
Subject: Interpolation problem in 'cgimage.pro' while having set_plot='ps'

Posted by [jacobsvensmark](#) on Sat, 30 Nov 2013 16:26:18 GMT

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So I execute the following code displaying 3 colored 7x7 array images, and the .eps file that is created has its displayed data smoothed/interpolated, even though I specify interpolate=0. If I set_plot,'X' and comment out the device commands, the displayed image is not interpolated and is thus fine. I wish to not have interpolation - am I doing something wrong or am I seeing a bug?

EXAMPLE using set_plot,'ps':

<http://imgur.com/LpzRVmD>

EXAMPLE using set_plot,'X' and no device commands

<http://imgur.com/s8c8uX6>

CODE EXAMPLE:

```
pro test
set_plot,'ps'
```

```
; Example data
```

```
data_1 = findgen(7,7)
```

```
data_2 = findgen(7,7)+2
```

```
data_3 = findgen(7,7)+3
```

```
device,filename='plot5.eps',/encapsul,/color
```

```
cgDisplay
```

```
maxdensity = max([data_1,data_2,data_3])
```

```
mindensity = min([data_1,data_2,data_3])
```

```
!p.multi=[0,3,1]
```

```
cgloadct, 33
```

```
tvlct, rr, gg, bb, /get
```

```
palette = [ [rr], [gg], [bb] ]
```

```
axes_settings = {xticks:6,xtickname:['0','15','30','45','60','75','90'],xtic kv:[0,15,30,45,60,75,90],$
                yticks:6,ytickname:['0','15','30','45','60','75','90'],ytick v:[0,15,30,45,60,75,90]}
```

```
; PLOT 1
```

```
ff = data_1
```

```
scaleddensity = bytscl(ff, min=mindensity, max=maxdensity)
```

```
; display the density plot.
```

```
cgimage, scaleddensity, /axes, palette=palette, axkeywords=axes_settings, $
```

```

    xtitle='Theta', ytitle='Phi', title = 'Bias at 1 Rvir', xrange=[-7.5,97.5],yrange=[-7.5,97.5],$
    position=[0.125, 0.125, 0.9, 0.7],color=cgcolor('black'),interpolate=0
cgcontour, ff, levels=(max(ff)-min(ff))*(findgen(6)+1.)/6.+min(ff), /onimage, $
    c_colors=['black'], $
    c_thick=thick, c_charthick=thick

; PLOT 2
    ff = data_2
    scaleddensity = bytscl(ff, min=mindensity, max=maxdensity)
; display the density plot.
    cgimage, scaleddensity, /axes, palette=palette,axkeywords=axes_settings, $
    xtitle='Theta', ytitle='Phi', title = 'Bias at 2 Rvir', xrange=[-7.5,97.5],yrange=[-7.5,97.5],$
    position=[0.125, 0.125, 0.9, 0.7],color=cgcolor('black'),interpolate=0

    cgcontour, ff, levels=(max(ff)-min(ff))*(findgen(6)+1.)/6.+min(ff), /onimage, $
    c_colors=['black'], $
    c_thick=thick, c_charthick=thick

; PLOT 3
    ff = data_3
    scaleddensity = bytscl(ff, min=mindensity, max=maxdensity)
; display the density plot.
    cgimage, scaleddensity, /axes, palette=palette, axkeywords=axes_settings, $
    xtitle='Theta', ytitle='Phi', title = 'Bias at 3 Rvir', xrange=[-7.5,97.5],yrange=[-7.5,97.5], $
    position=[0.125, 0.125, 0.9, 0.7],color=cgcolor('black'),interpolate=0
    cgcontour, ff, levels=(max(ff)-min(ff))*(findgen(6)+1.)/6.+min(ff), /onimage, $
    c_colors=['black'], $
    c_thick=thick, c_charthick=thick

; PLOT COLORBAR
    cgColorbar, Position=[0.125, 0.85, 0.9, 0.925], Title='M!dellipsoid!n(<R)/M!drandom!n(<R)', $
    Range=[mindensity, maxDensity], NColors=254, Bottom=1, OOB_Low='gray', $
    TLocation='Top',color=cgcolor('black')

device,/close
end

```

Subject: Re: Interpolation problem in 'cgimage.pro' while having set_plot='ps'
 Posted by [jacobsvensmark](#) on Sat, 30 Nov 2013 16:49:50 GMT
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Oh and for good measure, I am using IDL 7.0 on OSX. Thanks.

Subject: Re: Interpolation problem in 'cgimage.pro' while having set_plot='ps'

Posted by [jacobsvensmark](#) on Sat, 30 Nov 2013 17:23:26 GMT

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Interesting development: I found out that the interpolation/smoothing takes place as the .eps is opened with the default OSX viewer 'Preview'. The screenshots above are as opened with Preview.

HOWEVER when using the .eps in my LaTeX file it displays just fine, no interpolation. So now I don't really have a problem, even though it might still be a thing to fix.

Subject: Re: Interpolation problem in 'cgimage.pro' while having set_plot='ps'

Posted by [Phillip Bitzer](#) on Sat, 30 Nov 2013 17:29:24 GMT

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On Saturday, November 30, 2013 10:49:50 AM UTC-6, jacobsv...@gmail.com wrote:

> Oh and for good measure, I am using IDL 7.0 on OSX. Thanks.

My guess:

http://www.idlcoyote.com/ps_tips/maccolors.php

Subject: Re: Interpolation problem in 'cgimage.pro' while having set_plot='ps'

Posted by [jacobsvensmark](#) on Sat, 30 Nov 2013 19:12:32 GMT

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On Saturday, November 30, 2013 6:29:24 PM UTC+1, Phillip Bitzer wrote:

> On Saturday, November 30, 2013 10:49:50 AM UTC-6, jacobsv...@gmail.com wrote:

>

>> Oh and for good measure, I am using IDL 7.0 on OSX. Thanks.

>

>

>

> My guess:

>

>

>

> http://www.idlcoyote.com/ps_tips/maccolors.php

Looks exactly like it, thanks for posting.
