FindLevel and Multidimensional Waves

The FindLevel operation is not multidimensional aware. See **Analysis on Multidimensional Waves** on page II-95 for details.

See Also

The **EdgeStats**, **FindLevels**, **FindValue**, and **PulseStats** operations and the **BinarySearch** and **BinarySearchInterp** functions.

FindLevels

FindLevels [*flags*] *waveName, level*

The FindLevels operation searches the named wave to find one or more X values at which the specified Y *level* is **crossed**.

To find where the wave is equal to a given value, use **FindValue** instead.

Flags

/B=*box*	Sets box size for sliding average. See the **FindLevel** operation.
/D=*destWaveName*	Specifies wave into which FindLevels is to store the level crossing values. If /D and /DEST are omitted, FindLevels creates a wave named W_FindLevels to store the level crossing values in.
/DEST=*destWaveName*	
	Same as /D. Both /D and /DEST create a real wave reference for the destination wave in a user function. See **Automatic Creation of WAVE References** on page IV-72 for details.
/EDGE=*e*	Specifies searches for either increasing or decreasing level crossing.

      e=1:   Searches only for crossings where the Y values are increasing as level is crossed from wave start towards wave end.

      e=2:   Searches only for crossings where the Y values are decreasing as level is crossed from wave start towards wave end.

      e=0:   Same as no /EDGE flag (searches for both increasing and decreasing level crossings).

/M=*minWidthX*	Sets the minimum X distance between level crossings. This determines where FindLevels searches for the next crossing after it has found a level crossing. The search starts *minWidthX* X units beyond the crossing. The default value for *minWidthX* is 0.
/N=*maxLevels*	Sets a maximum number of crossings that FindLevels is to find. The default value for *maxLevels* is the number of points in the specified range of *waveName*.
/P	Compute crossings in terms of points. See the **FindLevel** operation.
/Q	Doesn't print to history and doesn't abort if no levels are found.
/R=(*startX,endX*)	Specifies X range. See the **FindLevel** operation.
/R=[*startP,endP*]	Specifies point range. See the **FindLevel** operation.
/T=*dx*	Search for two level crossings. *dx* must be less than *minWidthX*, so you must also specify /M if you use /T. (FindLevels limits *dx* so that second search start isn't beyond where the first search for next edge will be.) See **FindLevel** for more about /T.

Details

The algorithm for finding a level crossing is the same one used by the **FindLevel** operation.

If FindLevels finds *maxLevels* crossings or can not find another level crossing, it stops searching.