Subject: Re: Polar Plots?

Posted by davidf on Fri, 07 Aug 1998 07:00:00 GMT

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Donald Stuart Finan (dfinan@ezinfo.ucs.indiana.edu) writes:

- > Am I missing something or is there no easy way to do polar plots (with
- > 0-360deg axis) in IDL? All I want to do is to make a phase plot with
- > concentric rings for the radius. I've seen ppi.pro and am attempting to
- > modify, but this is my first experience with polar plots, so it's slow
- > going. Any tips?

It is not too hard. Here is a little program I coded up in 5 minutes called PolarPlot. It uses a function (included) called CIRCLE that I retrieved from my web page, and a function called ASPECT that you will have to retrieve from my web page:

http://www.dfanning.com/programs/aspect.pro

I use ASPECT because I think polar plots should be displayed with an aspect ratio of 1.

FUNCTION Circle, xcenter, ycenter, radius points = (2 * !PI / 99.0) * FINDGEN(100) x = xcenter + radius * COS(points) y = ycenter + radius * SIN(points) RETURN, Transpose([[x],[y]]) END

PRO PolarPlot, radius, angle

; Fake data if needed.

IF N_Params() EQ 0 THEN BEGIN angle = ((Randomu(seed, 360)*360) - 180) * !DtoR radius = Randomu(seed, 360) * 100 ENDIF

; Load plot colors.

TVLCT, [100, 255, 0], [100, 255, 255], [100, 0, 0], 1 Device, Decomposed=0

; Establish plot coordinates.

Plot, radius, angle, /Polar, XStyle=5, YStyle=5, \$

/NoData, Background=1, Position=Aspect(1.0) ; Draw axis through center. Axis, /XAxis, 0, 0, Color=2 Axis, /YAxis, 0, 0, Color=2 ; Plot data. OPlot, radius, angle, PSym=2, /Polar, Color=3 ; Draw 25 and 75 percent circles. dataMax = Max(radius)percent25 = Circle(0, 0, 0.25*dataMax) percent75 = Circle(0, 0, 0.75*dataMax)PlotS, percent25, Color=2 PlotS, percent75, Color=2 **END** To see it work with example data, just type: POLARPLOT. (Be sure you download ASPECT first.) Cheers. David David Fanning, Ph.D. Fanning Software Consulting E-Mail: davidf@dfanning.com Phone: 970-221-0438, Toll Free Book Orders: 1-888-461-0155 Coyote's Guide to IDL Programming: http://www.dfanning.com/