
Subject: Bar coordinate shift with cgBarPlot
Posted by [Federico Tosi](#) on Tue, 25 Feb 2014 20:51:51 GMT
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Hi all,

I am using Coyote's cgBarPlot to plot some vertical bars, but I'm having hard times to shift the bars of a given quantity in the horizontal direction. The BAROFFSET parameter does not do the job, because I need the bars not to be centered on a thick (i.e., I need to change their X coordinate), while BARCOORDS is an output parameter.

Is there any easy way to do that?

Thanks,
Federico

Subject: Re: Bar coordinate shift with cgBarPlot
Posted by [David Fanning](#) on Tue, 25 Feb 2014 21:00:50 GMT
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Federico Tosi writes:

> I am using Coyote's cgBarPlot to plot some vertical bars, but I'm having hard times to shift the bars of a given quantity in the horizontal direction. The BAROFFSET parameter does not do the job, because I need the bars not to be centered on a thick (i.e., I need to change their X coordinate), while BARCOORDS is an output parameter.

>

> Is there any easy way to do that?

The easiest way is probably just to draw the darn things yourself. But, I really don't understand what you are trying to do. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Bar coordinate shift with cgBarPlot
Posted by _____ on Tue, 25 Feb 2014 22:36:12 GMT
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Den tisdagen den 25:e februari 2014 kl. 21:51:51 UTC+1 skrev Federico Tosi:

> Hi all,

>

> I am using Coyote's cgBarPlot to plot some vertical bars, but I'm having hard times to shift the bars of a given quantity in the horizontal direction. The BAROFFSET parameter does not do the job, because I need the bars not to be centered on a tick (i.e., I need to change their X coordinate), while BARCOORDS is an output parameter.

>

> Is there any easy way to do that?

Does adding a number to the X coordinate do anything useful?

Subject: Re: Bar coordinate shift with cgBarPlot

Posted by [Federico Tosi](#) on Wed, 26 Feb 2014 07:30:21 GMT

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I have data separated for angle range: 0°-10°, 10°-20°, 20°-30°, 30°-40°, etc.. In the Y-coordinate is the number of observed data. When cgBarPlot is used, the vertical bars are centered on: 0°, 10°, 20°, 30°, while I would like them to be centered around: 5°, 15°, 25°, etc., so that the width of the bar is representative of the range of abscissa of my data.

I'm afraid that, when the bars are cumulative (i.e., when multiple cgBarPlot are overplotted), drawing them one by one is unfeasible.

Federico

> The easiest way is probably just to draw the darn things yourself. But,

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> I really don't understand what you are trying to do. :-)

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> Cheers,

>

> David

>

> --

>

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Subject: Re: Bar coordinate shift with cgBarPlot

Posted by [Helder Marchetto](#) on Wed, 26 Feb 2014 10:09:30 GMT

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On Wednesday, February 26, 2014 8:30:21 AM UTC+1, Federico Tosi wrote:

> I have data separated for angle range: 0°-10°, 10°-20°, 20°-30°, 30°-40°, etc.. In the Y-coordinate is the number of observed data. When cgBarPlot is used, the vertical bars are centered on: 0°, 10°, 20°, 30°, while I would like them to be centered around: 5°, 15°, 25°, etc., so that the width of the bar is representative of the range of abscissa of my data.

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>> David

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>> David Fanning, Ph.D.

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>> Fanning Software Consulting, Inc.

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>>  
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>> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/  
>  
>>  
>  
>> Sepore ma de ni thue. ("Perhaps thou speakest truth.")
```

I don't see a problem in doing this. If you read the documentation David has provided, then this is how I would do it: you will find two keywords you can use: `barcoords` and `barnames` (only if you want to show these).

How's this for you:
`cgBarPlot, findgen(10), barcoords=findgen(10)*10.0,
barnames=string(findgen(10)*10.0,format='(f0.1)')`

Or if you want it centered in the middle, just change that to

```
cgBarPlot, findgen(10)+1.0, barcoords=findgen(10)*10.0+5.0,  
barnames=string(findgen(10)*10.0+5.0,format='(f0.1)')
```

What you have to figure out is what you give as input to `cgBarPlot`. If for the range 0-10 you give 0 or 10. Ideally you will want to use $(\text{low}+\text{high})/2.0$. How you calculate that, depends on the input you have.

Cheers,
h

Subject: Re: Bar coordinate shift with `cgBarPlot`
Posted by [Federico Tosi](#) on Wed, 26 Feb 2014 11:15:17 GMT
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Helder,

what you suggest is a clever way to get around the problem. However, I understand that `BARCOORDS` is an output parameter, rather than an input one, hence I don't see how you can use `BARCOORDS` to determine the placement of the bars on the X axis.

Even in the two examples you suggested, there is always one tick below the bar, while I really would love the bar to be placed in between two ticks. And, I cannot draw the bars one by one. That's my real issue.

Cheers,
Federico

Il giorno mercoledì 26 febbraio 2014 11:09:30 UTC+1, Helder ha scritto:

> I don't see a problem in doing this. If you read the documentation David has provided, then this is how I would do it: you will find two keywords you can use: barcoords and barnames (only if you want to show these).

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>

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>

> Cheers,

>

> h

Subject: Re: Bar coordinate shift with cgBarPlot

Posted by [David Fanning](#) on Wed, 26 Feb 2014 13:31:56 GMT

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Federico Tosi writes:

> what you suggest is a clever way to get around the problem. However, I understand that BARCOORDS is an output parameter, rather than an input one, hence I don't see how you can use BARCOORDS to determine the placement of the bars on the X axis.

>

> Even in the two examples you suggested, there is always one tick below the bar, while I really would love the bar to be placed in between two ticks. And, I cannot draw the bars one by one. That's my real issue.

You are not going to be able to do anything about the ticks, but maybe something like this will work for you:

```
tickNames = StrArr(5)
FOR j=0,4 DO tickNames[j] = StrTrim(j*10,2) + '-' + StrTrim(j*10+10,2)
cgBarPlot, findgen(5)+1.0, barnames=ticknames
```

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Bar coordinate shift with cgBarPlot

Posted by [Federico Tosi](#) on Wed, 26 Feb 2014 16:52:55 GMT

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Thanks for the reply, David. In fact this works, although it is graphically inelegant when you have many bars and they are close to each other.

I wonder whether an alternative approach could exist, perhaps removing the X-axis and redesigning it (with the AXIS command) taking care of defining the ticks. However, I'm not sure this can be done in conjunction with cgBarPlot.

```
> You are not going to be able to do anything about the ticks, but maybe
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> tickNames = StrArr(5)
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>
> cgBarPlot, findgen(5)+1.0, barnames=ticknames
>
>
>
> Cheers,
>
>
>
```

> David
>
> --
>
> David Fanning, Ph.D.
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Subject: Re: Bar coordinate shift with cgBarPlot
Posted by [David Fanning](#) on Wed, 26 Feb 2014 17:04:42 GMT
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Federico Tosi writes:

> Thanks for the reply, David. In fact this works, although it is graphically inelegant when you have many bars and they are close to each other.
>
> I wonder whether an alternative approach could exist, perhaps removing the X-axis and redesigning it (with the AXIS command) taking care of defining the ticks. However, I'm not sure this can be done in conjunction with cgBarPlot.

I think I have said here several times that one of the worst programming decisions I ever made was to do a direct translation of BarPlot to cgBarPlot. So, yes, we have to live with our past.

If I were doing this, I would simply suppress the tick labels and add them myself, rotated at, say, a 45 degree angle so they will fit. You can do this with cgText. You can find code that does exactly this in the cgBoxPlot program.

Should this feature be added to cgBarPlot. Probably. Am I going to do it? No, not right now, unless someone is offering money. Then, I'd try to fit it in. :-)

Cheers,

David

--

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