

## WINDSORIZED MEAN PLOT

### PURPOSE

Generates a subsample Windsorized mean versus subsample index plot.

### DESCRIPTION

The subsample Windsorized mean is the mean of the data with 100p1% of the bottom data replaced by the next larger value, and with 100p2% of the top data replaced by the next smaller value, in the ascending ordered data set. The Windsorized mean plot is used to answer the question: "Does the subsample location change over different subsamples?" It consists of:

Vertical axis = subsample Windsorized mean;  
Horizontal axis = subsample index.

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

### SYNTAX

WINDSORIZED MEAN 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);

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

### EXAMPLES

```
WINDSORIZED MEAN PLOT Y X
WINDSORIZED MEAN PLOT Y X1 SUBSET X1 > 2
```

### NOTE

The analyst usually precedes the WINDSORIZED MEAN PLOT command with 2 LET commands of the following type:

```
LET P1 = .05
LET P2 = .10
```

where P1 and P2 are both between 0 and 1 and indicate the amount of data to be Windsorized from the left and right, respectively. In the example here, P1 = .05 and P2 = .10 indicates that 5% of the smallest data are replaced by the next larger value and 10% of the largest data are replaced by the next smaller value before forming the mean. Values greater than 1 are interpreted as percents. That is, P1 and P2 could be entered as 5 and 10 respectively.

### DEFAULT

None

### SYNONYMS

None

### RELATED COMMANDS

CHARACTERS	=	Sets the type for plot characters.
LINES	=	Sets the type for plot lines.
SD PLOT	=	Generates a standard deviation plot.
VARIANCE PLOT	=	Generates a variance plot.
RANGE PLOT	=	Generates a range plot.
MEAN PLOT	=	Generates a mean plot.
MEDIAN PLOT	=	Generates a median plot.
MIDMEAN PLOT	=	Generates a midmean plot.
MIDRANGE PLOT	=	Generates a midrange plot.
TRIMMED MEAN PLOT	=	Generates a trimmed mean plot.
BOX PLOT	=	Generates a box plot.
XBAR CHART	=	Generates an xbar control chart.
PLOT	=	Generates a data or function plot.

### APPLICATIONS

Quality Control

## IMPLEMENTATION DATE

88/2

## PROGRAM

```
SKIP 25
READ GEAR.DAT Y X
LET P1 = 10
LET P2 = 10
LINE BLANK DASH
CHARACTER X BLANK
XTIC OFFSET 0.2 0.2
YILABEL WINDSORIZED MEAN
XILABEL SAMPLE ID
TITLE AUTOMATIC
WINDSORIZED MEAN PLOT Y X
```

