

G N U P L O T

Macintosh version 3.7

patchlevel 1

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Thomas Williams, Colin Kelley and many others

Type ``help`` to access the on-line reference manual

The gnuplot FAQ is available from

`<http://www.ucc.ie/gnuplot/gnuplot-faq.html>`

Send comments and requests for help to `<info-gnuplot@dartmouth.edu>`

Send bugs, suggestions and mods to `<bug-gnuplot@dartmouth.edu>`

Terminal type set to 'pict'

gnuplot> help splot using

Sorry, no help for 'splot using'

gnuplot> help splot

``splot`` is the command for drawing 3-d plots (well, actually projections on a 2-d surface, but you knew that). It can create a plot from functions or a data file in a manner very similar to the ``plot`` command.

See ``plot`` for features common to the ``plot`` command; only differences are discussed in detail here. Note specifically that the ``binary`` and ``matrix`` options (discussed under "datafile-modifiers") are not available for ``plot``.

Syntax:

```
splot {<ranges>}  
      <function> | "<datafile>" {datafile-modifiers}}  
      {<title-spec>} {with <style>}  
      {, {definitions}, <function> ...}
```

where either a `<function>` or the name of a data file enclosed in quotes is supplied. The function can be a mathematical expression, or a triple of mathematical expressions in parametric mode.

By default ``splot`` draws the xy plane completely below the plotted data. The offset between the lowest ztic and the xy plane can be changed by ``set ticslevel``. The orientation of a ``splot`` projection is controlled by ``set view``. See ``set view`` and ``set ticslevel`` for more information.

Press return for more:

The syntax for setting ranges on the ``splot`` command is the same as for ``plot``. In non-parametric mode, the order in which ranges must be given is ``xrange``, ``yrange``, and ``zrange``. In parametric mode, the order is ``urange``, ``vrange``, ``xrange``, ``yrange``, and ``zrange``.

The ``title`` option is the same as in ``plot``. The operation of ``with`` is also the same as in ``plot``, except that the plotting styles available to ``splot`` are limited to ``lines``, ``points``, ``linespoints``, ``dots``, and ``impulses``; the error-bar capabilities of ``plot`` are not available for ``splot``.

The datafile options have more differences.

Subtopics available for `splot`:

binary	data-file	datafile	errorbars
example	grid_data	matrix	parametric
ranges	style	title	with

Subtopic of `splot`: style

Functions and data may be displayed in one of a large number of styles. The ``with`` keyword provides the means of selection.

Syntax:

```
with <style> { {linestyle | ls <line_style>}
               | {{linetype | lt <line_type>}
                 {linewidth | lw <line_width>}
                 {pointtype | pt <point_type>}
                 {pointsize | ps <point_size>}}} }
```

where `<style>` is either ``lines``, ``points``, ``linespoints``, ``impulses``, ``dots``, ``steps``, ``fsteps``, ``histeps``, ``errorbars``, ``xerrorbars``, ``yerrorbars``, ``xyerrorbars``, ``boxes``, ``boxerrorbars``, ``boxxyerrorbars``, ``financebars``, ``candlesticks`` or ``vector``. Some of these styles require additional information. See ``set style <style>`` for details of each style.

Default styles are chosen with the ``set function style`` and ``set data style`` commands.

By default, each function and data file will use a different line type and point type, up to the maximum number of available types. All terminal drivers support at least six different point types, and re-use them, in order, if more are required. The LaTeX driver supplies point types (all variants of a circle), and thus will only repeat after 12 curves are plotted with points. The PostScript drivers (``postscript``) supplies a total of 64.

If you wish to choose the line or point type for a single plot, `<line_type>` and `<point_type>` may be specified. These are positive integer constants (or expressions) that specify the line type and point type to be used for the plot. Use ``test`` to display the types available for your terminal.

You may also scale the line width and point size for a plot by using `<line_width>` and `<point_size>`, which are specified relative to the default values for each terminal. The `pointsize` may also be altered globally---see ``set pointsize`` for details. But note that both `<point_size>` as set here and

as set by ``set pointsize`` multiply the default point size---their effects are not cumulative. That is, ``set pointsize 2; plot x w p ps 3`` will use points three times default size, not six.

If you have defined specific line type/width and point type/size combinations with ``set linestyle``, one of these may be selected by setting `<line_style>` to the index of the desired style.

Press return for more: The keywords may be abbreviated as indicated.

Note that the ``linewidth`` and ``pointsize`` options are not supported by all terminals.

Examples:

This plots $\sin(x)$ with impulses:
`plot sin(x) with impulses`

This plots x with points, x^2 with the default:
`plot x*y w points, x**2 + y**2`

This plots $\tan(x)$ with the default function style, file "data.1" with lines:
`plot [] [-2:5] tan(x), 'data.1' with l`

This plots "leastsq.dat" with impulses:
`plot 'leastsq.dat' w i`

This plots the data file "population" with boxes:
`plot 'population' with boxes`

Press return for more: This plots "exper.dat" with errorbars and lines connect (errorbars require three or four columns):
`plot 'exper.dat' w lines, 'exper.dat' notitle w errorbars`

This plots $\sin(x)$ and $\cos(x)$ with linespoints, using the same line type but different point types:
`plot sin(x) with linesp lt 1 pt 3, cos(x) with linesp lt 1 pt 4`

This plots file "data" with points of type 3 and twice usual size:
`plot 'data' with points pointtype 3 pointsize 2`

This plots two data sets with lines differing only by weight:
`plot 'd1' t "good" w l lt 2 lw 3, 'd2' t "bad" w l lt 2 lw 1`

See ``set style`` to change the default styles.

Subtopic of `splot`: with

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                {pointtype | pt <point_type>}  
                {pointsize | ps <point_size>}} }
```

where <style> is either `lines`, `points`, `linespoints`, `impulses`, `dots`, `steps`, `fsteps`, `histeps`, `errorbars`, `xerrorbars`, `yerrorbars`, `xyerrorbars`, `boxes`, `boxerrorbars`, `boxxyerrorbars`, `financebars`, `candlesticks` or `vector`. Some of these styles require additional information. See `set style <style>` for details of each style.

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