VARIANCE OF THE MEAN PLOT

PURPOSE
Generates a subsample variance of the mean versus subsample index plot.

DESCRIPTION
The subsample variance of the mean is the subsample variance divided by the subsample size. The variance of the mean plot is used to answer the question: “Does the subsample variation of the mean change over different subsamples?” It consists of:

Vertical axis = subsample variance of the mean;
Horizontal axis = subsample index.

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

SYNTAX
VARIANCE OF THE 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
VARIANCE OF THE MEAN PLOT Y X
VARIANCE OF THE MEAN PLOT Y X SUBSET X > 2

DEFAULT
None

SYNONYMS
VARIANCE OF MEAN PLOT
VARM PLOT
VM PLOT

RELATED COMMANDS
CHARACTERS = Sets the type for plot characters.
LINES = Sets the type for plot lines.
STANDARD DEVIATION PLOT = Generates a standard deviation plot.
VARIANCE PLOT = Generates a variance plot.
STANDARD DEVI OF MEAN PLOT = Generates standard deviation of mean plot.
RANGE PLOT = Generates a range plot.
MEAN PLOT = Generates a mean plot.
MEDIAN PLOT = Generates a median plot.
BOX PLOT = Generates a box plot.
S CHART = Generates a standard deviation control chart.
PLOT = Generates a data or function plot.

APPLICATIONS
Quality Control

IMPLEMENTATION DATE
88/2
PROGRAM

SKIP 25
READ GEAR.DAT DIAMETER BATCH
LINE BLANK DASH
CHARACTER X BLANK
XTIC OFFSET 0.2 0.2
Y1LABEL VARIANCE OF THE MEAN
X1LABEL BATCH
TITLE VARIANCE OF THE MEAN PLOT
VARIANCE OF THE MEAN PLOT DIAMETER BATCH