
Subject: scatter plot , intensity colors. Help
Posted by [limigt](#) on Fri, 15 Nov 2013 13:06:17 GMT
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Dear all,

I need to do a scatterplot with colored symbols representing the intensity. I am adapting an example I found at http://www.idlcoyote.com/gallery/colored_line_plot.pro I am doing the following:

```
X=[2, 4, 5, 6, 7, 8]
Y=[20, 40, 45, 30, 10, 5]
I=[100,200,300,400,500,600]

;intensity color
colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
clr = Value_Locate(colors, I)
clr = Byte(Round(cgScaleVector(clr, 0, 255)))

cgLoadCT, 33
cgWindow

;the scatterplot
cgPlot, X, Y, /Nodata, /AddCMD
FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
    Color=clr[j], Psym=16,symsize=2,/AddCMD
FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
    Color=clr[j], Psym=16,symsize=2, /AddCMD
```

However the output produces a gray scale image.

1. What am I doing wrong?
2. How can I add a color bar associated with the intensity (I)?

I will appreciate any assistance.

Cheers,

Lim

Subject: Re: scatter plot , intensity colors. Help
Posted by [David Fanning](#) on Fri, 15 Nov 2013 14:25:59 GMT
[View Forum Message](#) <> [Reply to Message](#)

Lim writes:

>
> Dear all,

```

>
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example I found at http://www.idlcoyote.com/gallery/colored\_line\_plot.pro I am doing the following:
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> clr = Value_Locate(colors, I)
> clr = Byte(Round(cgScaleVector(clr, 0, 255)))
>
> cgLoadCT, 33
> cgWindow
>
> ;the scatterplot
> cgPlot, X, Y, /Nodata, /AddCMD
> FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
>     Color=clr[j], Psym=16,symsize=2,/AddCMD
> FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
>     Color=clr[j], Psym=16,symsize=2, /AddCMD
>
>
> However the output produces a gray scale image.
> 1. What am I doing wrong?

```

My guess would be using an outdated Coyote Library. There is no gray scale coloring when I run your example. I follow these steps to resolve these kinds of issues:

http://www.idlcoyote.com/code_tips/fixcoyoteprogram.php

```

> 2. How can I add a color bar associated with the intensity (I)?

```

I think I would use cgColorbar. Did this **not** work for some reason?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: scatter plot , intensity colors. Help
Posted by [limiq](#) on Fri, 15 Nov 2013 16:37:43 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Friday, November 15, 2013 8:06:17 AM UTC-5, Lim wrote:

```
> Dear all,
>
>
>
> I need to do a scatterplot with colored symbols representing the intensity. I am adapting an
example I found at http://www.idlcoyote.com/gallery/colored\_line\_plot.pro I am doing the following:
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> I=[100,200,300,400,500,600]
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>
> ;intensity color
>
> colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
>
> clr = Value_Locate(colors, I)
>
> clr = Byte(Round(cgScaleVector(clr, 0, 255)))
>
>
>
> cgLoadCT, 33
>
> cgWindow
>
>
> ;the scatterplot
>
> cgPlot, X, Y, /Nodata, /AddCMD
>
> FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
>
>     Color=clr[j], Psym=16,symsize=2,/AddCMD
>
> FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
>
>     Color=clr[j], Psym=16,symsize=2, /AddCMD
```

>
>
>
>
>
> However the output produces a gray scale image.
>
> 1. What am I doing wrong?
>
> 2. How can I add a color bar associated with the intensity (I)?
>
>
>
> I will appreciate any assistance.
>
>
>
> Cheers,
>
>
>
> Lim

Hi David,

1. Colors: I have updated my coyote library. Now I can see the colors. Thanks.

2. Colorbar: To be honest I do not have a clear idea about how to include the color bar with the colors matching those I used in the intensity. I will appreciate any suggestions.

Thanks,
Lim

Subject: Re: scatter plot , intensity colors. Help
Posted by [limigt](#) on Fri, 15 Nov 2013 16:46:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Friday, November 15, 2013 8:06:17 AM UTC-5, Lim wrote:

> Dear all,
>
>
>
> I need to do a scatterplot with colored symbols representing the intensity. I am adapting an
example I found at http://www.idlcoyote.com/gallery/colored_line_plot.pro I am doing the following:
>
>

```

>
> X=[2, 4, 5, 6, 7, 8]
>
> Y=[20, 40, 45, 30, 10, 5]
>
> I=[100,200,300,400,500,600]
>
>
>
> ;intensity color
>
> colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
>
> clr = Value_Locate(colors, I)
>
> clr = Byte(Round(cgScaleVector(clr, 0, 255)))
>
>
>
> cgLoadCT, 33
>
> cgWindow
>
>
> ;the scatterplot
>
> cgPlot, X, Y, /Nodata, /AddCMD
>
> FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
>
>     Color=clr[j], Psym=16,symsize=2,/AddCMD
>
> FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
>
>     Color=clr[j], Psym=16,symsize=2, /AddCMD
>
>
>
>
> However the output produces a gray scale image.
>
> 1. What am I doing wrong?
>
> 2. How can I add a color bar associated with the intensity (I)?
>
>

```

>
> I will appreciate any assistance.
>
>
>
> Cheers,
>
>
>
> Lim

Hi David,
I just saw you the solution to my problem:

http://www.idlcoyote.com/color_tips/colorbar.html

Thank you very much
Lim

Subject: Re: scatter plot , intensity colors. Help
Posted by [David Fanning](#) on Fri, 15 Nov 2013 16:54:42 GMT
[View Forum Message](#) <> [Reply to Message](#)

Lim writes:

> 1. Colors: I have updated my coyote library. Now I can see the colors. Thanks.
>
> 2. Colorbar: To be honest I do not have a clear idea about how to include the color bar with the
colors matching those I used in the intensity. I will appreciate any suggestions.

I would probably do it like this:

```
;-----  
X=[2, 4, 5, 6, 7, 8]  
Y=[20, 40, 45, 30, 10, 5]  
I=[100,200,300,400,500,600]  
  
;intensity color  
colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))  
clr = Value_Locate(colors, I)  
clr = Byte(Round(cgScaleVector(clr, 0, 255)))  
TVLCT, r, g, b, /Get  
TVLCT, r[clr], g[clr], b[clr], 1  
TVLCT, r, g, b, /Get  
  
cgWindow, 'TVLCT', r, g, b
```

```

;the scatterplot
cgPlot, X, Y, /Nodata, /AddCMD, Position=[0.125, 0.125, 0.9, 0.8]
FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
    Color=clr[j+1], Psym=16,symsize=2,/AddCMD
FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
    Color=clr[j+1], Psym=16,symsize=2, /AddCMD

cgDCBar, NColors=N_Elements(clr), Bottom=1, /AddCmd
END
;-----

```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: scatter plot , intensity colors. Help

Posted by [limiq](#) on Sun, 17 Nov 2013 10:59:42 GMT

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My final code:

Pro sctrplnt

```

X=[2, 4, 5, 6, 7, 8]
Y=[20, 40, 45, 30, 10, 5]
I=[100,200,300,400,500,600]
nelm=n_elements(X)
colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
clr = Value_Locate(colors, I)
clr = Byte(Round(cgScaleVector(clr, 0, 255)))

```

```

cgLoadCT, 33
cgWindow
;the scatterplot
cgPlot, X, Y, /Nodata, /AddCMD
FOR j=0,nelms-1 DO cgPlotS, X[j], Y[j],Color=clr[j], Psym=16,symsize=2,/AddCMD
cgColorbar, Divisions=5, Format='(I3)', Range=[100,600], /AddCMD , Title='I'

```

End

On Friday, November 15, 2013 8:06:17 AM UTC-5, Lim wrote:

```
> Dear all,
>
>
>
> I need to do a scatterplot with colored symbols representing the intensity. I am adapting an
example I found at http://www.idlcoyote.com/gallery/colored\_line\_plot.pro I am doing the following:
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> X=[2, 4, 5, 6, 7, 8]
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> I=[100,200,300,400,500,600]
>
>
>
> ;intensity color
>
> colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
>
> clr = Value_Locate(colors, I)
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> clr = Byte(Round(cgScaleVector(clr, 0, 255)))
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>
> cgLoadCT, 33
>
> cgWindow
>
>
> ;the scatterplot
>
> cgPlot, X, Y, /Nodata, /AddCMD
>
> FOR j=0,N_Elements(X)-2 DO cgPlotS, [X[j], X[j+1]], [Y[j], Y[j+1]], $
>
>     Color=clr[j], Psym=16,symsize=2,/AddCMD
>
> FOR j=0,N_Elements(pNPP)-1,2 DO cgPlotS, X[j], Y[j], $
>
>     Color=clr[j], Psym=16,symsize=2, /AddCMD
>
```


>
>
>
>
> However the output produces a gray scale image.
>
> 1. What am I doing wrong?
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> 2. How can I add a color bar associated with the intensity (I)?
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> I will appreciate any assistance.
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> Cheers,
>
>
>
> Lim

Subject: Re: scatter plot , intensity colors. Help
Posted by [David Fanning](#) on Sun, 17 Nov 2013 15:38:23 GMT
[View Forum Message](#) <> [Reply to Message](#)

Lim writes:

> My final code:
>
> Pro sctrplnt
>
> X=[2, 4, 5, 6, 7, 8]
> Y=[20, 40, 45, 30, 10, 5]
> I=[100,200,300,400,500,600]
> nelms=n_elements(X)
> colors = cgScaleVector(Findgen(N_Elements(I)), Min(I), Max(I))
> clr = Value_Locate(colors, I)
> clr = Byte(Round(cgScaleVector(clr, 0, 255)))
>
> cgLoadCT, 33
> cgWindow
> ;the scatterplot
> cgPlot, X, Y, /Nodata, /AddCMD
> FOR j=0,nelms-1 DO cgPlotS, X[j], Y[j],Color=clr[j], Psym=16,symsize=2,/AddCMD
> cgColorbar, Divisions=5, Format='(I3)', Range=[100,600], /AddCMD , Title='I'
>

> End

I prefer to have the color bar separate from the plot and not
overwritten on top of it, but aesthetics are completely up to you. ;-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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