

See Also

CWT, **FFT**, and **WaveTransform** operations.

For further discussion and examples see **Wigner Transform** on page III-281.

References

Wigner, E. P., On the quantum correction for thermo-dynamic equilibrium, *Physics Review*, 40, 749-759, 1932.

Bartelt, H.O., K.-H. Brenner, and A.W. Lohman, The Wigner distribution function and its optical production, *Optics Communications*, 32, 32-38, 1980.

Window

Window macroName([parameters]) [:macro type]

The Window keyword introduces a macro that recreates a graph, table, layout, or control panel window. The macro appears in the appropriate submenu of the Windows menu. Window macros are automatically created when you close a graph, table, layout, control panel, or XOP target window. You should use **Macro**, **Proc**, or **Function** instead of Window for your own window macros. Otherwise, it works the same as **Macro**.

See Also

The **Macro**, **Proc**, and **Function** keywords. **Data Folders and Window Recreation Macros** on page II-111 for details.

Macro Syntax on page IV-118 for further information.

WindowFunction

WindowFunction [/FFT[=f] /DEST=destWave] windowKind, srcWave

The WindowFunction operation multiplies a one-dimensional (real or complex) *srcWave* by the named window function.

By default the result overwrites *srcWave*.

Parameters

srcWave A one-dimensional wave of any numerical type. See **ImageWindow** for windowing two-dimensional data.

windowKind Specifies the windowing function. Choices for *windowKind* are:

Bartlett, Blackman367, Blackman361, Blackman492, Blackman474, Cos1, Cos2, Cos3, Cos4, Hamming, Hanning, KaiserBessel20, KaiserBessel25, KaiserBessel30, Parzen, Poisson2, Poisson3, Poisson4, Riemann, and an assortment of flat-top windows listed under **FFT**.

See **FFT** for window equations and details. The equations assume that **/FFT=1**.

Flags

/DEST=destWave Creates or overwrites *destWave* with the result of the multiplication of *srcWave* and the window function.

When used in a function, the WindowFunction operation by default creates a real wave reference for the destination wave. See **Automatic Creation of WAVE References** on page IV-72 for details.

/FFT [=1] The window interval is $0 \dots N = \text{numpts}(\text{srcWave})$. This sets the first value of *srcWave* to zero, but not the last value. This is appropriate for windowing data in preparation for Fourier Transforms, and is the same algorithm used by **FFT**.

The window interval is $0 \dots N = \text{numpts}(\text{srcWave}) - 1$ if **/FFT** is missing or **/FFT=0**. This sets the first and last value of *srcWave* to 0. This is the (only) algorithm that the Hanning operation uses.