Kaiser:

$$\frac{I_0\left(\omega_a\sqrt{\left(\frac{L-1}{2}\right)^2-\left(n-\frac{L-1}{2}\right)^2}\right)}{I_0\left(\omega_a\left(\frac{L-1}{2}\right)\right)} \qquad 0\le n\le L-1$$

where $I_0\{\ldots\}$ is the zeroth-order Bessel function of the first kind and ω_a is the design parameter specified by /P=*param*.

KaiserBessel20: α = 2.0
KaiserBessel25: α = 2.5
KaiserBessel30: α = 3.0

$$w(n)=\frac{I_0\left(\pi\alpha\sqrt{1-\left(\frac{n}{L/2}\right)^2}\right)}{I_0(\pi\alpha)} \qquad 0\le|n|\le\frac{L}{2}$$

$$I_0(x)=\sum_{k=0}^{\infty}\frac{\left(x^2/4\right)^k}{(k!)^2}.$$

Examples

To see what one of the windowing filters looks like:

```
Make/N=(80,80) wShape                // Make a matrix
ImageWindow/I/O Blackman wShape      // Replace with windowing filter
Display;AppendImage wShape                  // Display windowing filter
Make/N=2 xTrace={0,79},yTrace={39,39}       // Prepare for 1D section
AppendToGraph yTrace vs xTrace
ImageLineProfile srcWave=wShape, xWave=xTrace, yWave=yTrace
Display W_ImageLineProfile           // Display 1D section of filter
```

See Also

The **WindowFunction** operation for information about 1D applications.

Spectral Windowing on page III-275. Chapter III-11, **Image Processing** contains links to and descriptions of other image operations.

See **FFT** operation for other 1D windowing functions for use with FFTs; **DSPPeriodogram** uses the same window functions. See **Correlations** on page III-362.

DPSS

References

For further windowing information, see page 243 of:

Pratt, William K., *Digital Image Processing*, John Wiley, New York, 1991.

IndependentModule

#pragma IndependentModule = *imName*

The IndependentModule pragma designates groups of one or more procedure files that are compiled and linked separately. Once compiled and linked, the code remains in place and is usable even though other procedures may fail to compile. This allows functioning control panels and menus to continue to work regardless of user programming errors.

See Also

Independent Modules on page IV-238, **The IndependentModule Pragma** on page IV-55 and **#pragma**.