Parameters

cw Coefficient wave. The Gaussian peak shape is defined by the coefficients as follows:

cw[0]: Peak location.
cw[1]: Peak width: sqrt(2) * (standard deviation).
cw[2]: Amplitude.

cw must be a double precision wave.

yw Y wave into which values are stored.

yw may be either double precision or single precision.

xw X wave containing the X values at which the peak function is to be evaluated.

xw may be either double precision or single precision.

Details

This function is primarily intended to support the Multipeak Fitting package. To use MPFXGaussPeak as a fitting function, wrap it in an all-at-once user-defined fitting function:

```
Function FitGaussPeak(Wave cw, Wave yw, Wave xw) : FitFunc
   Variable dummy = MPFXGaussPeak(cw, yw, xw)
End
```

The assignment to "dummy" is required because you must explicitly do something with the return value of a built-in function.

If the waves do not satisfy the number type requirements, the function returns NaN. A successful invocation returns zero.

See Also

All-At-Once Fitting Functions on page III-256

MPFXLorentzianPeak

MPFXLorentzianPeak(cw, yw, xw)

The MPFXLorentzianPeak function implements a single Lorentzian peak with no Y offset in the format of an all-at-once fitting function. It fills the wave yw with values defined by a Lorentzian peak as if this wave assignment statement was executed:

```
yw = 2*cw[2]/pi * cw[1]/(4*(xw-cw[0])^2 + cw[1]^2)
```

Parameters

cw Coefficient wave. The Lorentzian peak shape is defined by the coefficients as follows:

cw[0]: Peak location.
cw[1]: Peak width as full width at half maximum.
cw[2]: Peak area.

cw must be a double precision wave.

yw Y wave into which values are stored.

yw may be either double precision or single precision.

xw X wave containing the X values at which the peak function is to be evaluated.

xw may be either double precision or single precision.

Details

This function is primarily intended to support the Multipeak Fitting package. To use MPFXLorentzianPeak as a fitting function, wrap it in an all-at-once user-defined fitting function:

```
Function FitLorentzianPeak(Wave cw, Wave yw, Wave xw) : FitFunc
   Variable dummy = MPFXLorentzianPeak(cw, yw, xw)
End
```