

---

Subject: Is there a way to plot with axis breaks in IDL?  
Posted by [fututre.keyboard](#) on Fri, 02 Apr 2010 03:28:36 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

I know this is rare when you need to do this kinda plot. But i'd appreciate a lot if someone can point me to the right direction.  
Thanks!

BTW: here is an example of axis break plot from Originlab's webpage.  
<http://www.originlab.com/index.aspx?s=8&lm=114&pid=1020>

---

---

Subject: Re: Is there a way to plot with axis breaks in IDL?  
Posted by [mankoff](#) on Thu, 08 Apr 2010 17:26:19 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

On Apr 8, 12:33 am, "fututre.keyboard" <future.keybo...@gmail.com> wrote:

> Thanks for the implementation. It takes only a little tweak to make  
> the plot useful. What I need to pay attention when tweaking are the  
> tick- related stuff. The other thing is that I have to suppress the x-  
> title/title and use xyouts to get a centered x-title/title. Although I  
> don't need to break up y-axis, I would imagine a hard time to xyouts y-  
> title in a usual orientation.  
>  
> E  
>

TITLE and XTITLE are now handled correctly (I think). I'm not sure what you mean when you mention y-title and orientation.

Feel free to follow up with me off-list.

-k.

---

---

Subject: Re: Is there a way to plot with axis breaks in IDL?  
Posted by [fututre.keyboard](#) on Thu, 08 Apr 2010 20:13:56 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Great. Thanks! I didn't notice the changes in the code. I just noticed that there is an orientation keyword for xyouts. I am happy now.

On Apr 8, 10:26 am, mankoff <mank...@gmail.com> wrote:

> On Apr 8, 12:33 am, "fututre.keyboard" <future.keybo...@gmail.com>  
> wrote:  
>

>> Thanks for the implementation. It takes only a little tweak to make  
>> the plot useful. What I need to pay attention when tweaking are the  
>> tick- related stuff. The other thing is that I have to suppress the x-  
>> title/title and use xyouts to get a centered x-title/title. Although I  
>> don't need to break up y-axis, I would imagine a hard time to xyouts y-  
>> title in a usual orientation.

>

>> E

>

> TITLE and XTITLE are now handled correctly (I think). I'm not sure  
> what you mean when you mention y-title and orientation.

>

> Feel free to follow up with me off-list.

>

> -k.

---

Subject: Re: Is there a way to plot with axis breaks in IDL?

Posted by [mankoff](#) on Thu, 08 Apr 2010 22:03:32 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Apr 8, 1:13 pm, "fututre.keyboard" <future.keybo...@gmail.com>  
wrote:

> Great. Thanks! I didn't notice the changes in the code. I just noticed  
> that there is an orientation keyword for xyouts. I am happy now.

>

> On Apr 8, 10:26 am, mankoff <mank...@gmail.com> wrote:

>

>> On Apr 8, 12:33 am, "fututre.keyboard" <future.keybo...@gmail.com>  
>> wrote:

>

>>> Thanks for the implementation. It takes only a little tweak to make  
>>> the plot useful. What I need to pay attention when tweaking are the  
>>> tick- related stuff. The other thing is that I have to suppress the x-  
>>> title/title and use xyouts to get a centered x-title/title. Although I  
>>> don't need to break up y-axis, I would imagine a hard time to xyouts y-  
>>> title in a usual orientation.

>

>>> E

>

I think I know what you're talking about. You might want to set !  
fancy=1 in a startup file.

---

Subject: Re: Is there a way to plot with axis breaks in IDL?

Posted by [biophys](#) on Sun, 11 Apr 2010 07:17:13 GMT

I recall I did something without using xyouts years ago when I was TA-ing a physics class. It can do multiple breaks along both x and y axis as well as overplot etc. I can dig it out from my old hard drive if people are interested.

Cheers,  
Yun

On Apr 8, 12:33 am, "fututre.keyboard" <future.keybo...@gmail.com> wrote:

> Thanks for the implementation. It takes only a little tweak to make  
> the plot useful. What I need to pay attention when tweaking are the  
> tick- related stuff. The other thing is that I have to suppress the x-  
> title/title and use xyouts to get a centered x-title/title. Although I  
> don't need to break up y-axis, I would imagine a hard time to xyouts y-  
> title in a usual orientation.

>  
> E  
>

> On Apr 3, 11:21 am, mankoff <mank...@gmail.com> wrote:

>  
>  
>

>> On Apr 2, 6:12 am, David Fanning <n...@dfanning.com> wrote:

>  
>>> I've made plots like this before. It is not particularly  
>>> difficult to do \*a\* plot. It is more difficult to write  
>>> this kind of functionality in a general way.

>  
>> I think I just came up with a fairly generic implementation  
here:[http://code.google.com/p/kdm-idl/source/browse/trunk/pl\\_otbreak.pro](http://code.google.com/p/kdm-idl/source/browse/trunk/pl_otbreak.pro)

>  
>> For example I was able to produce the following graphic (including  
>> equivalent of OPLOT command) with the following two lines of  
code.<http://kenmankoff.com/tmp/plotbreak.png>

>  
>> plotbreak, time, p, \$  
>>     position=pos, \$  
>>     xrange0=[0,1000], \$  
>>     xrange1=[1000,3000], \$  
>>     breakpct=66, \$  
>>     key0={ytitle:'Population (Phytoplankton)', \$  
>>         xtitle:'Time (days)', \$  
>>         xtickn:['0','20','40','60','80',' '],\$  
>>         title:'Predator v. Prey', \$  
>>         thick:2}, \$  
>>     key1={xtitle:'Time (days)', \$

```
>>          yst:5,thick:2,$
>>          xtickn:['100','150','200','250','300'] }
>
>>  plotbreak, time, z, $
>>          position=pos, $
>>          breakpct=66, $
>>          xrange0=[0,1000], $
>>          xrange1=[1000,3000], $
>>          key0={NOERASE:1,color:253,thick:3,yst:5,xst:5}, $
>>          key1={color:253,thick:3,xst:5,$
>>              ytitle:'Population (Zooplankton)'}
>
>>  A truly generic algorithm, which would be difficult, would be
>>  recursive and let me specify BREAKPCT=[10,30,80,90,95] rather than
>>  just as a single percentage (66% in the above example). It should also
>>  be recursive in X and Y. That algorithm, when complete, could then
>>  easily be used to draw, for example, a calendar with the weekends
>>  (first and last column) thinner than the middle weekdays. I'll leave
>>  that as an exercise to the reader.
>
>>  -k.
```

---

---

Subject: Re: Is there a way to plot with axis breaks in IDL?  
Posted by [mankoff](#) on Mon, 12 Apr 2010 17:11:59 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

On Apr 11, 12:17 am, biophys <biop...@gmail.com> wrote:  
> I recall I did something without using xyouts years ago when I was TA-  
> ing a physics class. It can do multiple breaks along both x and y axis  
> as well as overplot etc. I can dig it out from my old hard drive if  
> people are interested.  
>  
> Cheers,  
> Yun  
>

I'm interested.

-k.

---

---

Subject: Re: Is there a way to plot with axis breaks in IDL?  
Posted by [biophys](#) on Wed, 28 Apr 2010 02:45:38 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Ok, for those who are interested. I finally had sometime to hook up

one of those old ide drives and dig out the file.

I added a new idldoc comment header in rst format and fixed a "ghost" problem with PS output. Basically I use a plot command with no breaks to determine the plot region and generate proper (x/y) titles. Then I have to erase the plot except those titles with another plot using background color. It works perfect for direct graphics but there will be "ghost" tick labels in PS output due to none perfect overlapping. I fixed it by patching with small background filled rectangles. It is not elegant but works for me so far.

Another issue is that ticklen can be very different when you have uneven plotting segments. It seems that the ticklen is proportional to the size of the plotting segment. I can scale the (major) ticklen with xticklen/yticklen keyword(s). However, the minor ticks does not scale accordingly.

Please visit the following site for source and documents and feel free to mature the code as you see fit. I am not sure how long this server will last since my boss had got another job a while ago. It would be nice someone can help hosting the file. Comments and suggestions are definitely welcome.

<http://tinyurl.com/2aflnn2>

Best,  
Yun

On Apr 12, 10:11 am, mankoff <mank...@gmail.com> wrote:  
> On Apr 11, 12:17 am, biophys <biop...@gmail.com> wrote:  
>  
>> I recall I did something without using xyouts years ago when I was TA-  
>> ing a physics class. It can do multiple breaks along both x and y axis  
>> as well as overplot etc. I can dig it out from my old hard drive if  
>> people are interested.  
>  
>> Cheers,  
>> Yun  
>  
> I'm interested.  
>  
> -k.

---

Subject: Re: Is there a way to plot with axis breaks in IDL?  
Posted by [David Fanning](#) on Wed, 28 Apr 2010 03:00:55 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

biophys writes:

- > I added a new idldoc comment header in rst format and fixed a "ghost"
- > problem with PS output. Basically I use a plot command with no breaks
- > to determine the plot region and generate proper (x/y) titles. Then I
- > have to erase the plot except those titles with another plot using
- > background color. It works perfect for direct graphics but there will
- > be "ghost" tick labels in PS output due to none perfect overlapping. I
- > fixed it by patching with small background filled rectangles. It is
- > not elegant but works for me so far.

It might be easier to "draw" the plot with invisible ink.  
Here is the Plot command I usually use:

```
Plot, xrange, yrange, POSITION=position, $  
XSTYLE=5, YSTYLE=21, /NODATA, /NOERASE
```

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: Is there a way to plot with axis breaks in IDL?

Posted by [biophys](#) on Wed, 28 Apr 2010 04:17:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Hi, David

Suppressing the entire axis would also erase the xtitle/ytitle. That's what bothers me. I wanted it to be consistent when there is no breaks at all. It may look like an overkill with this not so elegant solution. Afterall, one could always use xyouts to draw the xtitle/ytitle and fine tune the positions and charsize.

Best,  
Yun

On Apr 27, 8:00 pm, David Fanning <n...@dfanning.com> wrote:

> biophys writes:

>> I added a new idldoc comment header in rst format and fixed a "ghost"

>> problem with PS output. Basically I use a plot command with no breaks  
>> to determine the plot region and generate proper (x/y) titles. Then I  
>> have to erase the plot except those titles with another plot using  
>> background color. It works perfect for direct graphics but there will  
>> be "ghost" tick labels in PS output due to none perfect overlapping. I  
>> fixed it by patching with small background filled rectangles. It is  
>> not elegant but works for me so far.  
>  
> It might be easier to "draw" the plot with invisible ink.  
> Here is the Plot command I usually use:  
>  
> Plot, xrange, yrange, POSITION=position, \$  
> XSTYLE=5, YSTYLE=21, /NODATA, /NOERASE  
>  
> 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.")

---