Subject: Re: circle plot symbol
Posted by Martin Schultz on Mon, 22 May 2000 07:00:00 GMT
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As an example library of extra symbols, please find attached my sym.pro
which provides you with a series of filled and open symbols. Use simply
as in
  plot,x,y,psym=sym(1)
or
  plot,x,y,psym=-sym(6) in case you want connecting lines

If you type
.r sym
showsym
you will get an overview of the defined symbols, and with
showsym,/ps
you can print them and paste them onto your monitor for reference

Cheers,
Martin

Refik Orhun wrote:
>
> Hi Folks,
>
> First of all, you have quite an impressive news group.
> Well, I Have a simple question. How do I code a circle as a symbol in a
> plot ? All the symbols in my plots so far are squares, diamonds and
> triangles, i.e. codes 2, 3, 4, etc...
>
> Can anybody tell me the number or code for a "simple circle" to use in PSYM= ?
>
> Thanks
>
> Refik
>
> P.S. I am a biology graduate student and trying to get rid some of the
> Excel graphs from my dissertation. I have used IDL 3.6 on Alpha UNIX for
> 1.5 years, and I am starting to use it again at home on the demo 5.3 until
> I get the student 4.0 comes in. I like it for multi-panel graphs,
> contour-plots, and histograms. Well, no circles yet...
>

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[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[ [[[[[[
; $Id: sym.pro,v 1.10 1999/01/22 20:12:17 mgs Stab $
;---------------------------------------------------------- --
;+
; NAME:
;       SYM
;
; PURPOSE:
;       define a standard sequence of plotting symbols
;
; CATEGORY:
;       utility
;
; CALLING SEQUENCE:
;       PLOT,X,Y,PSYM=SYM(NUMBER)
;
; INPUTS:
;       NUMBER    ->   symbol number
;
;              0 : dot
;              1 : filled circle
;              2 : filled upward triangle
;              3 : filled downward triangle
;              4 : filled diamond
;              5 : filled square
;              6 : open circle
;              7 : open upward triangle
;              8 : open downward triangle
;              9 : open diamond
;             10 : open square
;             11 : plus
;             12 : X
;             13 : star
;             14 : filled rightfacing triangle
;             15 : filled leftfacing triangle
;             16 : open rightfacing triangle
;             17 : open leftfacing triangle
;
; KEYWORD PARAMETERS:
;
; OUTPUTS:
;       function returns the symbol number to be used with PSYM= in the
;       PLOT command
;
; SUBROUTINES:
```

```
;       SHOWSYM : Can be used to produce a symbol chart for reference
;       (Type .r sym, then showsym, optionally with the /PS option).
;       Extra keywords are passed to PLOTS, so you can e.g. choose
;       a fancy color for your chart.
;
; REQUIREMENTS:
;
; NOTES:
;       This function produces a side effect in that the USERSYM procedure
;       is used to create a symbol definition. It's meant for usage within
;       the PLOT, OPLOT, etc. command
;
; EXAMPLE:
;       PLOT,X,Y,PSYM=SYM(0),SYMSIZE=3
;               produces a plot with dots (standard symbol 3)
;       FOR I=0,17 DO OPLOT,X+1,Y,PSYM=SYM(I),COLOR=I
;               overplots 17 curves each with its own symbol
;
; MODIFICATION HISTORY:
;       mgs, 22 Aug 1997: VERSION 1.00
;       mgs, 10 Sep 1999: - added SHOWSYM procedure
;
;-
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; kept with any copy of this software. If this software shall
; be used commercially or sold as part of a larger package,
; please contact the author to arrange payment.
; Bugs and comments should be directed to mgs@io.harvard.edu
; with subject "IDL routine sym"
 ;-------------------------------------------------------------- --


pro showsym,ps=ps,_EXTRA=e

FORWARD_FUNCTION SYM


  psflag = keyword_set(PS)
  if (psflag) then begin
    olddev = !D.NAME
    set_plot,'PS'
    device,/COLOR,bits=8,xsize=8,ysize=5,yoffset=3,/INCHES, $
        filename='symbols.ps'
  endif
```

```
  plot,findgen(18),/NODATA,xstyle=4,YSTYLE=4
  for i=0,17 do begin
    plots,1,18-i,PSYM=SYM(i),_EXTRA=e
    xyouts,0.5,18-i-0.2,strtrim(i,2),align=1.
  endfor

  if (psflag) then begin
    device,/close
    set_plot,olddev
    print,'Symbollist created as symbols.ps.'
  endif

  return
end

; ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

function sym,number

    on_error,2  ; return to caller


    if(n_elements(number) eq 0) then return,1  ; default



    result=8    ; default: return psym=8, i.e. user defined symbol

; define some help variables for
; circle :
    phi=findgen(32)*(!PI*2/32.)
    phi = [ phi, phi(0) ]


    case number of

       0  : result = 3    ; dot

       1  : usersym, cos(phi), sin(phi), /fill
                    ; filled circle

       2  : usersym, [ -1, 0, 1, -1 ], [ -1, 1, -1, -1 ], /fill
                    ; filled upward triangle

       3  : usersym, [ -1, 0, 1, -1 ], [  1, -1, 1, 1 ], /fill
                    ; filled downward triangle

       4  : usersym, [ 0, 1, 0, -1, 0 ], [ 1, 0, -1, 0, 1 ], /fill
```

```
                ; filled diamond

      5  : usersym, [ -1, 1, 1, -1, -1 ], [ 1, 1, -1, -1, 1 ], /fill
                ; filled square

      6  : usersym, cos(phi), sin(phi)
                ; open circle

      7  : usersym, [ -1, 0, 1, -1 ], [ -1, 1, -1, -1 ]
                ; open upward triangle

      8  : usersym, [ -1, 0, 1, -1 ], [  1, -1, 1, 1 ]
                ; open downward triangle

      9  : usersym, [ 0, 1, 0, -1, 0 ], [ 1, 0, -1, 0, 1 ]
                ; open diamond

     10  : usersym, [ -1, 1, 1, -1, -1 ], [ 1, 1, -1, -1, 1 ]
                ; open square

     11  : result = 1    ; plus

     12  : result = 7    ; X

     13  : result = 2    ; star

     14  : usersym, [ -1, 1, -1, -1 ], [1, 0, -1, 1 ], /fill
                ; rightfacing triangle, filled

     15  : usersym, [ 1, -1, 1, 1 ], [1, 0, -1, 1 ], /fill
                ; leftfacing triangle, filled

     16  : usersym, [ -1, 1, -1, -1 ], [1, 0, -1, 1 ]
                ; rightfacing triangle, open

     17  : usersym, [ 1, -1, 1, 1 ], [1, 0, -1, 1 ]
                ; leftfacing triangle, open

    else : begin
           print,'invalid symbol number - set to 1'
           result = 1
           end

  endcase

return,result
end
```

File Attachments

1) sym.pro, downloaded 128 times