SYMMETRY PLOT

PURPOSE

Generates a symmetry plot.

DESCRIPTION

A symmetry plot is a graphical data analysis technique for assessing if a data set is symmetric about the mean. It consists of:

Vertical axis = Y(n-i+1) - median;
Horizontal axis = median - Y(i);

where median is the sample median, Y is sample variable, and i goes from 1 to the index of the median point. This plot graphs the distance from the median of points above the median against the corresponding points below the median. The interpertation of this plot is that the closer these points lie to the 45 degree line, the more symmetric the data is. The symmetry plot can be generated for either raw data of for pre-computed frequencies (i.e., grouped data).

SYNTAX 1

SYMMETRY PLOT <y> <SUBSET/EXCEPT/FOR qualification>
where <y> is the variable of raw data values;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

This syntax is used when you have raw data.

SYNTAX 2

SYMMETRY PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>
where <y> is the variable of pre-computed frequencies;
<x> is the variable of group identifiers;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

This syntax is used when you have pre-computed frequencies.

EXAMPLES

SYMMETRY PLOT Y1
SYMMETRY PLOT Y1 GROUP
SYMMETRY PLOT Y1 SUBSET Y1 > -3.0

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

LINES	=	Sets the type for plot lines.
CHARACTERS	=	Sets the type for plot characters.
PLOT	=	Generates a data or function plot.
PROBABILITY PLOT	=	Generate a probability plot.
PERCENT POINT PLOT	=	Generates a percent point plot.

REFERENCE

“Graphical Methods for Data Analysis,” Chambers, Cleveland, Kleiner, and Tukey, Wadsworth, 1983.

APPLICATIONS

Exploratory Data Analysis

IMPLEMENTATION DATE

88/9

PROGRAM

```
SKIP 25
READ MARSHAK.DAT Y
CHARACTER CIRCLE
CHARACTER HW 2.0 1.5
LINE BLANK
Y1LABEL POINTS ABOVE MEDIAN
X1LABEL POINTS BELOW MEDIAN
TITLE AUTOMATIC
SYMMETRY PLOT Y
```