
Subject: multiplot solution

Posted by [meo](#) on Fri, 04 Nov 1994 21:50:06 GMT

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Hi this is fern. I wrote a program a year ago to plot many graphs on top of eachother (with no spaces or titles between them) :

```
PRO MultiPlot,DataArray,YStringArray,XString,MainString,XArray,Y LRange, $
YURange,NOWINDOW=NOWINDOW,NOEQUAL=NOEQUAL
```

```
;+
;*****
;
; PRO MultiPlot,DataArray,YStringArray,XString,MainString,XArray ;
; YLRange, YURange,NOWINDOW=NOWINDOW,NOEQUAL=NOEQUAL ;
;*****
;
; Author: Fernando Meo ;
; Date: March31, 1993 ;
; Purpose: Displays multiple data graphs in one window ;
; ;
; Method: The main body of the routine was borrowed from Jamie ;
; Gunn. ;
; ;
; Variables: ;
; inputs: DataArray : Two dimentional array ;
; containing the data to ;
; be displayed. Each row ;
; REPRESENTS A PLOT. ;
; YStringArray : Array of y-title for ;
; each plot. ;
; XString : String for xtitle. ;
; MainString : Main Title ;
; XArray @ : Arrays representing ;
; the x axis values. If ;
; it is inputted as an ;
; integer or not inputted ;
; at all, the values will ;
; be generated as indicies;
; YURange @ : Y axis upper limit range;
; YLRange @ : Y axis lower limit range;
; NOEQUAL @ : Unequal y-axis (max) ;
; outputs: none ;
; input/output: none ;
; keywords: NOWINDOW : Supress the creation of window;
; ;
;*****
;-
ON_ERROR,1
Info = SIZE(DataArray)
Num = N_ELEMENTS(YStringArray)
```

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;***** Make sure that the dimentions are equal
IF Info(2) NE Num THEN BEGIN
  PRINT, '***** DIMENSIONS ARE NOT COMPATABLE *****'
  RETURN
ENDIF

IF KEYWORD_SET(NOWINDOW) EQ 0 THEN CreateWin,22,MainString,600,400

N = Num

;***** Generate the X axis values if applicable
IF N_ELEMENTS(XArray) LE 1 THEN XArray = INDGEN(Info(1))

;***** Generate the Yrange
IF N_ELEMENTS(YURange) EQ 0 THEN YURange = MAX(DataArray)
IF YURange LT 0 THEN YURange = MAX(DataArray)
IF N_ELEMENTS(YLRange) EQ 0 THEN YLRange = MIN(DataArray)
IF YLRange LT 0 THEN YLRange = MAX(DataArray)

N2=fix((N+1)/2)
;***** N=# of graphs

CASE N OF
  1:!p.multi=0
  2:!p.multi=[0,1,2]
  ELSE:BEGIN
    !p.multi=[0,2,N2+1,0,1] ; 2 columns
    !y.margin=[0,0]
  ENDELSE
ENDCASE

!x.tickname=' ' ;Suppress x-axis labelling

;***** Plot the Data!!!!

FOR i=0,N-1 DO BEGIN
  t = 1
  IF (i eq N2-1) or (i eq N-1) THEN BEGIN
;***** The end of the column
!x.tickname=""
  XAxisTitle = XString
  ENDIF ELSE BEGIN
!x.tickname=' '
  XAxisTitle = "
  ENDELSE

  IF (i eq N2) and (N gt 2) THEN !p.multi(0)=N2+1

```

```

IF (total(t) EQ 0) THEN BEGIN
  !p.multi(0)=!p.multi(0)-1    ;avoid trying to plot empty signals
ENDIF ELSE BEGIN
  IF KEYWORD_SET(NOEQUAL) EQ 0 THEN BEGIN
PLOT,XArray,DataArray(0:*,i),YTITLE=YStringArray(i),$
YRANGE=[YLRange,YURange],xtitle=XAxisTitle,YSTYLE=1,XSTYLE=1
oplot,[0,500],[0,0]
  ENDIF ELSE BEGIN
    PLOT,XArray,DataArray(0:*,i),YTITLE=YStringArray(i),$
xtitle=XAxisTitle,YSTYLE=1,XSTYLE=1
oplot,[0,500],[0,0]

  ENDELSE

  ENDELSE
ENDFOR

!x.margin=[10,3]
!y.margin=[4,2] ;Back to normal

xyouts,.1,.06,MainString,/normal
!p.multi=0
!x.tickname=""

RETURN
END

```

Try it out. BY THE WAY, THE PROCEDURE "CreateWin" should be replaced by the command "Window,1". The "CreateWin" procedure is a procedure that I created.

Good Luck!

CIAO
Fern...
