

## ImageInfo

<i>/R=roiWave</i>	Specifies a region of interest (ROI). The ROI is defined by a wave of type unsigned byte (/b/u) that has the same number of rows and columns as <i>imageMatrix</i> . The ROI itself is defined by the entries of pixels in the <i>roiWave</i> with value of 0. Pixels outside the ROI may have any nonzero value. The ROI does not have to be contiguous. When <i>imageMatrix</i> is a 3D wave, <i>roiWave</i> can be either a 2D wave (matching the number of rows and columns in <i>imageMatrix</i> ) or it can be a 3D wave that must have the same number of rows, columns and layers as <i>imageMatrix</i> . When using a 2D <i>roiWave</i> with a 3D <i>imageMatrix</i> the ROI is understood to be defined by <i>roiWave</i> for each layer in the 3D wave.  See <b>ImageGenerateROIMask</b> for more information on creating 2D ROI waves.
<i>/S</i>	Computes the histogram for a whole 3D wave possibly subject to 2D or 3D ROI masking. The <i>/S</i> and <i>/P</i> flags are mutually exclusive.

### Details

The ImageHistogram operation works on images, but it handles both 2D and 3D waves of any data type. Unless you use one of the special features of this operation (e.g., ROI or */P* or */I*) you could alternatively use the **Histogram** operation, which computes the histogram for the full wave and includes additional options for controlling the number of bins.

If the data type of *imageMatrix* is single byte, the histogram will have 256 bins from 0 to 255. Otherwise, the 256 bins will be distributed between the minimum and maximum values encountered in the data. Use the */I* flag to increase the number of bins to 65536, which may be useful for unsigned short (*/W/U*) data.

### See Also

**ImageHistModification**, **ImageGenerateROIMask**, **JointHistogram**, **Histograms** on page III-372

## ImageInfo

**ImageInfo** (*graphNameStr*, *imageWaveNameStr*, *instanceNumber*)

The ImageInfo function returns a string containing a semicolon-separated list of information about the specified image in the named graph window or subwindow.

### Parameters

*graphNameStr* can be "" to refer to the top graph.

When identifying a subwindow with *graphNameStr*, see **Subwindow Syntax** on page III-92 for details on forming the window hierarchy.

*imageWaveNameStr* contains either the name of a wave displayed as an image in the named graph, or an image instance name (wave name with "#n" appended to distinguish the nth image of the wave in the graph). You might get an image instance name from the **ImageNameList** function.

If *imageWaveNameStr* contains a wave name, *instanceNumber* identifies which instance you want information about. *instanceNumber* is usually 0 because there is normally only one instance of a wave displayed as an image in a graph. Set *instanceNumber* to 1 for information about the second image of the wave, etc. If *imageWaveNameStr* is "", then information is returned on the *instanceNumber*th image in the graph.

If *imageWaveNameStr* contains an instance name, and *instanceNumber* is zero, the instance is taken from *imageWaveNameStr*. If *instanceNumber* is greater than zero, the wave name is extracted from *imageWaveNameStr*, and information is returned concerning the *instanceNumber*th instance of the wave.

**Details**

The string contains several groups of information. Each group is prefaced by a keyword and colon, and terminated with the semicolon for ease of use with **StringByKey**. The keywords are as follows:

Keyword	Information Following Keyword
AXISFLAGS	Flags used to specify the axes. Usually blank because /L and /B (left and bottom axes) are the defaults.
COLORMODE	A number indicating how the image colors are derived: 1: Color table (see <b>Image Color Tables</b> on page II-392). 2: Scaled color index wave (see <b>Indexed Color Details</b> on page II-400). 3: Point-scaled color index (See <b>Example: Point-Scaled Color Index Wave</b> on page II-401). 4: Direct color (see <b>Direct Color Details</b> on page II-401). 5: Explicit Mode (see <b>ModifyImage</b> explicit keyword). 6: Color table wave (see <b>Color Table Waves</b> on page II-399).
RECREATION	Semicolon-separated list of <i>keyword=modifyParameters</i> commands for the ModifyImage command.
XAXIS	X axis name.
XWAVE	X wave name if any, else blank.
XWAVEDF	The full path to the data folder containing the X wave or blank if there is no X wave.
YAXIS	Y axis name.
YWAVE	Y wave name if any, else blank.
YWAVEDF	The full path to the data folder containing the Y wave or blank if there is no Y wave.
ZWAVE	Name of wave containing Z data used to calculate the image plot.
ZWAVEDF	The full path to the data folder containing the Z data wave.

The format of the RECREATION information is designed so that you can extract a keyword command from the keyword and colon up to the “;”, prepend “ModifyImage ”, replace the “x” with the name of a image plot (“data#1” for instance) and then **Execute** the resultant string as a command.

**Example 1**

This example gets the image information for the second image plot of the wave "jack" (which has an instance number of 1) and applies its **ModifyImage** settings to the first image plot.

```
#include <Graph Utility Procs>, version=6.1 // For WMGetRECREATIONFromInfo
// Make two image plots of the same data on different left and right axes
Make/O/N=(20,20) jack=sin(x/5)+cos(y/4)
Display;AppendImage jack // bottom and left axes
AppendImage/R jack // bottom and right axes
// Put image plot jack#0 above jack#1
ModifyGraph axisEnab(left)={0.5,1},axisEnab(right)={0,0.5}
// Set jack#1 to use the Rainbow color table instead of the default Grays
ModifyImage jack#1 ctab={*,*,Rainbow,0}
```

