

November 9, 2021

GIXRD measurements with the Rayonix detector

1. Load the sample with the long side parallel to the beam.
2. Close the hutch, open shutters (button + "opsh")
3. Type: `ccd_off`
4. Type: `ccd_setup`
 - a. "1" Mar165
 - b. "9" change filename. Record both sample + angle of incidence, eg. "SB-1_0.01deg"
5. Type: `fsopen` (opens fast shutter)
6. Type: `umv th 0` (moves sample angle "th" to 0 degree)
7. Now we will start the sample alignment.
8. Type: `dscan z -0.5 0.5 25 0.8` (scan sample height "z")
9. Type: `umv z CEN` (moves "z" to inflection point)
10. Type: `set z 0` (sets new zero for "z" at the current position)
11. Type: `dscan th -0.5 0.5 25 0.8` (scans "th", the sample angle relative to the beam)
12. Type: `umv th pl_xMAX` (moves "th" to the peak position)
13. Type: `set th 0` (sets new zero for "th" at the current position)
14. Repeat steps 8 to 13 until there is no change in th and z
15. Type: `fsclose` (closes the fast shutter)
16. Type: `umv th 0.0X` (insert the desired angle of incidence "th", in degree)
17. Type: `ccd_on`
18. Type: `ct 1` (This command will count and acquire an image during 1 second. If the signal is weak, count longer. If signal is saturated (red), count shorter)
19. If changing angles, remember to change filename.

Ctrl + C command will stop whatever SPEC is doing. Use this command if you notice something wrong.