the PostScript device. That way, I can jump through the necessary hoops from the beginning.

```
data = Dist(300)
step = (Max(data) - Min(data)) / 16.
levels = Indgen(16) * step + Min(data)
IF (!D.Flags AND 256) NE 0 THEN BEGIN
    Device, Decomposed=1, Get_Decomposed=theState
    Erase, Color=FSC_Color('ivory')
```

```
ENDIF
CTLoad, 4, /Brewer, NCOLORS=255
black = FSC_Color('black', 255)
pos = [0.15, 0.15, 0.9, 0.75]
TVImage, BytScl(data, TOP=254), POSITION=pos
Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, $
    LEVELS=levels, COLOR=black, C_LABEL=Replicate(1, 16)
Colorbar, NCOLORS=255, RANGE=[Min(data), Max(data)], DIVISIONS=4, $
    POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=black
IF (!D.Flags AND 256) NE 0 THEN Device, Decomposed=theState
END
```

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.")

Subject: Re: how to draw contour with continue color?
Posted by [xqinshan](#) on Mon, 17 Nov 2008 12:46:28 GMT
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```
> xqinshan writes:
>> Thanks David. That work well for screen (set_plot,'win'), but for ps
>> (set_plot,'ps'),
>> device,decomposed=3D1
>> dosnot work. There is a white line in the image and colorbar. I hope
>> pictures of ps form can be the same as on screen. How to do that?
>
> Here is a version of the program that works on the display
> and in PostScript. In the future, if you want something
> in PostScript just say so, or write an e-mail to ITTVIS
> asking them to PLEASE get to work on updating the PostScript
> device. That way, I can jump through the necessary hoops
> from the beginning.
>
> data = Dist(300)
> step = (Max(data) - Min(data)) / 16.
> levels = Indgen(16) * step + Min(data)
> IF (!D.Flags AND 256) NE 0 THEN BEGIN
>     Device, Decomposed=1, Get_Decomposed=theState
>     Erase, Color=FSC_Color('ivory')
> ENDIF
```

```
> CTLoad, 4, /Brewer, NCOLORS=255
> black = FSC_Color('black', 255)
> pos = [0.15, 0.15, 0.9, 0.75]
> TVImage, BytScl(data, TOP=254), POSITION=pos
> Contour, data, /NOERASE, POSITION=pos, XSTYLE=1, YSTYLE=1, $
>   LEVELS=levels, COLOR=black, C_LABEL=Replicate(1, 16)
> Colorbar, NCOLORS=255, RANGE=[Min(data), Max(data)], DIVISIONS=4, $
>   POSITION=[0.15, 0.8, 0.9, 0.85], /TOP, COLOR=black
> IF (!D.Flags AND 256) NE 0 THEN Device, Decomposed=theState
> END
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
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> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
```

Great! Many thanks!
