

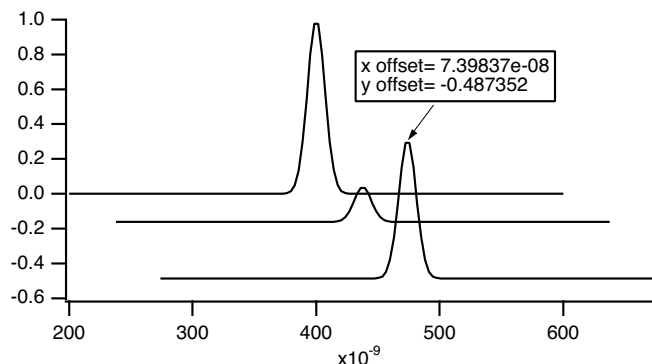
## Chapter II-13 — Graphs

This example uses double-backslashes because a single backslash is an escape character in Igor literal strings. Since we want a backslash in the final text, because that is what Igor requires for \k and \W, we need to use a double-backslash in the literal strings.

If you were to enter the legend text in the Add Annotation dialog, you would use just a single backslash and the dialog would generate the requires command, with double-backslashes.

### Trace Offsets

You can offset a trace in a graph in the horizontal or vertical direction without changing the data in the associated wave. This is primarily of use for comparing the shapes of traces or for spreading overlapping traces out for better viewing.



Each trace has an X and a Y offset, both of which are initially zero. If you check the Offset checkbox in the Modify Trace Appearance dialog, you can enter an X and Y offset for the trace.

You can also set the offsets by clicking and dragging in the graph. To do this, click the trace you want to offset. Hold the mouse down for about a second. You will see a readout box appear in the lower left corner of the graph. The readout shows the X and Y offsets as you drag the trace. If it doesn't take too long to display the given trace, you will be able to view the trace as you drag it around on the screen.

If you press Shift while offsetting a wave, Igor constrains the offset to the horizontal or vertical dimension.

You can disable trace dragging by pressing Caps Lock, which may be useful for trackball users.

Offsetting is undoable, so if you accidentally drag a trace where you don't want it, choose Edit →Undo.

It is possible to attach a tag to a trace that will show its current offset values. See **Dynamic Escape Codes for Tags** on page III-38, for details.

If autoscaling is in effect for the graph, Igor tries to take trace offsets into account. If you want to set a trace's offset without affecting axis scaling, use the Set Axis Range item in the Graphs menu to disable autoscaling.

When offsetting a trace that uses log axes, the trace offsets by the same distance it does when the axis is not log. The shape of the trace is not changed — it is simply moved. If you were to try to offset a trace by adding a constant to the wave's data, it would distort the trace.

### Trace Multipliers

In addition to offsetting a trace, you can also provide a multiplier to scale a trace. The effective value used for plotting is then  $multiplier * data + offset$ . The default value of zero means that no multiplier is provided, not that the data should be multiplied by zero.

With normal (not log) axes, you can interactively scale a trace using the same click and hold technique described for trace offsets. First place Cursor A somewhere on the trace to act as a reference point. Then, after entering offset mode by clicking and holding, press Option (*Macintosh*) or Alt (*Windows*) to adjust the multiplier instead of the offset. You can press and release the key as desired to alternate between scaling and offsetting.