graph twoway rpspike — Range and point plot with spikes

Description

A range and point plot has three y variables, such as high, low, and closing daily stock prices, or mean values and the corresponding upper and lower bounds of the 95% confidence intervals.

`twoway rpspike` plots a range and a point, using a spike to connect the high and low values and a marker for the point on each spike.

Quick start

Specify a range plot of `y1` and `y2` with spikes and markers for `y3`

```
twoway rpspike y1 y2 y3 x
```

Specify a horizontal range and point plot with spikes

```
twoway rpspike y1 y2 y3 x, horizontal
```

Specify maroon spikes

```
twoway rpspike y1 y2 y3 x, lcolor(maroon)
```

Specify maroon markers

```
twoway rpspike y1 y2 y3 x, mcolor(maroon)
```

Specify an overlaid line plot

```
twoway rpspike y1 y2 y3 x || line y4 x, sort
```

Specify labels for the y axis

```
twoway rpspike y1 y2 y3 x, ylabel(100 200 300 400)
```

Menu

Graphics > Two-way graph (scatter, line, etc.)

Syntax

```
twoway rpspike y1var y2var y3var xvar [if] [in] [, options]
```

options	Description
`vertical`	vertical spikes; the default
`horizontal`	horizontal spikes
marker_options	change look of markers (color, size, etc.)
line_options	change look of spike lines
colorvar_options	change color of spike lines based on values of a variable
axis_choice_options	associate plot with alternative axis
twoway_options	titles, legends, axes, added lines and text, by, regions, name, aspect ratio, etc.

All explicit options are *rightmost*, except `vertical` and `horizontal`, which are *unique*; see [G-4] **Concept: repeated options**.

Options

`vertical` and `horizontal` specify whether the *y1* and low *y2* values are to be presented vertically (the default) or horizontally.

In the default `vertical` case, *y1var* and *y2var* record the minimum and maximum (or maximum and minimum) y values to be graphed against each *xvar* value.

If `horizontal` is specified, the values recorded in *y1var* and *y2var* are plotted in the x direction, and *xvar* is treated as the y value.

marker_options specify how the markers look, including shape, size, color, and outline; see [G-3] ***marker_options***.

line_options specify the look of the lines used to draw the spikes, including pattern, width, and color; see [G-3] ***line_options***.

colorvar_options specify that the color of the lines used to draw the spikes be determined by the levels of the numeric variable *colorvar*; see [G-3] ***colorvar_options***.

axis_choice_options associate the plot with a particular y or x axis on the graph; see [G-3] ***axis_choice_options***.

twoway_options are a set of common options supported by all `twoway` graphs. These options allow you to title graphs, name graphs, control axes and legends, add lines and text, set aspect ratios, create graphs over `by()` groups, and change some advanced settings. See [G-3] ***twoway_options***.

Remarks and examples

Remarks are presented under the following headings:

Typical use

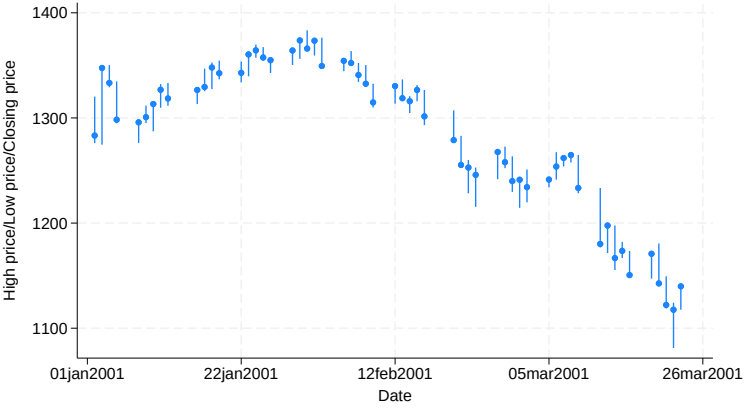
We have daily data recording the values for the S&P 500 in 2001:

```
. use https://www.stata-press.com/data/r19/sp500
(S&P 500)
. list date high low close in 1/5
```

	date	high	low	close
1.	02jan2001	1320.28	1276.05	1283.27
2.	03jan2001	1347.76	1274.62	1347.56
3.	04jan2001	1350.24	1329.14	1333.34
4.	05jan2001	1334.77	1294.95	1298.35
5.	08jan2001	1298.35	1276.29	1295.86

We will use the first 57 observations from these data and create a range plot for high and low prices with markers for the closing prices:

```
. twoway rpspike high low close date in 1/57
```



Advanced use

`twoway rpspike` can be usefully combined with other `twoway` plottypes (see [G-2] **graph twoway**). For example, we add a line plot for the closing price to the graph above, and we change the color of the spikes with `lcolor(gs11)` to give the line plot more prominence.

```
. twoway rpspike high low close date, lcolor(gs11) ||
        line close date || in 1/57
        , legend(label(1 "High/Low/Closing price"))
```

Also see

[G-2] **graph twoway rarea** — Range plot with area shading

[G-2] **graph twoway rbar** — Range plot with bars

[G-2] **graph twoway rcap** — Range plot with capped spikes

[G-2] **graph twoway rcapsym** — Range plot with spikes capped with marker symbols

[G-2] **graph twoway rconnected** — Range plot with connected lines

[G-2] **graph twoway rline** — Range plot with lines

[G-2] **graph twoway rpcap** — Range and point plot with capped spikes

[G-2] **graph twoway rscatter** — Range plot with markers

[G-2] **graph twoway rspike** — Range plot with spikes

[G-2] **graph twoway spike** — Two-way spike plots