# acquireoff

This command collects the specified number of complex data points from the digital receiver without blocking other pulse sequence commands. It is the closing statement of acquireon.

*Syntax*

acquireoff(mode, points)

mode ........... one of:

*overwrite* :      each data point is stored in a new location in memory. If the command is run more than once the second data set will overwrite the first.

points ......... the number of complex points to collect. Has the form “nx”, where x is an integer greater than 0.

*Notes*

1. Because a digital filter is applied to the data as it is collected, there will be a filter dependent delay between sampling the RF data and it appearing in the DSP. This is called the *receiver latency* and can be incorporated into the relationships list using the predefined variable *rxLat*. The receiver latency takes the following values for high frequency Keas:

if(flatFilter == "yes")

rxLat = 1.65 – 0\*DW

else

rxLat = 1.65 - 3\*DW

endif

and for low frequency Keas (0-20 MHz):

if(flatFilter == "yes")

rxLat = 1.65 - 5\*DW

else

rxLat = 1.65 - 8\*DW

endif

where DW is the dwell time in s. The possibility of a negative latency is explained below.

1. The acquisition duration is longer than would be predicted by the formula dwell\_time×number\_of\_points. This is because the total number of points collected is always larger by 6 (1-400 MHz Keas) or 11 (0-20 MHz Kea). These points are then discarded because they are distorted by the digital filter as the receiver switches on. The receiver latency variable *rxLat* takes this loss of points into account so that you will still start acquiring data at the correct time. In addition there is time at the end of the acquisition period for data to be transferred to the spectrometer processor. This time depends on the number of points collected, the dwell time plus a number of internal parameters. You can determine the total acquisition time within your execpp procedure by calling the following function:

acqTm = keaNMR:getAcqTime(guipar)

*Example:* see

[acquireon](acquireon.htm), [acquire](acquire.htm)