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IDENTIFICATION

PRINTER PAPER PLOTTER, MU PPP5
704 FORTRAN PROGRAM
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Midwestern Universities Research Association, Madison, Wisconsin

PURPOSE

To plot floating point data as asterisks on the 716 printer with a mesh size of 60 x 120 (one page).

RESTRICTIONS

MUPPP5 is intended to be used only as a FORTRAN II subroutine. It is available on the FORTRAN system tape at this installation.

USAGE

MUPPP5 is assembled with a FORTRAN program by the statement

CALL MUPPP5 (X, Y, S, N, I)

where X and Y refer to the values (floating point numbers) to be plotted in the X and Y directions respectively. S is an array of four floating point numbers to indicate the scale of the plot. S_1 is the largest algebraic value to be expected in the X direction (X_{max}). Similarly, S_2, S_3, S_4 are the expected X_{min}, Y_{max}, Y_{min} respectively. Any point whose values of X or Y fall outside this range will not be plotted.

Since it is sometimes desirable to obtain plots of two motions, MUPPP5 is designed to handle two plots. N(an integer) determines which of the two plots is being produced. N may be assigned only the values of 1 or 2.

I is a print indicator. As the image of a plot is being built up with X and Y values, the indicator I must be zero. When it is desired to have the plot printed, MUPPP5 is entered with $I \neq 0$. If $I = 1$, the image is cleared after printing. If $I = 2$, the image is saved for further additions of X and Y values. S, of course, must not be changed for the additions unless two plots of differing scales superimposed on each other is desired.

OUTPUT FORMAT

A plot consists of a one page array of asterisks and blanks, 120 columns wide and 60 lines deep. The resolution is 10 columns per inch and 6 lines per inch. Each plot is preceded (on the same page) with a two line heading to indicate the range of values encountered (not the original S values) and the horizontal and vertical scales in inches. An example follows:

MURA-520

XMAX = 1.2345678E-01, XMIN = -1.2345678E-02,
YMAX = 1.2345678E-03, YMIN = -1.2345678E-04
ONE HORIZONTAL INCH = 1.2345678E-05,
ONE VERTICAL INCH = 1.2345678E-06

If within the range of the plot, X and/or Y axes are shown by asterisks across the full width or height of the mesh.

CODING INFORMATION

The space required by MUPPP5 and its three subsidiary subroutines is as follows:

MUPPP5	451 WORDS
MUPPPA	38 WORDS
MUPPPB	91 WORDS
MUPPPC	85 WORDS
PLOT 1 STORAGE	240 WORDS
PLOT 2 STORAGE	240 WORDS
OTHER STORAGE	19 WORDS
	1156 WORDS TOTAL