Using the SampleCase Robot on Persephone

updated: 14 May 2014 (cgf)

General Guidelines:

- ☞ **The SampleCase should be left in Automation mode** at the end of each user's session.
- ☞ **A sample should be left in the magnet** at the end of each user's session. This covers the magnet gap, reducing dust accumulation in the probe.
- ☞ Manual mode is useful for minimizing the time for sample changes. Kinetics experiments often require this, as would samples that degrade at room temperature.

A. *Automated Sample Changes:*

The lights on the sample changer should be green or yellow; red indicates an error (see below).

No sample inserted: bore will be uncovered, position on wheel with tube down

Sample inserted: bore covered, position on wheel with tube up and engaged

1. **sx #↵** ; takes out sample if in magnet, and puts sample in position # in
2. **sx ej↵** ; removes sample and leaves magnet empty

B. *Switching to Manual Mode*

1. **sx ej↵**
2. Press the blue button on the SampleCase to move an empty position into the lift position (all other positions can be exchanged while the robot is non-operational).
3. Press the red button down on the SampleCase. The lights will go red, and TopSpin will report the action on-screen.
4. Now, the following commands will function for sample changes:

   ej↵ ; eject samples; *always do this prior to inserting samples at the top of the bore*

   ij↵ ; insert samples

C. *Switching back to Automation Mode*

The SampleCase must always be left in Automation mode.

1. **ej↵** ; *the magnet gap must be empty prior to switching back to automation mode*

   If the sample will not eject, turn the Target Gas Flow to 1500 lph in the VT controls.
2. **ij↵** ; after the sample is removed, turn the lift gas flow back off.
3. ***Wait*** for **ij** to finish. This takes 30-60s, with the TopSpin status showing (in lower left corner):

   

4. Lift the red button on the SampleCase. The red light will blink, and then switch to yellow.
5. **sx #↵** ; *always leave a sample in the magnet at departure* (this leaves the magnet bore covered).