

STANDARD DEVIATION PLOT

PURPOSE

Generates a subsample standard deviation versus subsample index plot.

DESCRIPTION

The subsample standard deviation is the standard deviation (with divisor n_i-1) of the data in the subsample. The standard deviation plot is used to answer the question: "Does the subsample variation change over different subsamples?" It consists of:

Vertical axis = subsample standard deviation;

Horizontal axis = subsample index.

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

SYNTAX

STANDARD DEVIATION 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

STANDARD DEVIATION PLOT Y X

STANDARD DEVIATION PLOT Y X SUBSET X > 2

DEFAULT

None

SYNONYMS

SD PLOT

S PLOT

RELATED COMMANDS

CHARACTERS	=	Sets the type for plot char.
LINES	=	Sets the type for plot lines.
VARIANCE PLOT	=	Generates a variance plot.
STAND DEVI OF THE MEAN PLOT	=	Generates standard deviation of the 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  
YILABEL STANDARD DEVIATION  
XILABEL BATCH  
TITLE STANDARD DEVIATION PLOT  
STANDARD DEVIATION PLOT DIAMETER BATCH
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