**Flags**

| | |
|---|---|
| /DSTX=*destX* | Saves the output X data in the specified destination wave. The destination wave is created or overwritten if it already exists. |
| /DSTY=*destY* | Saves the output Y data in the specified destination wave. The destination wave is created or overwritten if it already exists. |

**Details**

FindContour uses a contour-following algorithm to generate a pair of waves describing the locus of the solution to *matrixWave=level*.

If you omit /DSTX the output X data is written to W_XContour in the current data folder.

If you omit /DSTY the output Y data is written to W_YContour in the current data folder.

The output waves are written as double-precision floating point. They use NaNs to separate different contiguous solution points.

**Example**

```
Make/N=(100,200) dataWave = 1e4*gauss(x,50,10,y,100,20)
FindContour dataWave,4     // Find solution to dataWave=4
NewImage dataWave
AppendToGraph/T W_YContour vs W_XContour
```

**See Also**

**AppendMatrixContour**, **ContourZ**

# FindDimLabel

**FindDimLabel(*waveName*, *dimNumber*, *labelString*)**

Returns the index value corresponding to the label for the given dimension. Returns -1 if the label is for the entire dimension. Returns -2 if the label is not found.

Use *dimNumber* =0 for rows, 1 for columns, 2 for layers, or 3 for chunks.

**See Also**

**GetDimLabel**, **SetDimLabel**, **CopyDimLabels**

# FindDuplicates

**FindDuplicates [*flags*] *srcWave***

The FindDuplicates operation identifies duplicate values in a wave and optionally creates various output waves. *srcWave* can be either numeric or text.

When *srcWave* is numeric, the /DN, /INDX, /RN and /SN flags create output waves as described below. If you omit all of these flags then FindDuplicates does nothing.

When *srcWave* is text, the /DT, /INDX, /RT and /ST flags create output waves as described below. If you omit all of these flags then FindDuplicates does nothing.

The FindDuplicates operation was added in Igor Pro 7.00.

**Flags**

| | |
|---|---|
| /FREE | Creates all output waves as free waves. The /FREE flag was added in Igor Pro 8.00.<br>/FREE is permitted in user-defined functions only. If you use /FREE then all output wave parameters must be simple names, not paths or $ expressions.<br>See **Free Waves** on page IV-91 for details on free waves. |
| /INDX=*indexWave* | Creates a numeric output wave containing the index of each encountered duplicate. The index is the point number in *srcWave* where a duplicate value was encountered. This flag applies to both numeric and text inputs. |
| /Z | Do not report any errors. |

**Flags for Numeric Source Wave**

/DN=*dupsWave* Creates a numeric output wave that contains the duplicates.

/RN=*dupsRemovedWave*

Creates a numeric output wave that contains the source data with all duplicates removed.

/SN=*replacement* Creates a numeric output wave with all duplicates replaced with *replacement*. *replacement* can be any numeric value including NaN or INF.

The output wave is W_ReplacedDuplicates in the current data folder unless you specify a different output wave using the /SNDS flag.

/SNDS=*dupsReplacedWave*

Specifies the output wave generated by /SN. If you omit /SNDS then the output wave created by /SN is W_ReplacedDuplicates in the current data folder. /SNDS without /SN has no effect.

/TOL=*tolerance* Specifies the tolerance value for single-precision and double-precision numeric source waves.

Two values are considered duplicates if

```
abs(value1-value2) <= tolerance
```

By default *tolerance* is zero.

/UN=*uniqueNumbersWave*

Creates a numeric output wave that contains the unique numbers in *srcWave* sorted from small to large. When *srcWave* contains NaN entries they are sorted as the last point in *uniqueNumbersWave*.

/UN is incompatible with /RN which maintains the order of entries in *srcWave*.

The /UN flag was added in Igor Pro 9.00.

/UNC=*uniqueCounts*

Creates a numeric output wave that contains the count of each entry in the *uniqueNumbersWave* created by the /UN flag.

The /UNC flag was added in Igor Pro 9.00.

**Flags for Text Source Wave**

/CI Performs case-insensitive text comparisons on ASCII characters only. For example, "A" and "a" are considered duplicates.

The /CI flag was added in Igor Pro 9.00.

/DT=*dupsWave* Creates a text output wave that contains the duplicates.

/LOC Performs locale-aware text comparisons which take case into account for both ASCII and non-ASCII characters. For example, the non-ASCII characters "Å" and "å" are considered duplicates as well as the ASCII characters "A" and "a".

/LOC is ignored unless you also include /CI.

The /LOC flag was added in Igor Pro 9.00.

/RT=*dupsRemovedWave*

Creates a text output wave that contains the source data with all duplicates removed.

/ST=*replacementStr* Creates a text output wave with all duplicates replaced with *replacementStr*. *replacementStr* can be any text value including "".

The output wave is T_ReplacedDuplicates in the current data folder unless you specify a different output wave using the /STDS flag.