

SINE FREQUENCY PLOT

PURPOSE

Generates a subsample sine frequency versus subsample index plot.

DESCRIPTION

The subsample sine frequency is the approximate least squares estimate of the frequency in a single-frequency sinusoidal model based on data from that subsample only. The sine frequency plot is used to answer the question: "Does the subsample frequency change over different subsamples?" It consists of:

Vertical axis = subsample sine frequency;
Horizontal axis = subsample index.

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

SYNTAX

SINE FREQUENCY 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

SINE FREQUENCY PLOT Y X
SINE FREQUENCY PLOT Y X SUBSET X > 2

DEFAULT

None

SYNONYMS

SF PLOT

RELATED COMMANDS

CHARACTERS	=	Sets the type for plot characters.
LINES	=	Sets the type for plot lines.
SINE AMPLITUDE PLOT	=	Generates a sine amplitude plot.
COMPLEX DEMOD AMPL PLOT	=	Generates a complex demodulation amplitude plot.
COMPLEX DEMOD PHASE PLOT	=	Generates a complex demodulation phase plot.
RANGE PLOT	=	Generates a range plot.
MEAN PLOT	=	Generates a mean plot.
AUTOCORRELATION PLOT	=	Generates an autocorrelation plot.
BOX PLOT	=	Generates a box plot.
RANGE PLOT	=	Generates a range plot.
MEAN PLOT	=	Generates a mean plot.
PLOT	=	Generates a data or function plot.

APPLICATIONS

Time Series Analysis

IMPLEMENTATION DATE

88/2

PROGRAM

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TITLE AUTOMATIC
SKIP 25
READ ELNINO.DAT Y YEAR MONTH
.
MULTIPLY 2 1; MULTIPLY CORNER COORDINATES 0 0 100 100
PLOT Y
XLIMITS 1 12; XTIC OFFSET 1 1
MAJOR XTIC MARK NUMBER 12; MINOR XTIC MARK NUMBER 0
XTIC MARK FORMAT ALPHA
XTIC MARK CONTENT JAN FEB MARCH APRIL MAY JUNE JULY AUGUST SEP OCT ...
NOV DEC
Y1LABEL SINE FREQUENCY
YTIC OFFSET 0.05 0.05
LINE BLANK SOLID
CHARACTER CIRCLE BLANK
SINE FREQUENCY PLOT Y MONTH
END OF MULTIPLY
```

