Subject: Re: Y2 axis title orientation

Posted by pgrigis on Fri, 28 Jan 2011 18:54:28 GMT

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On Jan 28, 1:47 pm, Jonathan <jonat...@naic.edu> wrote:

- > I have been occasionally frustrated by the inability to title a Y2
- > axis (y-axis on the right side of a plot) with the right orientation.
- > Using the command:
- > AXIS,/SAVE,YAXIS=1,TITLE='title'
- > writes the title with the baseline on the right, rather than the left.
- > The latter is how I have always seen and used y2 axis titles, and it
- > is a strange guirk of IDL that it insists on doing this in a non-
- > standard (and in fact ugly) way.

That can be accomplished by using yaxis=0 instead of yaxis=1.

Example:

```
plot,[1,2,3]
AXIS,/SAVE,1,YAXIS=1,yTITLE='title' ;plot an axis with title on right side
AXIS,/SAVE,1.5,YAXIS=0,yTITLE='title' ;left side version
Ciao,
Paolo
```

- Today, I finally wrote a routine to correct this. I do not promise
 that it is perfect, but I hope it is a step in the right direction,
 and that with input from users of this group we can finally make a
 usable y2 axis title routine.
- > Here it is ...
- > ;+
- > ; NAME:
- > : Y2TITLE
- >
- > : PURPOSE:
- > ; The purpose of this routine is to print a right-hand y-axis
- > title
- > ; with the baseline towards the axis (IDL's baseline is away
- > from the axis).
- > :
- > ; AUTHOR:
- > :
- > ; Jonathan Friedman
- > ; NAIC Arecibo Observatory

```
> ; HC-3 Box 53995
   Arecibo, PR 00612
> ; http://www.naic.edu
  ; e-mail: jonat...@naic.edu
  ; CATEGORY:
       Plotting, annotation and labeling.
>
>
  ; CALLING SEQUENCE:
       Y2TITLE(titletext)
>
>
  : INPUTS:
       titletext: The text that you want to use for the Y2 title.
>
  : KEYWORD PARAMETERS:
       ANGLE: An angle for the text, CCW from vertical + baseline
> to the left
             in degrees.
       CHARSIZE: The character size of the title. Default is 1.0.
> ;
       COLOR: The color index of the title. Default is !P.Color...
>
                Sets the font of the annotation. Hershey: -1,
       FONT:
> Hardware:0, True-Type: 1.
>
  ; COMMON BLOCKS:
       None.
>
 : SIDE EFFECTS:
       The title is relative to the most recent PLOT call.
>
 : RESTRICTIONS:
       none.
>
 : EXAMPLE:
       To display a y2 title, type:
> ;
> ;
       x=findgen(100)
> ;
       y1=\sin(2*!pi*x/30)
       y2=5.*\cos(2*!pi*x/45 + 0.6)
> ;
       PLOT,x,y1,YRANGE=[-1,1],YSTYLE=3,YTITLE='SIN(2!4p!3x/30)'
> :
       AXIS,/SAVE,YAXIS=1,YRANGE=[-5,5],YSTYLE=3
       OPLOT,x,y2,linestyle=2
       Y2TITLE(5.0*COS(2!4p!3x/45 + 0.6))
> ;
```

```
; MODIFICATION HISTORY:
      Written by: Jonathan Friedman, 28 January 2011.
>
> ;-
> :
#################
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>
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> :
  ##################
 PRO y2title, text,ANGLE=angle,CHARSIZE=charsize,COLOR=color,FONT=font
>
> IF NOT KEYWORD_SET(ANGLE) then angle=0
  ; coordinates of the plotting window in /NORMAL
> x0 = !x.window[0]
> x1 = !x.window[1]
y0 = y.window[0]
> y1 = [y.window[1]]
> ch_nwidth = FLOAT(!D.X_CH_SIZE)/FLOAT(!D.X_VSIZE)
>
  ; Determine the width of the y2 axis labels, and set the
   ; position of the y2 axis title to the right of the labels.
```

```
> ylabel_val = ABS(!Y.CRANGE[1]) > ABS(!Y.CRANGE[0])
> ofs = (MIN(!Y.CRANGE) LT 0)? 3:2
> label_nwidth = CEIL(ABS(ALOG10(ylabel_val))) + ofs
> cs = (!P.CHARSIZE GT 0) ? !P.CHARSIZE*ch_nwidth : ch_nwidth
> xpos = (x1 + 0.01*(x1-x0)) + label_nwidth*cs
> ypos = (y1 + y0)/2
> XYOUTS,xpos,ypos,text,/NORMAL,ALIGNMENT=0.5, $
      ORIENTATION=270+angle, $
      CHARSIZE=charsize, COLOR=color, FONT=font
>
> END
```