
Subject: Re: Polar Plots

Posted by [Dr. Otto Jusko](#) on Thu, 26 Apr 2001 09:25:49 GMT

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I have written a package for analysing data of form profiles i.e. straightness and roundness profiles. For the roundness case extended polar plotting is needed. I don't think that it can be used without modification. But the principle might be of interest.

Basically it works like this:

A plot center is defined and the data is converted to cartesian coordinates. After that a command like the following is executed:

```
winkel = array of angular steps
rawdat = polar data
auswfakt = scaling factor
...
rect_dat = cv_coord (from_pol=transpose([[winkel],[rawdat* auswfakt,
rawdat[0]* auswfakt]]),/to_rect)
radius = fltarr(N_elements(winkel)) + plotradius
radius = cv_coord (from_pol=transpose([[winkel],[radius]]),/to_rect)
rect_dat = rect_dat + radius
...
rect_dat[0,*] = rect_dat[0,*] + plot_center[0]
rect_dat[1,*] = rect_dat[1,*] + plot_center[1]
..
plots, noclip=0, rect_dat,/device
```

For circular axes the following is performed: A max. and min. radius is defined. Coordinates of the vectors for the axes are calculated.

```
zwinkel = array of angular steps
LinCnt = Counter for several plot circles
add25 = a small value
```

```
maxradius = fltarr(N_elements(zwinkel)) + maxrad[LinCnt]-add25
maxradius = cv_coord (from_pol=transpose([[zwinkel],[maxradius]]),/to_rect)
maxradius[0,*] = maxradius[0,*] + plot_mitte[0]
maxradius[1,*] = maxradius[1,*] + plot_mitte[1]
minradius = fltarr(N_elements(zwinkel)) + minrad[LinCnt]+add25
minradius = cv_coord (from_pol=transpose([[zwinkel],[minradius]]),/to_rect)
minradius[0,*] = minradius[0,*] + plot_mitte[0]
minradius[1,*] = minradius[1,*] + plot_mitte[1]
```

After that everything is plotted in a single command:

plots, noclip=0, rect_dat,/device

Otto

Chris Bull schrieb:

- > Hi all,
- >
- > I was just wondering if anyone had extended (and is willing to share) the
- > IDL basic polar plot routine to include useful things like circular axes
- > etc (before I slave over doing it myself! :*)
- >
- > Regards
- >
- > Chris Bull

File Attachments

1) [Otto.Jusko.vcf](#), downloaded 146 times
