QUARTILE PLOT

PURPOSE
Generates a subsample quartile versus subsample index plot.

DESCRIPTION
The upper quartile is the 75th percentile (i.e., the point where 75% of the data values are below that point) and the lower quartile is the 25th percentile (i.e., the point where 25% of the data values are below that point). The subsample quartile is the quartile of the data in the subsample. The quartile plot is used to answer the question: “Does the subsample spread change over different subsamples?” It consists of:
- Vertical axis = subsample quartile;
- Horizontal axis = subsample index.

In addition, a horizontal line is drawn representing the full sample quartile. The appearance of the 2 traces is controlled by the first 2 settings of the LINES, CHARACTERS, SPIKES, BARS, and similar attributes.

SYNTAX
<UPPER/LOWER> QUARTILE PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>
where <y> is the response (= dependent) variable;
<x> is the subsample identifier variable (this variable appears on the horizontal axis);
LOWER specifies a lower quartile plot and UPPER specifies an upper quartile plot;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
UPPER QUARTILE PLOT Y X
LOWER QUARTILE PLOT Y X1 SUBSET X1 < 12

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
- CHARACTERS = Sets the type for plot characters.
- LINES = Sets the type for plot lines.
- MEAN PLOT = Generates a mean plot.
- SD PLOT = Generates a standard deviation plot.
- BOX PLOT = Generates a box plot.
- XBAR CHART = Generates a xbar control chart.
- PLOT = Generates a data or function plot.

APPLICATIONS
Exploratory Data Analysis

IMPLEMENTATION DATE
88/2
PROGRAM
  . PURPOSE--GENERATE A QUARTILE PLOT OF POINT BARROW FREON-11 DATA
  SKIP 50
  SET READ FORMAT 3F4.0,F5.0,F6.0,F3.0,2F9.0
  READ PBF11.DAT YEAR DAY BOT SD F11 FLAG WV CO2
  .
  RETAIN YEAR DAY BOT SD F11 WV CO2 FLAG SUBSET FLAG 0
  LET MONTH=INT(DAY/30.25)+1
  .
  TITLE QUARTILE PLOT
  XLIMITS 0 15
  YLIMITS 1 1.01
  CHARACTER U U
  LINE BLANK SOLID
  UPPER QUARTILE PLOT WV MONTH
  PRE-ERASE OFF
  CHARACTER L L
  LOWER QUARTILE PLOT WV MONTH