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Subject: Re: Flipping and combining plots  
Posted by [Vince Hradil](#) on Thu, 23 May 2002 16:01:28 GMT  
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I did a similar thing, but just drew the histogram using plots. Not too elegant(?), but the output looked very nice.

Wayne Landsman <landsman@mpb.gsfc.nasa.gov> wrote in  
news:3CED0A80.950535C2@mpb.gsfc.nasa.gov:

>  
> I want to create an X-Y scatter plot, and have an associated plot of  
the  
> Y  
> histogram values placed snug next to it. This means that the  
> histogram plot needs to be flipped 90 degrees so that the (original)  
> X-axis of  
> the histogram is snug against the right Y axis of the scatter plot.  
> My  
> approach has been to use the /XYEXCH keyword of the T3D procedure to  
> flip the X  
> and Y axis. This seems to work O.K. but the plot annotation now looks  
> correct  
> only if viewed through a mirror (for !P.FONT=-1 or 1) or is not  
> positioned  
> correctly (for !P.FONT = 0). I suppose that I could suppress the  
> annotation and then rewrite it myself without the T3D keyword present.  
>  
> But I have a suspicion that I am making the problem too complicated and  
> that  
> there is any easier way to make the plot, perhaps without using T3D.  
> Any  
> ideas?  
>  
> My test code is below. (The histogramming may not be quite right, but  
> I  
> wanted to make the program self-contained.)  
>  
> Thanks, --Wayne Landsman            landsman@mpb.gsfc.nasa.gov  
>  
>  
> pro test                            ;Combine a scatter + Y histogram plot  
> x = indgen(100)                    ;X axis  
> y = abs(randomn(seed,100)\*10)      ;Create scattered Y data  
> xdivide = 0.7    ;Scatter plot is 0.7 of X plot area, histogram plot is  
> 0.3  
> plot,x,y,/nodata   ;Set up plotting coordinates but don't plot  
>

```

> ;Get left and right margins in normalized coordinates
> margins = [min(!x.window)-min(!x.region), $
>           min(!y.window)-min(!y.region), $
>           max(!x.region)-max(!x.window), $
>           max(!y.region)-max(!y.window)]
>
> ;Get total plot size
>
> ysize = 1. - margins[1] - margins[3]
> xsize = 1. - margins[0] - margins[2]
>
>
> ;Set up plot position for scatter plot
>
> pos = [0,0,xdivide*xsize,ysize] + $
>       [margins[0],margins[1],margins[0],margins[1]]
>
> plot,x,y,psym=1,pos=pos
>
> ;Now set up plot position for (rotated) histogram plot, flip X and Y
> values
>
> Pos = [ 0, xdivide*xsize,ysize,xsize] + $
>       [margins[1],margins[0],margins[1],margins[0]]
>
> T3D,/reset,/xyexch      ;Histogram plot will have X and Y values
> exchanged
>
> h = histogram(y,min=!Y.crange[0],max = !Y.crange[1]) ;Histogram of Y
> values
> n = !Y.crange[1] - !y.crange[0]
> xx = !Y.crange[0] + indgen(n) ;Xrange for histogram
> n = N_elements(xx)
> xx = [0,xx, xx[n-1]+1 ] + 0.5
> yy = [0,histogram(y),0]
>
> plot,/t3d,xx,yy,/noerase,pos=pos,psym=10,xtit = ' ', /noclip, $
>   xticks = 2,xtickname = [ ' ',' ',' ' ],xrange=!Y.crange,/xsty
> return
> end
>
>
>

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