

## CsrWaveRef

**CsrWaveRef**(*cursorName* [, *graphNameStr*])

The CsrWaveRef function returns a wave reference to the wave the specified cursor (A through J) is on in the top (or named) graph.

### Details

The wave reference can be used anywhere Igor is expecting the name of a wave (not a string containing the name of a wave).

CsrWaveRef should be used in place of the CsrWave() string function to work properly with data folders.

### Examples

```
Print CsrWaveRef(A) [50]           // not CsrWaveRef("A")
Print CsrWaveRef(B, "Graph0") [50] // in specified graph
```

### See Also

**Programming With Cursors** on page II-321.

**Wave Reference Functions** on page IV-197.

## CsrXWave

**CsrXWave**(*cursorName* [, *graphNameStr*])

The CsrXWave function returns a string containing the name of the wave supplying the X coordinates for an XY plot of the Y wave the specified cursor (A through J) is attached to in the top (or named) graph.

### Details

CsrXWave returns an empty string ("") if the wave the cursor is on is not plotted versus another wave providing the X coordinates (that is, if the wave was not plotted with a command such as `Display theWave vs anotherWave`).

The name of a wave by itself is not sufficient to identify the wave because it does not specify what data folder contains the wave. Thus, if you are calling CsrXWave for the purpose of passing the wave name to other Igor procedures, you should use the **CsrXWaveRef** function instead. Use CsrXWave if you want the name of the wave to use in an annotation or a notebook.

### Examples

```
Display ywave vs xwave
```

ywave supplies the Y coordinates and xwave supplies the X coordinates for this XY plot.

```
Cursor A ywave,0
Print CsrXWave(A)           // prints xwave
```

### See Also

**Programming With Cursors** on page II-321.

## CsrXWaveRef

**CsrXWaveRef**(*cursorName* [, *graphNameStr*])

The CsrXWaveRef function returns a wave reference to the wave supplying the X coordinates for an XY plot of the Y wave the specified cursor (A through J) is attached to in the top (or named) graph.

### Details

The wave reference can be used anywhere Igor is expecting the name of a wave (not a string containing the name of a wave).

CsrXWaveRef returns a null reference (see **WaveExists**) if the wave the cursor is on is not plotted versus another wave providing the X coordinates (that is, if the wave was not plotted with a command such as `Display theWave vs anotherWave`). CsrXWaveRef should be used in place of the CsrXWave string function to work properly with data folders.

### Examples

```
Display ywave vs xwave
```

ywave supplies the Y coordinates and xwave supplies the X coordinates for this XY plot.