Subject: Plotting a horizontal line over a cgImage
Posted by Christina Haig on Mon, 29 Aug 2016 16:03:09 GMT
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This question probably has a very specific audience, but anyone who might be able to help me I would greatly appreciate.

Here is a good example of a cgimage plot, somewhat complex, but nothing untoward:

```
p = pos[*,0]
  cgimage,data1,/DEVICE,/SCALE,/AXES,position=[p[0],p[1],p[2], p[3]],$
        xrange=[mint,maxt],yrange=[minp,maxp],charsize=3,$
 AXKEYWORDS={xtickformat:'(A1)',ylog:1,yticks:2,$
        ytickname:['10!e0','10!e1','10!e2']},/noerase
```

As you can see, the yrange goes roughly from 1 to 100ish. I would like to plot a horizontal line at 2 that references the axes set in the cgimage command, and at the position of the same (there are 12 total plots in my output). Now oplot obviously does not allow the position command. So I attempted to cleverly use the cgplot command to overplot the line.

```
cgplot,[mint,maxt],[2.0,2.0],thick=4,line=5,color=255,$
      position=[p[0],p[1],p[2],p[3]],/overplot
```

However nothing shows up in my plot. Can anyone advise me how I might solve this problem?

Thanks,
Christina

Subject: Re: Plotting a horizontal line over a cgImage
Posted by wlandsman on Mon, 29 Aug 2016 18:20:01 GMT
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On Monday, August 29, 2016 at 12:03:11 PM UTC-4, Christina Haig wrote:

> As you can see, the yrange goes roughly from 1 to 100ish.

Actually we can't see ;-) We (the readers of this newsgroup) don't know the content of your variables, and we can't see the output plot.

But your code looks like it should work. Does the CGPLOT command come immediately after the CGIMAGE command or is there something in between that could reset the positioning?

Also I would set COLOR='green' (or something similar) in your CGPLOT command, in case there is something funky with the color table.

Also check the coordinate transformation between data and device coordinates

IDL> print,convert_coord(mint,maxt],[2.0,2.0],/data,/to_device)

to make sure the line is in the physical area of the window. --Wayne

---

Subject: Re: Plotting a horizontal line over a cgImage
Posted by Christina Haig on Mon, 29 Aug 2016 18:20:05 GMT
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One edit to say I changed to:

```
cgplot,[mint,maxt],[2.0,2.0],thick=4,line=5,color=255,$
    position=[p[0],p[1],p[2],p[3]],/ylog,/overplot
```

However, still nothing.

Subject: Re: Plotting a horizontal line over a cgImage
Posted by Christina Haig on Mon, 29 Aug 2016 19:29:51 GMT
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On Monday, August 29, 2016 at 2:20:04 PM UTC-4, wlandsman wrote:
> On Monday, August 29, 2016 at 12:03:11 PM UTC-4, Christina Haig wrote:
>
>> As you can see, the yrange goes roughly from 1 to 100ish.
>
> Actually we can't see ;-) We (the readers of this newsgroup) don't know the content of your variables, and we can't see the output plot.
>
> But your code looks like it should work. Does the CGPLOT command come immediately after the CGIMAGE command or is there something in between that could reset the positioning?
>
> Also I would set COLOR='green' (or something similar) in your CGPLOT command, in case there is something funky with the color table.
>
> Also check the coordinate transformation between data and device coordinates
>
> IDL> print,convert_coord(mint,maxt],[2.0,2.0],/data,/to_device)
>
> to make sure the line is in the physical area of the window. --Wayne

Hi Wayne, thanks for your reply. I decided to try your suggestion of 'green', and also 'black', just in case. Also, my color table goes from black to white (255 to 0), and I tried both of those.

I also tried the convert_coord command, but /to_device gives some weirdly large numbers that I don't quite understand. I then tried convert_coord with /to_normal and got:

0.088541664 0.95833331 0.0000000
0.35069446 0.95833331 0.0000000

This looks like it should be somewhere in the plot area, in the general region of the upper-lefthand-corner where the underlying plot is. There is nothing between the cgplot and cgimage command. Is there something about either cgplot or cgimage that doesn't like one writing over the other perhaps? Is there a way to override this?

Subject: Re: Plotting a horizontal line over a cgImage
Posted by wlandsman on Tue, 30 Aug 2016 13:59:29 GMT
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I had tested your code by putting in fake data below and I see the horizontal line at y=2. --Wayne

```
cgimage,dist(512),/DEVICE,/SCALE,/AXES,position=[0.2,0.2,0.9 ,0.9],$
      xrange=[1,10],yrange=[1,100],charsize=3,$
      AXKEYWORDS={xtickformat:'(A1)',ylog:1,yticks:2,$
      ytickname:['10!e0','10!e1','10!e2']},/noerase


cgplot,[1,10],[2.0,2.0],thick=4,line=5,color='green',$
    position=[0.2,0.2,0.9,0.9],/overplot
```

Subject: Re: Plotting a horizontal line over a cgImage
Posted by Jeremy Bailin on Thu, 22 Sep 2016 21:08:26 GMT
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On Monday, August 29, 2016 at 11:03:11 AM UTC-5, Christina Haig wrote:
> This question probably has a very specific audience, but anyone who might be able to help me I would greatly appreciate.
>
> Here is a good example of a cgimage plot, somewhat complex, but nothing untoward:
>
> p = pos[*,0]
> cgimage,data1,/DEVICE,/SCALE,/AXES,position=[p[0],p[1],p[2], p[3]],$
> xrange=[mint,maxt],yrange=[minp,maxp],charsize=3,$
> AXKEYWORDS={xtickformat:'(A1)',ylog:1,yticks:2,$
> ytickname:['10!e0','10!e1','10!e2']},/noerase
>
> As you can see, the yrange goes roughly from 1 to 100ish. I would like to plot a horizontal line at 2 that references the axes set in the cgimage command, and at the position of the same (there are 12 total plots in my output). Now oplot obviously does not allow the position command. So I attempted to cleverly use the cgplot command to overplot the line.
>

> cgplot,[mint,maxt],[2.0,2.0],thick=4,line=5,color=255,$
> position=[p[0],p[1],p[2],p[3]],/overplot
>
> However nothing shows up in my plot. Can anyone advise me how I might solve this problem?
>
> Thanks,
> Christina

Are minp and maxp what you think they are?

-Jeremy.

Subject: Re: Plotting a horizontal line over a cgImage
Posted by Christina Haig on Fri, 23 Sep 2016 19:04:38 GMT
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On Thursday, September 22, 2016 at 5:08:47 PM UTC-4, Jeremy Bailin wrote:
> On Monday, August 29, 2016 at 11:03:11 AM UTC-5, Christina Haig wrote:
>> This question probably has a very specific audience, but anyone who might be able to help me I would greatly appreciate.
>>
>> Here is a good example of a cgimage plot, somewhat complex, but nothing untoward:
>>
>> p = pos[*,0]
>> cgimage,data1,/DEVICE,/SCALE,/AXES,position=[p[0],p[1],p[2], p[3]],$
>> xrange=[mint,maxt],yrange=[minp,maxp],charsize=3,$
>> AXKEYWORDS={xtickformat:'(A1)',ylog:1,yticks:2,$
>> ytickname:['10!e0','10!e1','10!e2']},/noerase
>>
>> As you can see, the yrange goes roughly from 1 to 100ish. I would like to plot a horizontal line at 2 that references the axes set in the cgimage command, and at the position of the same (there are 12 total plots in my output). Now oplot obviously does not allow the position command. So I attempted to cleverly use the cgplot command to overplot the line.
>>
>> cgplot,[mint,maxt],[2.0,2.0],thick=4,line=5,color=255,$
>> position=[p[0],p[1],p[2],p[3]],/overplot
>>
>> However nothing shows up in my plot. Can anyone advise me how I might solve this problem?
>>
>> Thanks,
>> Christina
>
> Are minp and maxp what you think they are?
>
> -Jeremy.

Apologies for the delay in replying. This was in fact the problem. The problem was my data was already logarithmic, and thus my axes were 0 - 2.0. My fault for not remembering that /ylog just changes the tick names of the axes on cgplot, but the min and max has to be already logged.

So what I needed was to put in log(2.0), instead of just 2.0. I'll leave this thread up in case other people have trouble with logarithmic cgplot.
