

Running samples in Cryostat

Change samples

1. Set the control at “helium Gas supply out”



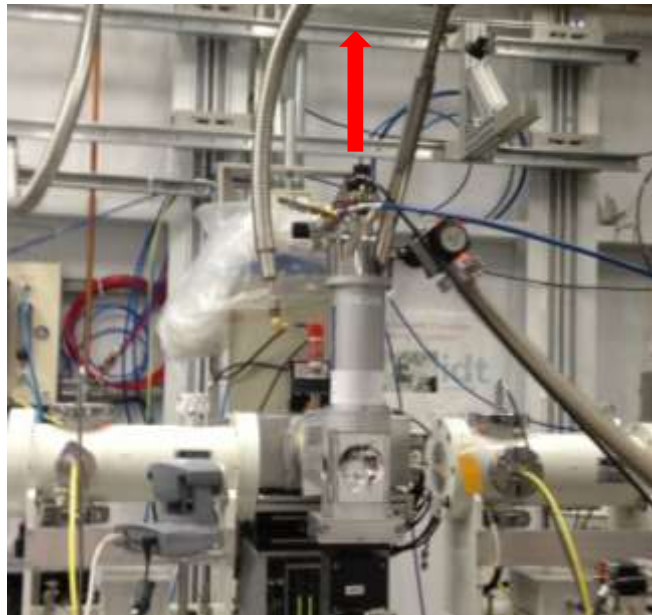
2. Feel the pressure with your hand at the out let of the pressure release valve, making sure there is positive pressure from Helium gas supply



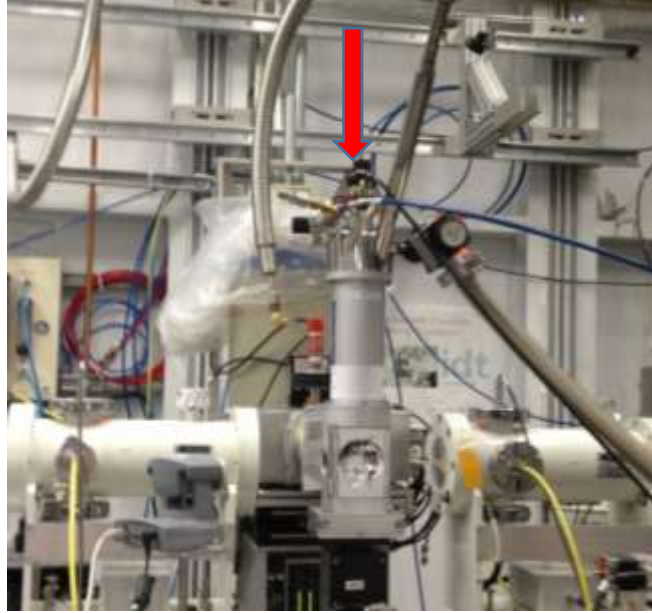
3. Open the valve to the cryostat, filling the dry He gas into cryostat sample environment



4. Remove your sample by taking out the cryostat sample rod



- shake the pre-cooled sample rod loaded with new sample, insert the rod, and covered the rod end with tape to reduce the possible leakage to the cryostat sample environment



Note: *Be sure no ice from condensation on sample holder (wipe off) before putting in LN₂. You can use “dust remover” to remove the ice.*



6. Tuning the control of the position of “Vent to scroll pump”, pumping the cryostat sample environment



7. Switching between “helium Gas supply out” and “Vent to scroll pump” for at least 6 times, cleaning the sample environment



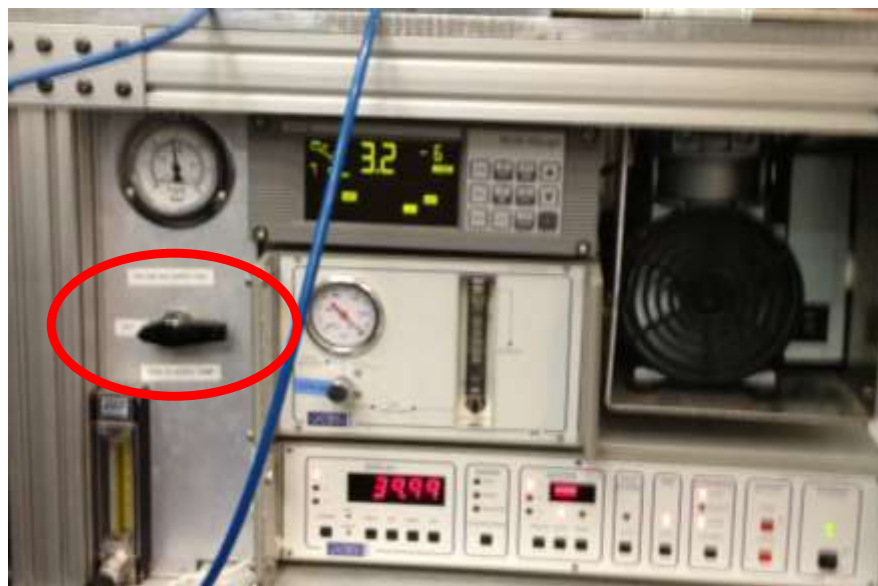
- Set “helium Gas supply out”, filling He gas to the cryostat sample environment



- Close the valve to the cryostat



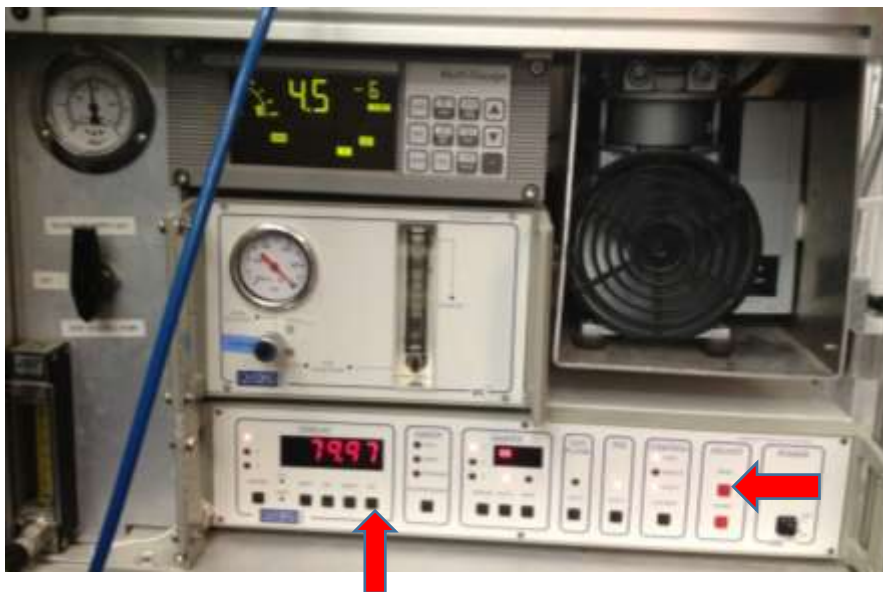
10. Set to "off" while running samples



Sample frozen

When ice has been developed inside the cryostat sample environment surrounding the sample rod, the rod will not be able to be removed.

1. Following the procedures 1 to 3 described in the last section, set the target temperature at 80 degree, namely holding the bottom “set”, then press the “Raise” in the “ADJUST” section of the control panel till the set point is reached (with “Auto” and “PID on)



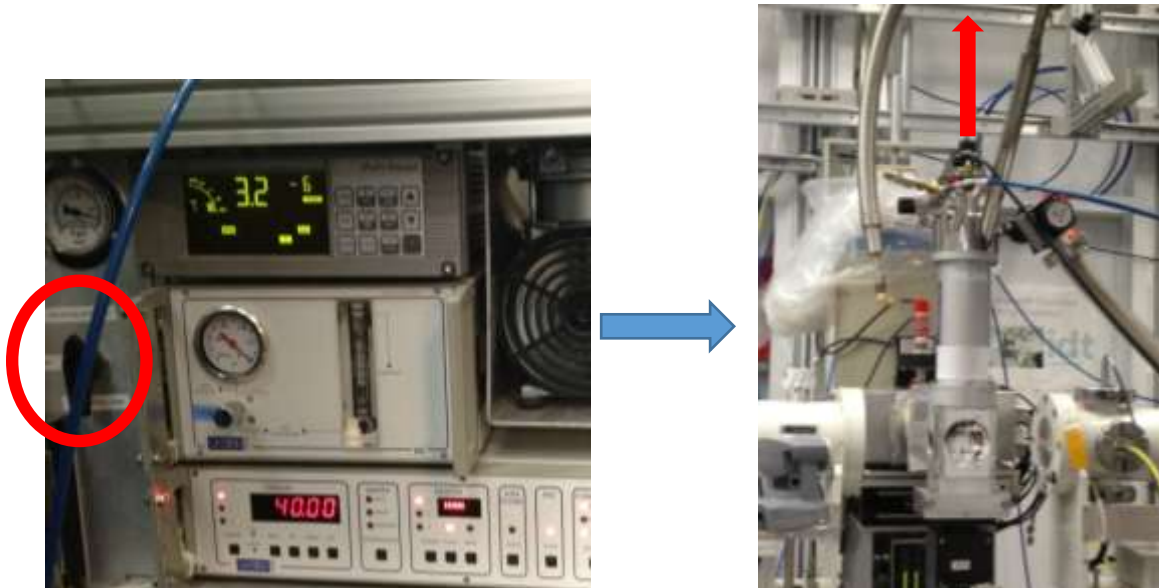
2. keep pumping by setting at “ Vent to scroll pump” .
particularly when temperature is between 70 and 80 degree in order to defreeze ice forming by nitrogen and pump all nitrogen out of the cryostat, **notice that when the temperature is beyond 77 K, there might be large amount of N2 gas needs to be released, so the time stays at “helium Gas supply out” shouldn’t be too long, the cryostat sample environment will be not be over pressured**



3. You can also decrease helium flow to increase the speed of warm up.



4. Now you can get your sample out after setting “helium Gas supply out”



5. Put your sample in, cycle between pumping and filling helium gas to the cryostat sample environment by at least 6 times at around 80 degree



6. Set desired temperature by holding the bottom “set”, then press the “lower” in the “ADJUST” section of the control panel till the set point is reached



7. Switching between “helium Gas supply out” and “ Vent to scroll pump” for at least 10 times while the temperature is decreasing



8. Set “helium Gas supply out”, filling He gas to the cryostat sample environment



9. Close the valve to the cryostat



10. Set to "off" while running samples

