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## Description

`twoway pcscatter` draws markers for each point designated by  $(y1var, x1var)$  and for each point designated by  $(y2var, x2var)$ .

## Quick start

Paired-coordinate scatterplot

```
twoway pcscatter y1 x1 y2 x2
```

Same as above, but label points  $(y1, x1)$  using the values of variable `labvar`

```
twoway pcscatter y1 x1 y2 x2, mlabel(labvar)
```

Same as above, but label points  $(y2, x2)$  instead of  $(y1, x1)$

```
twoway pcscatter y1 x1 y2 x2, mlabel(labvar) headlabel
```

## Menu

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

## Syntax

```
twoway pcscatter y1var x1var y2var x2var [if] [in] [, options]
```

<i>options</i>	Description
<code>headlabel</code>	label second coordinate, not first
<code>vertical</code>	orient plot naturally; the default
<code>horizontal</code>	orient plot transposing <i>y</i> and <i>x</i> values
<code>marker_options</code>	change look of markers (color, size, etc.)
<code>marker_label_options</code>	add marker labels; change look or position
<code>colorvar_options</code>	change color of markers based on values of a variable
<code>axis_choice_options</code>	associate plot with alternative axis
<code>twoway_options</code>	titles, legends, axes, added lines and text, by, regions, name, aspect ratio, etc.

All explicit options are *unique*; see [G-4] **Concept: repeated options**.

## Options

`headlabel` specifies that labels be drawn on the markers of the (*y2var*, *x2var*) points rather than on the markers of the (*y1var*, *x1var*) points. By default, when the `mlabel()` option is specified, labels are placed on the points for the first two variables—*y1var* and *x1var*. `headlabel` moves the labels from these points to the points for the second two variables—*y2var* and *x2var*.

`vertical` and `horizontal` specify whether the *y* and *x* coordinates are to be swapped before plotting—`vertical` (the default) does not swap the coordinates, whereas `horizontal` does.

These options are rarely used when plotting only paired-coordinate data; they can, however, be used to good effect when combining paired-coordinate plots with range plots, such as `twoway rspike` or `twoway rbar`; see [G-2] **graph twoway rspike** and [G-2] **graph twoway rbar**.

`marker_options` specify how the markers look, including shape, size, color, and outline; see [G-3] **marker\_options**. The same marker is used for both sets of points.

`marker_label_options` specify if and how the markers are to be labeled; see [G-3] **marker\_label\_options**.

`colorvar_options` specify that the color of the markers 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

Visually, there is no difference between

```
. twoway pcscatter y1var x1var y2var x2var
```

and

```
. twoway scatter y1var x1var || scatter y2var x2var, pstyle(p1)
```

though in some cases the former is more convenient and better represents the conceptual structure of the data.

The two scatters are presented in the same overall style, meaning that the markers (symbol shape and color) are the same.

## Also see

[G-2] [graph twoway](#) — Two-way graphs

[G-2] [graph twoway pcarrow](#) — Paired-coordinate plot with arrows

[G-2] [graph twoway pccapsym](#) — Paired-coordinate plot with spikes and marker symbols

[G-2] [graph twoway pci](#) — Two-way paired-coordinate plot with immediate arguments

[G-2] [graph twoway pcspike](#) — Paired-coordinate plot with spikes

[G-2] [graph twoway rscatter](#) — Range plot with markers

[G-2] [graph twoway scatter](#) — Two-way scatterplots

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