
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 quirk 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

```

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> ;
> ; 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..
> ;
> ;     FONT:    Sets the font of the annotation. Hershey: -1,
> 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.CHAR.SIZE GT 0) ? !P.CHAR.SIZE*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, $
>     CHAR.SIZE=charsize, COLOR=color, FONT=font
>
> END
```
