

Use circular convolution for the case where the data in *srcWaveName* and *destWaveName* are considered to endlessly repeat (or “wrap around” from the end back to the start), which means no zero padding is needed.

Use acausal convolution when the source wave contains an impulse response where the middle point of *srcWave* corresponds to no delay ( $t = 0$ ).

#### See Also

**Convolution** on page III-284 for illustrated examples. **MatrixOp**.

#### References

A very complete explanation of circular and linear convolution can be found in sections 2.23 and 2.24 of Rabiner and Gold, *Theory and Application of Digital Signal Processing*, Prentice Hall, 1975.

## CopyDimLabels

**CopyDimLabels** [*flags*] *srcWave*, *destWave*, [*destWave*]...

The CopyDimLabels operation copies dimension labels from the source wave to the destination wave or waves.

CopyDimLabels was added in Igor Pro 8.00.

Support for multiple destination waves was added in Igor Pro 9.00.

#### Flags

In the following flags, *dim* is 0 for the rows dimension, 1 for the columns dimension, 2 for the layers dimension, and 3 for the chunks dimension.

<i>/ROWS=dim</i>	Copies the row dimension labels of <i>srcWave</i> into the <i>destWave</i> dimension specified by <i>dim</i> .
<i>/COLS=dim</i>	Copies the column dimension labels of <i>srcWave</i> into the <i>destWave</i> dimension specified by <i>dim</i> .
<i>/LAYR=dim</i>	Copies the layer dimension labels of <i>srcWave</i> into the <i>destWave</i> dimension specified by <i>dim</i> .
<i>/CHNK=dim</i>	Copies the chunk dimension labels of <i>srcWave</i> into the <i>destWave</i> dimension specified by <i>dim</i> .

#### Details

If you omit all flags, CopyDimLabels copies all dimension labels in *srcWave* to the corresponding dimension labels of *destWave* for dimensions that exist in *destWave*.

You can use */ROWS*, */COLS*, */LAYR* and */CHNK* to copy dimension labels from any existing source wave dimension into any existing destination wave dimension. For example, to copy the column dimension labels of wave1 into the row dimension labels of wave2 use:

```
CopyDimLabels /COLS=0 wave1, wave2
```

To copy the column dimension labels of wave1 into the layer dimension labels of wave2 and the row dimension labels of wave1 into the column dimension labels of wave 2 use:

```
CopyDimLabels /COLS=2 /ROWS=1 wave1, wave2
```

If the source dimension has *N* elements and the destination dimension has *M*>*N* elements then only the first *N* dimension labels are set in the destination. The remaining dimension labels in the destination are unchanged.

If the source dimension has *N* elements and the destination dimension has *M*<*N* elements then only the first *M* dimension labels are copied from the source to the destination.

It is an error to attempt to copy dimension labels to a non-existent dimension in the destination.

#### See Also

**FindDimLabel**, **GetDimLabel**, **SetDimLabel**, **Dimension Labels** on page II-93