Subject: IDL New Graphics Axis function: bug or feature?
Posted by manodeep@gmail.com on Tue, 23 Oct 2012 00:33:00 GMT
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Hi everyone,

I was trying to add an alternate X-axis to a new graphics plot when I could not place this new X-axis on the plot no matter how I tried. It turns out that the original data co-ordinate was established with /YLOG and the AXIS function wanted the location to be set in alog10(yrange[1]).

Here's an example code:

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;;; generate some random data
N = 100
x = dindgen(N)
y = randomu(seed,N)*N


;;; create the plot
p = plot(x,y,/ylog) ;;; use YLOG
ax = p.axes
ax[2].hide=1 ;;; hide the top X-axis

;;; Now try to plot a new alternate  X-axis
ymax = (p.yrange)[1]
a0 = axis('X',location=[0.0,ymax],tickdir=1);;; axis does not appear
a1 = axis('X',location=[0.0,alog10(ymax)],tickdir=1) ;;; axis appears at the top

end
------------------------------------
IDL> print,!version
{ x86_64 linux unix linux 8.0 Jun 18 2010      64      64}
```

Looking through the newsgroup, it seems this behaviour is in line with what Sean Davis saw here: https://groups.google.com/forum/#!topic/comp.lang.idl-pvwave /lNWGIDjJQh8

I don't think IDL Direct Graphics AXIS procedure worked in this fashion. Anybody aware of the reason for the change?

Cheers,
Manodeep

Subject: Re: IDL New Graphics Axis function: bug or feature?
Posted by manodeep@gmail.com on Wed, 24 Oct 2012 16:31:29 GMT

On Wednesday, October 24, 2012 2:11:23 AM UTC-5, alx wrote:
> Le mardi 23 octobre 2012 19:32:22 UTC+2, Mark Piper a écrit :
>
>> On Monday, October 22, 2012 6:33:00 PM UTC-6, Manodeep Sinha wrote:
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> in case of Y being log-scaled.
>
> If true, that is definitely a bug, since the starting coordinate of the new axis remains constrained along a direction.
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>
>
> alain.

Huh. I actually get an error 'LOCATION must have 2 or 3 elements' when I try to run those two lines. You are right that orientation of the new axis is constrained to be parallel to the currently established co-ordinate system.

Subject: Re: IDL New Graphics Axis function: bug or feature?
Posted by lecacheux.alain on Thu, 25 Oct 2012 05:51:37 GMT
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Le mercredi 24 octobre 2012 18:31:29 UTC+2, Manodeep Sinha a écrit :
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By using IDL V8.2.1 and Win7, on "pl=plot(/TEST)", I find that "ax=axis('X',LOCATION=[0.2,0.2])", as well as "ax=axis('X',LOCATION=[0.2])", produces an horizontal axis located at the right Y, but wrongly starting at X=0.

alx.

Subject: Re: IDL New Graphics Axis function: bug or feature?
Posted by chris_torrence@NOSPAM on Fri, 26 Oct 2012 19:47:46 GMT
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Hi all,

The original bug is now fixed. If you have logarithmic axes, you can just specify the LOCATION in regular units (you don't have to take the log first). Thanks for reporting the bug!

Regarding the LOCATION, we also changed the behavior so you only have to give a single scalar number. So for example, for an X axis, you just set the LOCATION to the "Y" value where you want the axis. You can also set LOCATION="bottom", or "top", "left", or "right" as a shortcut. Note that the old behavior (where you had to specify a 2 or 3-element array) will still work find, but is undocumented.

Finally, if you want to do what alx wants (where the axis doesn't extend across the entire range), you can use the AXIS_RANGE property.

Hope this helps.

Cheers,
Chris
ExelisVIS
p.s. all of the above changes will be in IDL 8.2.2, due out early next year.
