

Target Movement Procedure

The new target motion dialogue has a drop down menu to select the desired target position.

- If necessary, call MCC to stop the beam and stop the beam.
- Turn off the microwaves.
- Click "Move Target"
- Select desired position from drop down menu
- Click "Go"
 - To remove the target from the beam completely, click "Run Home"
 - See the nominal target positions on the table to the right of the screen. You can verify the position using the linear encoder, listed as the SM1 string pot on the table.
- Watch the motion on the video screen to your upper left
- Switch the NMR Channel to the new position (ie Top 5T or Bottom 2.5T) in PDP
- Double check the calibration constant before taking data
- Take Data
- Turn back on microwaves if this will be a production run. Polarize the target to sufficient levels before asking for beam back.
- Log the Move to the Halog

The below procedure was created for SANE, and should be updated for changes to the target.

- **DO NOT** move target while beam is on! You may damage the insert.

Exception: When you are doing a position calibration, it may be necessary to make small adjustments when on the "hole" target position.

- Have Shift Leader to call MCC and tell them:

1. Turn off beam
2. Turn off the microwaves
3. It is not necessary in this experiment to mask target motion. Target motion is not tied in to the fast shut-down.

- Move target stick:

1. Check with Shift Leader that beam is indeed off.
2. Click the "Move Target" button on bottom right of NMR display.
3. Click and hold the "Move Table Up" or "Move Table Down" button
4. Watch the green indicator lights to determine where target table is
5. When light for the desired new position lights, you are close
6. Target position is most accurately determined by the Target Encoder
7. Ensure encoder value in LabView from monitor 7. The "Target" camera views some electronic racks. The box in the top of the left rack is the encoder readout. You can read it, and watch the lights on the "Target Motion" panel.
8. Move table until Encoder is ± 0.01 of number listed next to green light
9. There is significant hysteresis in the motion of the table. In order to position the table accurately it is necessary to always approach a target encoder value from the same direction. This direction is essentially arbitrary, but for the purpose of this experiment **we are approaching targets from lower encoder positions**. If you at a lower encoder position and moving up, just go to the target position carefully. If you are above the target position or overshoot a position, first move to an encoder value at least .1 below the desired position. Approach the desired position from here.
10. When table is properly positioned, hit the "Done" button
11. Wait 1015 seconds for computer to write new position to EPICS
12. Note new position and encoder value in logbook and **electronic logbook!**
13. Change NMR channel to the appropriate target. If you are on a non-ammonia target, place the NMR program in "Monitor" mode.
14. Change the calibration constant if necessary. See the posted values or check the paper logbook.

15. Ensure the microwaves are still off, and change the microwave switch to the desired position. If you are on Carbon or Empty, any position will do.

- Of course, throughout this the beam is off. Once you have finished, tell the shift leader that the target has successfully moved.