**Setpoint:** Operator -- Selected threshold Used as the target of the feedback control loop

**Gains:** The gains are scaling factors for the error signal to determine how quickly corrections should be applied in the feedback loop.

The Proportional gain scales the current value of the error signal.

The integral gain scales the aggregate of the past values of the error signal (the "area under the curve")

**Drive Amplitude:** cantilever oscillations amplitude

**Lock-in Phase:**
freq (60 ~ 90 kHz) [MESP.SCM-PIT,FESP] 170 degrees for cantilevers with higher freq. increased electronic phase lag must be compensated
freq (300 kHz) [TESP. RTESP] ~130 degrees

**DataCube:** MatLab is installed on computer.To get help in using the Nanoscope DataCube scripts**:**

In MATLAB command window, type:

>> help NSMatlabExamples

The scripts provide examples on how to use the NSMatlabUtilities to retrieve data and information from NanoScope data files. This data can then be processed with MATLAB.

A set of example NanoScope data files are also included and can be found in the "MATLAB Examples Files" sub-folder.