AppendImage

AppendImage [**/G=*g*/W=*winName*][***axisFlags***] ***matrix*** [**vs** {***xWaveName*, *yWaveName***}]

The AppendImage operation appends the matrix as an image to the target or named graph. By default the image is plotted versus the left and bottom axes.

Parameters

matrix is either an NxM 2D wave for false color or indexed color images, or it can be a 3D NxMx3 wave containing a layer of data for red, a layer for green and a layer for blue. It can also be a 3D NxMx4 wave with the fourth plane containing alpha values.

If *matrix* contains multiple planes other than three or four or if it contains three or four and multiple chunks, the **ModifyImage** plane keyword can be used to specify the desired subset to display.

If you provide *xWaveName* and *yWaveName*, *xWaveName* provides X coordinate values, and *yWaveName* provides Y coordinate values. This makes an image with uneven pixel sizes. In both cases, you can use * to specify calculated values based on the dimension scaling of *matrix*. See **Details** if you use *xWaveName* or *yWaveName*.

Flags

axisFlags Flags /L, /R, /B, and /T are the same as used by **AppendToGraph**.

/G=*g* Controls the interpretation of three-plane images as direct RGB.

- *g*=1 Suppresses the auto-detection of three or four plane images as direct (RGB) color.
- *g*=0 Same as no /G flag (default).

/W=*winName* Appends to the named graph window or subwindow. When omitted, action will affect the active window or subwindow. This must be the first flag specified when used in a Proc or Macro or on the command line.

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

Details

When appending an image to a graph each image data point is displayed as a rectangle. You can supply optional X and Y waves to define the coordinates of the rectangle edges. *These waves need to contain one more data point than the X (row) or Y (column) dimension of the matrix*. The waves must also be either strictly increasing or strictly decreasing. See **Image X and Y Coordinates** on page II-388 for details.

For false color, the values in the matrix are linearly mapped into a color table. See the ModifyImage ctab keyword. For indexed color, the values in the matrix are interpreted as Z values to be looked up in a user-supplied 3 column matrix of colors. See the ModifyImage cindex keyword. Direct color NxMx3 waves contain the actual red, green, and blue values for each pixel. NxMx4 waves add an alpha channel. If the number type is unsigned bytes, then the range of intensity ranges from 0 to 255. For all other number types, the intensity ranges from 0 to 65535.

By default, nondirect color matrices are initially displayed as false color using the Grays color table and autoscale mode.

If the matrix is complex, the image is displayed in terms of the magnitude of the Z value, that is, $\text{sqrt}(\text{real}^2 + \text{imag}^2)$.

See Also

Image X and Y Coordinates on page II-388, **Color Blending** on page III-498.

The **NewImage**, **ModifyImage**, and **RemoveImage** operations. For general information on image plots see Chapter II-16, **Image Plots**.