Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Michael Wallace on Wed, 06 Jul 2005 13:52:22 GMT
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The bar_plot procedure is attempting to label every bar in your plot.
There is a maximum limit (60) to the number of labels you can show for
an axis.

Might I suggest using the histogram mode of the plot procedure instead?
plot, some_data, PSYM = 10

-Mike

liko wrote:
> How to make barplot for [43,273] array? when Im using BAR_PLOT it
> displays error:
> c:\1\1.eps
> % Keyword array parameter XTICKNAME must have from 1 to 60 elements.
> % Execution halted at: BAR_PLOT   242
> C:\RSI\IDL61\lib\bar_plot.pro
> % $MAIN$ 56 D:\Egs\working_4.pro
>
>
> What is wrong?How can I make barplot of array or vector grater than 60
> elements?PLOT function doesnt have this problem...

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by liko2@o2.pl on Thu, 07 Jul 2005 07:27:41 GMT
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Thank You, that solved the problem :)

Can I set colors for this plot?

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Thu, 07 Jul 2005 09:26:18 GMT
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liko2@o2.pl wrote:
> Thank You, that solved the problem :)
>
> Can I set colors for this plot?
>

for the line, use the standard color= keyword for the plot statement. If

this gives you unexpected results then I would read David's website at
http://www.dfanning.com

As far as I know, to get filled bars you need to use the polyfill
procedure. In order to make the first and last "bars" full width, you
can pad the x and y arrays:

x=[1,2,3,4,5,6]
y=[2,3,4,2,4,2]

x_pad=[0,x,7]
y_pad=[0,y,0]

plot, x_pad, y_pad, xstyle=1, psym=10

HTH,

Ben

--
-=-=-=-=-=-=-=-=-=-=-=-=-=-
  Ben Panter, Garching, Germany
  email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by liko2@o2.pl on Thu, 07 Jul 2005 14:15:16 GMT
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Yghh...Turned out that histogram isnt good option, because for 2 exacly
the same numbers beside each other it creates one, wider bar and I need
two of them in such case(each value must be represented by one
bar)...Any other suggestions?

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Thu, 07 Jul 2005 14:20:18 GMT
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liko2@o2.pl wrote:
> Yghh...Turned out that histogram isnt good option, because for 2 exacly
> the same numbers beside each other it creates one, wider bar and I need
> two of them in such case(each value must be represented by one
> bar)...Any other suggestions?

In addition to the polyfill routine mentioned before, you can use plots
to draw lines.

Use

plot, ... , psym=10

to draw the plot, then run a for loop on plots to draw the lines between
bins. You could probably do something a bit more efficient than a for
loop with shift and rebin if you had time on your hands.

--
-=-=-=-=-=-=-=-=-=-=-=-=-=-
  Ben Panter, Garching, Germany
  email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by liko2@o2.pl on Thu, 07 Jul 2005 14:31:26 GMT
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psym=10 is a histogram option for PLOT what I have mentioned about...It
doesnt work for two or more values which are the same and come one
after another...

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Haje Korth on Thu, 07 Jul 2005 14:48:38 GMT
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This restriction is not specific to bar_plot, it is a restriction to the
xtickname keyword passed to the plot command. I am not sure, how more than
60 ticks on the x axis can be presented in a readable form? I ususally use
about 5. You will have toi write your own code using plots to drawn your
bars and xyouts to label them.

Haje

"liko" <liko2@o2.pl> wrote in message
news:ce3909d8.0507060507.6b37b543@posting.google.com...
> How to make barplot for [43,273] array? when Im using BAR_PLOT it
> displays error:
> c:\1\1.eps
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>
>
> What is wrong?How can I make barplot of array or vector grater than 60
> elements?PLOT function doesnt have this problem...

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Thu, 07 Jul 2005 14:51:12 GMT
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liko2@o2.pl wrote:
> psym=10 is a histogram option for PLOT what I have mentioned about...It
> doesnt work for two or more values which are the same and come one
> after another...
>

Yes, I meant that that is an easy way to get the overall shape of the
line, then you can put in vertical lines using plots (not plot!) to draw
lines which distinguish the bars.

If you don't mind not having the bars next to each other you could also
do the padding operation I mentioned before to put a zero between each
bar - something like:

x=[1,2,3,4,5]
y=[3,4,5,5,2]

new_x=[0.5,1,1.5,2,2.5,3,3.5,4,4.5,5,5.5]
new_y=[0,3,0,4,0,5,0,5,0,5,0,2,0]

plot, new_x, new_y, psym=10, yr=[0,6]

HTH,

Ben

--
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
  Ben Panter, Garching, Germany
  email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Benjamin Luethi on Thu, 07 Jul 2005 14:52:36 GMT
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another possibility:

1. plot, data, psym=10

2. set every second element equal to 0 (data[0:*:2]=0)

3. oplot, data, psym=10

On Thu, 07 Jul 2005 16:15:16 +0200, liko2@o2.pl <liko2@o2.pl> wrote:

> Yghh...Turned out that histogram isnt good option, because for 2 exacly
> the same numbers beside each other it creates one, wider bar and I need
> two of them in such case(each value must be representated by one
> bar)...Any other suggestions?
>

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by liko2@o2.pl on Fri, 08 Jul 2005 08:02:39 GMT
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I cant change data because Its very important to me to see how much
space ist between each bar... I should use PLOTS then, but Im beginer
in IDL...

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Fri, 08 Jul 2005 09:22:16 GMT
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liko2@o2.pl wrote:
> I cant change data because Its very important to me to see how much
> space ist between each bar... I should use PLOTS then, but Im beginer
> in IDL...
>

OK. I'm pretty sure there are more elegant ways to do this, but for for
a five minute coffee break solution try this:

IDL> ;make some sample data longer than 80 elements
IDL> x=findgen(80)
IDL> y=hanning(80)
% Compiled module: HANNING.
IDL> ;Make the initial plot
IDL> plot, x, y, psym=10
IDL> ;find midpoints for x ordinate of line
IDL> midpt=x[0:78]+0.5*(x[1:79]-x[0:78])
IDL> ;draw the lines
IDL> for i=0,78 do plots, [midpt[i],midpt[i]], $
IDL> [!y.crange[0],max([y[i],y[i+1]])]

Where $ indicates the expression rolls over to the next line and
!y.crange is the bottom of the y-axis. The max(...) bit makes sure that
you get the full height of the bin.

To make your code flexible, change the 78,79,80 to variations of
num_bars=N_ELEMENTS(x)

HTH,

    Ben

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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
  Ben Panter, Garching, Germany
  email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Fri, 08 Jul 2005 11:11:54 GMT
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liko2@o2.pl wrote:
> Did you try this wit array containing several exacly the same values?It
> still creates one bar for this case...

We may be talking at cross purposes, but in my tests it didn't. I can
see I was a little too cryptic with n_elements. See the program below
for what I meant.

Save and compile the program at the end of this message, and with the
same x and y as before try this:

IDL> bp_plot_barchart, x,y, title='fred'
IDL> y[10:20]=0.6
IDL> bp_plot_barchart, x,y, title='fred'

which certainly draws lines between the 11 bars of the same height.

PROGRAM:

PRO bp_plot_barchart, x, y, _extra=e

;Make the initial plot

num_bar=n_elements(x)

plot, x, y, psym=10, _extra=e

;find midpoints for x ordinate of line

midpt=x[0:num_bar-2]+0.5*(x[1:num_bar-1]-x[0:num_bar-2])

;draw the lines

for i=0,num_bar-2 do plots, [midpt[i],midpt[i]], $
  [!y.crange[0],max([y[i],y[i+1]])]

END

--
-=-=-=-=-=-=-=-=-=-=-=-=-=-
 Ben Panter, Garching, Germany
 email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by liko2@o2.pl on Fri, 08 Jul 2005 12:26:09 GMT
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IT WORKS! :) But.... :P When the first bar >0 it isnt proprly
drawn...Why?

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by Ben Panter on Fri, 08 Jul 2005 12:53:13 GMT
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liko2@o2.pl wrote:

> IT WORKS! :) But.... :P When the first bar >0 it isnt proprly
> drawn...Why?

Glad it works for you. Try adapting the program to include the padding I
mentioned earlier in the thread - that will sort out the first and last
bars. psym=10 only works in the plot range (ie. between the data
points). You want to extend that range to include the edges of the first
and last bars (which are an extrapolation, which is why you do the padding).

You'll also run into problems if you ever have -ve data, but I'll let
you work that one out:)

Ben

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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
 Ben Panter, Garching, Germany
 email via www.benpanter.co.uk

Subject: Re: BAR_PLOT restricted to 60 element ARRAY??
Posted by R.Bauer on Mon, 11 Jul 2005 06:29:56 GMT
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Haje Korth wrote:
> This restriction is not specific to bar_plot, it is a restriction to the
> xtickname keyword passed to the plot command. I am not sure, how more than
> 60 ticks on the x axis can be presented in a readable form? I ususally use
> about 5. You will have toi write your own code using plots to drawn your
> bars and xyouts to label them.
>
> Haje

You should have a look into our library for bar_plot2. I have removed
this restriction and have added a lot of features.

; 2003-09-10 : size restriction of 60 bars removed

Based on this there was an addon for our plotlib written too.

cheers

Reimar
>
>
> "liko" <liko2@o2.pl> wrote in message
> news:ce3909d8.0507060507.6b37b543@posting.google.com...

>
>> How to make barplot for [43,273] array? when Im using BAR_PLOT it
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>> What is wrong?How can I make barplot of array or vector grater than 60
>> elements?PLOT function doesnt have this problem...
>
>
>

--
Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
 -- -------
      a IDL library at ForschungsZentrum Juelich
  http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html
 == =======

Another question concerning PLOT: how can I add a albels for each bar
(or peak)? Im not using bar_plot.