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
>
>
>
```