MAXIMUM PLOT

PURPOSE
Generates a subsample maximum versus subsample index plot.

DESCRIPTION
The subsample maximum is the largest data value in the subsample. The maximum plot is used to answer the question: “Does the subsample variation change over different subsamples?” The plot consists of:

- **Vertical axis**: subsample maximum;
- **Horizontal axis**: subsample index.

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

SYNTAX
```
MAXIMUM 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
```
MAXIMUM PLOT Y X
MAXIMUM PLOT Y X SUBSET X = 2 TO 12
```

DEFAULT
None

SYNONYMS
MAX PLOT

RELATED COMMANDS
- CHARACTER = Sets the type for plot characters.
- LINES = Sets the type for plot lines.
- MINIMUM PLOT = Generates a minimum plot.
- RANGE PLOT = Generates a range plot.
- EXTREME PLOT = Generates an extreme plot.
- DECILE PLOT = Generates a decile plot.
- STANDARD DEVIATION PLOT = Generates a standard deviation plot.
- VARIANCE PLOT = Generates a variance plot.
- MEAN PLOT = Generates a mean plot.
- MEDIAN PLOT = Generates a median plot.
- BOX PLOT = Generates a box plot.
- RANGE CHART = Generates a maximum control chart.
- S CHART = Generates a standard deviation control chart.
- PLOT = Generates a data or function plot.

APPLICATIONS
- Quality Control

IMPLEMENTATION DATE
88/2
PROGRAM
SKIP 50
SET READ FORMAT 3F4.0,F5.0,F6.0,F3.0,2F9.0
READ PBF11.DAT YEAR DAY BOT SD F11 FLAG WV CO2
.
RETAIN YEAR DAY BOT SD F11 WV CO2 FLAG SUBSET FLAG 0
LET MONTH=INT(DAY/30.25)+1
.
LINE BLANK DASH
CHARACTER X BLANK
XLIMITS 0 15
Y1LABEL MAXIMUM
X1LABEL GROUP ID
TITLE AUTOMATIC
MAXIMUM PLOT WV MONTH