

Automatic Labels

Axis Labels:

The goal is to have all automatic labels be

<Quantity> [<Units>],

eg

Time [s]

or

Rotation Rate [$^{\circ}/s$]

- dataVectors use meta-strings units and quantity to build the labels.
- In cases where is Units empty, but Quantity is not, just Quantity will be printed (eg, Index, or Number in bin)
- In cases where quantity is empty and units is not, just the units will be printed (eg, $^{\circ}/s$).
- The first curve in a plot's list which has either quantity or units will define the plot's label.
- If no curves have either quantity or units defined, and legends are not defined, then the Y label will be the list of curve names.
- If Y label does not list the curve names and legends are not defined, then the top label will list the curve names.
- If the axis is set to interpret time, then Units will not be printed in the axis label.

Spectra:

y:

Quantity is set by the type of spectrum (eg Power Spectral Density)

Units is set by the units of the input vector (eg, V), and the rate units specified in the dialog (eg, Hz).... so, eg, V^2/Hz .

x:

Quantity defaults to Frequency but can be overridden in the dialog.

Units defaults to Hz but can be overridden in the dialog.

Histograms:

y:

The Y automatic label is set depending on the type of histogram (eg, Number in Bin)

x:

The X label is set from the input vector.

Equations:

y:

Name of the equation.

x:

Default label from the input X vector.

Spectrograms:

y:

Quantity and Units are set in the same way as Spectra x axis.

x:

Quantity is set to Time.

Units is set to s.

Plugins:

Plugins need to set their output vector Quantity and Units as appropriate. In most cases, fits and filters will pass through the values from their input vectors.

Legend Labels

Curves and Images supply default legend labels. These labels should be the same as the curve's descriptive name, except that special characters in field names need to be escaped.