
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

```

> ; 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..
> ;
> ;     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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> ; 2. Altered source versions must be plainly marked as such, and must
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> ;
> ; 3. This notice may not be removed or altered from any source
> ;    distribution.
> ;
> ;
> ; #####
#####
>
> 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
```

Subject: Re: Y2 axis title orientation
Posted by [David Fanning](#) on Fri, 28 Jan 2011 19:24:40 GMT
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Jonathan writes:

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> usable y2 axis title routine.
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It would be more perfect if the example given in the documentation header actually worked. :-)

Cheers,

David

--

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

Subject: Re: Y2 axis title orientation
Posted by [Jonathan](#) on Sat, 29 Jan 2011 12:31:52 GMT
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To Paolo:

Your example shows exactly the problem I am talking about. Both axis titles have their baselines on the right. My routine puts the baseline on the left for the Y2 title.

To David:

You are certainly correct. You need to write the Y2TITLE command as a procedure (comma, not parens). I had originally written it as a function with the hope of finding a way of embedding it in a YTITLE keyword. So the command should have read:

```
YTITLE, '5.0*COS(2!4p!3x/45 + 0.6)'
```

I have done some further testing, and so far it works with many ways I apply a Y2 axis, including on a PostScript device.

--Jonathan

On Jan 28, 3:24 pm, David Fanning <n...@dfanning.com> wrote:

> Jonathan writes:

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> Cheers,

>

> David

> --

> David Fanning, Ph.D.

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Subject: Re: Y2 axis title orientation

Posted by [pgrigis](#) on Mon, 31 Jan 2011 14:57:26 GMT

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On Jan 29, 7:31 am, Jonathan <jonat...@naic.edu> wrote:

> To Paolo:

> Your example shows exactly the problem I am talking about. Both axis
> titles have their baselines on the right. My routine puts the baseline
> on the left for the Y2 title.

What do you mean as "baseline"? I see one title on the right of the axis, and one title on the left of the axis, isn't that what you wanted? If not what is it you need?

Ciao,
Paolo

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> procedure (comma, not parens). I had originally written it as a
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>> David
>> --
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>> Fanning Software Consulting, Inc.
>> Coyote's Guide to IDL Programming:<http://www.idlcoyote.com/>
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