

6-PLOT

PURPOSE

Generate 6 plots on the same page that are useful after a fit.

DESCRIPTION

This plot is used after some type of fit to generate some of the most common diagnostic plots in a convenient way. The plots are:

1. observed and fitted dependent values against the independent variable (the observed values are automatically drawn using the plot symbol X while the predicted values are drawn as a solid line);
2. the residuals versus the independent variable (uses whatever the current settings are for the LINE and CHARACTERS commands);
3. the residuals versus the predicted values (uses whatever the current settings are for the LINE and CHARACTERS commands);
4. a lag plot of the residuals (uses an X as the plot symbol);
5. a histogram of the residuals;
6. and a normal probability plot of the residuals.

The 6-PLOT command does not perform a fit. It assumes that this has been done in a prior command and that the PRED and RES variables are the results from that fit. The dependent variable and the independent variable used in the fit are given as the 2 arguments to the 6-PLOT command. If a multi-variable fit was performed, specify the independent variable you want to use on the horizontal axis for the first 2 plots (plots against the remaining independent will have to be generated with additional PLOT commands).

SYNTAX

6-PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>

where <y> is the dependent variable that was used in the most recent fit;

<x> is an independent variable used in the most recent fit;

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

EXAMPLES

6-PLOT Y X

6-PLOT RUN1

6-PLOT Y1 SUBSET TAG = 1

NOTE 1

If a fit has not yet been performed, DATAPLOT does not automatically generate one (and so the PRED and RES variables still contain all zero values).

NOTE 2

Remember that various commands generate updated values for RES and PRED. Specifically, LOWESS, SMOOTH, SPLINE FIT, and several others automatically update these variables. Be sure that the fit you want to plot was the most recent command to update the RES and PRED variables before entering the 6-PLOT command.

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

FIT	=	Performs a least squares linear or non-linear fit.
LOWESS	=	Performs a locally weighted least square regression.
SMOOTH	=	Smooth a time series.
SPLINE FIT	=	Performs a spline fit.
ANOVA	=	Performs an analysis of variance.
MEDIAN POLISH	=	Performs a median polish.
HISTOGRAM	=	Generates a histogram.
NORMAL PROB PLOT	=	Generates a normal probability plot.
PLOT	=	Generates a data or function plot.

LAG PLOT	=	Generates a lag plot.
MULTILOT	=	Allows multiple plots per page

APPLICATIONS

Exploratory Data Analysis

IMPLEMENTATION DATE

93/12

PROGRAM

```
. ALASKA PIPELINE RADIOGRAPHIC DEFECT BIAS CURVE
. PERFORM A LINEAR REGRESSION
SKIP 25
READ BERGER1.DAT MEAS TRUE
FIT MEAS TRUE
TITLE AUTOMATIC
CHARACTER CIRCLE
CHARACTER SIZE 1.2
CHARACTER FILL ON
LINE BLANK SOLID
6-PLOT MEAS TRUE
```

