version

#pragma version = *versNum*

In the File Information dialog, `#pragma version=`*versNum* provides file version information that is displayed next to the file name in the dialog. This line must not be indented and must appear in the first fifty lines of the file. See **Procedure File Version Information** on page IV-166.

See Also

The **The version Pragma** on page IV-54, **Procedure File Version Information** on page IV-166, the **IgorInfo** function, and #**pragma**.

VoigtFunc

VoigtFunc(X,Y)

The VoigtFunc function computes the Voigt function using an approximation that has, as described by the author, "accuracy is typically at at least 13 significant digits".

VoigtFunc returns values from a normalized Voigt peak centered at X=0 for the given value of X. The X input is a normalized distance from the peak center:

$$X = \sqrt{\ln(2)} \frac{\nu - \nu_0}{\gamma_g}$$

where γ_g is the Gaussian component half-width, and $\nu - \nu_0$ is the distance from the peak center.

The parameter Y is the shape parameter: when Y is zero, the peak is pure Gaussian. When Y approaches infinity, the shape becomes pure Lorentzian. When Y is sqrt(ln(2)), the mix is half-and-half.

VoigtFunc was added in Igor Pro 7.00. The approximation used to compute it was changed Igor 8.00 for greater accuracy.

Details

The VoigtFunc function returns values from a normalized peak that can be used as the basis for user-defined fitting functions. The function is used as the basis for the built-in Voigt fitting function and the **VoigtPeak** function.

VoigtFunc Curve Fitting Example

Here is an example of a user-defined fitting function built on VoigtFunc:

```
Constant sqrtln2=0.832554611157698                  // sqrt(ln(2))
Constant sqrtln2pi=0.469718639349826                // sqrt(ln(2)/pi)

Function MyVoigtFit(w,xx) : FitFunc
    Wave w
    Variable xx

    //CurveFitDialog/ These comments were created by the Curve Fitting dialog.
    //CurveFitDialog/ Equation:
    //CurveFitDialog/ Variable ratio = sqrtln2/gw
    //CurveFitDialog/ Variable xprime = ratio*(xx-x0)
    //CurveFitDialog/ Variable voigtY = ratio*shape
    //CurveFitDialog/ f(xx) = y0 + area*sqrtln2pi*VoigtFunc(xprime, voigtY)
    //CurveFitDialog/ End of Equation
    //CurveFitDialog/ Independent Variables 1
    //CurveFitDialog/ xx
    //CurveFitDialog/ Coefficients 5
    //CurveFitDialog/ w[0] = y0
    //CurveFitDialog/ w[1] = area
    //CurveFitDialog/ w[2] = x0
    //CurveFitDialog/ w[3] = gw (FWHM)
    //CurveFitDialog/ w[4] = shape (Lw/Gw)

    Variable voigtX = 2*sqrtln2*(xx-w[2])/w[3]
    Variable voigtY = sqrtln2*w[4]
    return w[0] + (w[1]/w[3])*2*sqrtln2pi*VoigtFunc(voigtX, voigtY)
End
```