Slide 1

Administrivia

- (None?)

Slide 2

(Mostly-)Text-Mode Plotting — `gnuplot`

- Often run in graphical mode, but interface is text-only. Help available from within program by typing `help`. (Help is modeled after online help on VAX VMS operating system, and is — different.)

- (Interestingly enough, the name has nothing to do with the GNU project, but apparently was an attempt at humor by the authors, who wanted to call it `newplot` but didn't want to conflict with some other program by that name.)

- Admittedly the text-only interface seems clunky by comparison to GUI tools, and this does seem like the kind of application for which a GUI tool would be good, but . . .

gnuplot, Continued

- A benefit to the text-mode interface is that commands/settings can be saved to a (text!) file for later reuse. (And since it's a text file it can be edited directly with a text editor.)

- Program can also be run in "batch" mode. Might be useful for generating many similar plots from different data, or for recreating plots as data changes.

- All this makes for something that fits nicely into the world of traditional-UNIX text-mode tools.

- Nice for LaTeX users because it can produce output in various LaTeX-friendly formats (including ones that allow final typesetting to use same fonts as document). (More about this in discussion of LaTeX — next topic.)

Slide 3

gnuplot Basics

- `plot` to plot a mathematical expression or data.

- `set xrange`, `set yrange` to set ranges for two axes.
  `set logscale` to scale one or more axes logarithmically.

- `set style` to use nondefault "style" (particularly useful for plotting data — default is points, but you can do lines or bars too).

- `replot` to repeat previous `plot` command, as you might want to do after changing style, etc.

- `save` to save settings to a file. `load` to retrieve them.

- `set terminal` to choose a different output format. Combine with `set output` to save plot to a file.

Slide 4

`gnuplot` Examples

- A few examples on "Sample programs" page.

- *Lots* of examples available at `gnuplot.sourceforge.net`

Slide 5

Minute Essay

- Can you think of a situation in which you might use `gnuplot`?

- What tool(s) do you usually use to make plots?

Slide 6