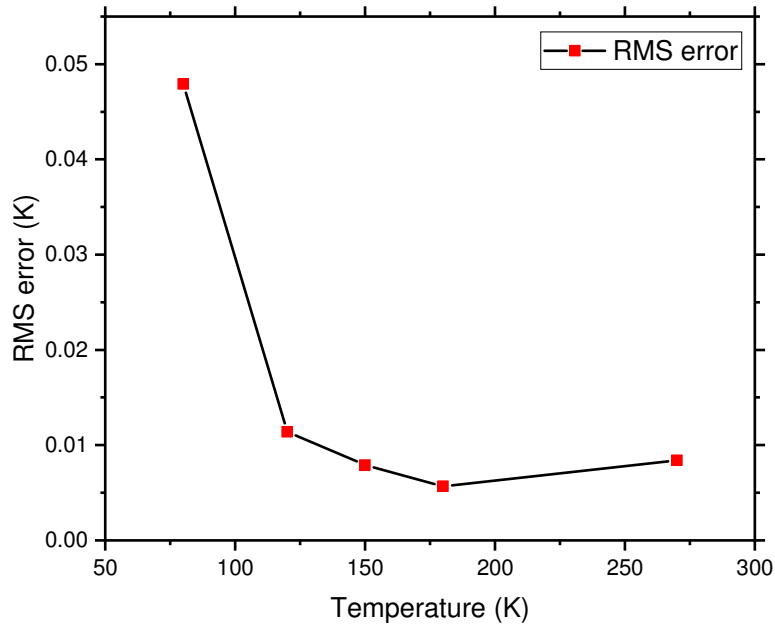


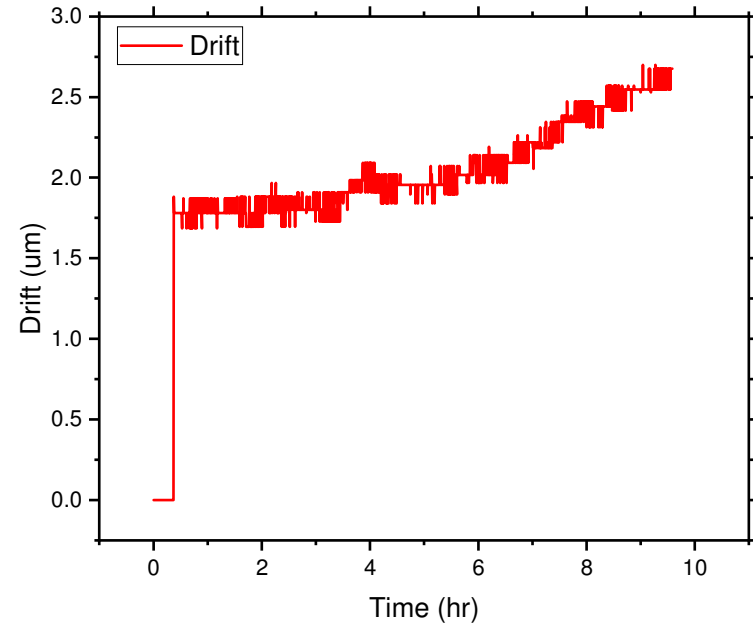
Microscope was placed above cryostat quartz window using posts and the sample was imaged for 10 hours at 78K. Results are displayed on next page



Temperature stability of Lakeshore controller using LN2
 PID settings: P400 I10 D25

Use 4 turns on the flow valve to while cooling from room temperature, 5/8 turns to maintain. Use current range of 333mA for 77K to 210K. Above that, you may use 1A for heating and 333A for maintaining.

For faster cooling from a high setpoint to a lower one, manually open the valve to about two turns and then close to 5/8 turns as you approach the set point. Then turn on controller.



Sample drift in X-Y as a function of time

Temperature set point: 78K

Possible table bump during the first hour, hutch was probably occupied. Sample also lost some focus by the end of 10 hours. Due to large backlash in microscope fine focus, establishment of z drift was not possible.