

Documentation for gnuPipe.h and gnuPipe.c

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Description

These routines allow plotting of data by piping to the free gnuplot program. They require that gnuplot is loaded and functional. To test whether it works enter “gnuplot” at a system prompt and see if it runs.

Dependencies

Only the gnuplot software.

History

10/29/01	started
1/2017	updated

Functions

File functions

`FILE *gnuWindow();`
Opens a pipe to gnuplot, returning a pointer to the file. This pointer needs to be sent back to all of the other library routines. This also turns off the standard gnuplot legend. Returns NULL on failure (probably due to gnuplot not being installed).

`void gnuClose(FILE *gnu);`
Closes the pipe to gnuplot.

Direct gnuplot access

`void gnuCommand(FILE *gnu, char *s);`
Sends a command string to gnuplot without any prior filtering or processing. Since it's not possible to get messages back from gnuplot, there is no way for a calling program to know if an error occurred.

`void gnuPrompt(FILE *gnu);`
Displays a prompt to the standard error to allow the program user to enter commands directly to gnuplot. It terminates when the user enters a blank line.

Set up functions

`void gnuSetScales(FILE *gnu, double xa, double xb, double ya, double yb);`
Sets scales of the plot, where the x range is from x_a to x_b and the y range is from y_a to y_b . If $x_a=x_b$ then autoscaling is used for x , and similarly for y .

Data plotting

`void gnuData(FILE *gnu, double *x, double *y, int m, int col);`

Plots sets of x,y data to gnuplot, where there is one column of x values, with m items and col columns of y data, with m values each.

`void gnuData2(FILE *gnu, double *x, double *y, int *ct, int col);`

Similar to `gnuData` except that there are col columns of x data to plot against the respective columns of y data. Each column has `ct[]` elements.