

Data collection at SER-CAT using SERGUI

- After establishing the NoMachine connection to the data collection machine (164.54.208.73) using your SER-CAT login, if you see a locked screen (blue screen with time display etc.), you can unlock it by pressing Enter on your keyboard. It will prompt for your password to unlock the screen. You can launch the data collection GUI from a terminal window by typing: `sergui`
- After launching `sergui` (and entering your contact information on the pop-up window), you can find some useful information/short videos for sample alignment, rastering etc. under the "Document" field at the top.
- You can check your puck positions by clicking "Puck list" in the Sample page.
- Once mounting a crystal, the program will automatically align the loop (Auto-loop). You may wait until it finishes and then center your crystal.
- Two options available for sample rastering if needed:
 - 2D Raster: interactive mode, user may choose different sample positions from raster rank
 - 3D Raster: full automation ONLY and sample will go to the top ranked positions from the 0 and 90 degree raster ranks.
- The data collection GUI (`sergui`) will automatically create sub-directories for each crystal based on puck name and pin numbers.
- Since the data collection time is very short, you may collect on each crystal that diffracts reasonably well (instead of screening all crystals and then collecting).
- The closest detector distance is 165 mm. Please note that the detector movement takes some time (about 1mm/sec).
- Under the "Collect" tab, now you will find both Collect Single (for screening) and Collect Dataset options. 'CollectSingle' may take a few seconds if/when the detector and/or system needs initialization.
- If KID image display disappears (either closed accidentally or crash), you can reopen it by clicking Help->Start kid display.
- Starting data collection parameters can be 50% transmission, 0.05 sec, 0.25 deg width for the default 50micronpinhole. It is a good idea to use the "maxPix" value on KIDimage display as a guide to adjust your data collection parameters (transmission, exposure time etc). You can click on "About" tab on KID display for more information.
- A summary of automated data processing statistics can be accessed by clicking "Autoproc log" box at the bottom portion of `sergui`.
- It is a good idea to defrost the robot gripper (by clicking Defrost on Sample page) once you are finished with 10-15 samples. Defrost takes about 2 minutes (Defrost button will turn back to green from yellow after the defrost is done).
- Make sure the Beam Status is "on" at the bottom of `sergui` running tab. If it is off, APS may have lost the beam. In that case once the beam comes back, you can open A shutter and then D shutter by accessing "Help" tab on `sergui`.