

HFT 3 detector Telescope ALS Run Plan

Pre- ALS Run Tasks

- Calibrate and gain adjustment if necessary on all 3 detectors in running configuration.
- Assemble detectors into telescope head.
- Secure and test assembled telescope for function.
- Test system on bench with ALS pulser mockup and look at data for full frame and normal data taking mode.
- Fully test the software and control / event display system.
- Make / locate a TTL adapter for the ALS spill signal.
- Design and fabricate a holder mechanism for mounting our telescope to the ALS beam pipe structure. This mechanism must tilt to give particles at angles for Andrew's tracking testing.
- Make experimental layout, place PCs, power supplies, etc.
- Michal, Xiangming and Chinh to take ALS training.
- Talk with the ALS people and provide experiment description and safety documentation.

ALS Run tasks.

- Perform all administrative tasks that allow us to run, i.e. safety inspections, documentation, training, etc.
- Test fit all hardware in beamline. Position all PCs, power supplies, cables, etc. Do not place telescope in holder.
- Test all electronics in position and take noise data. Is everything OK?
- Setup beam parameters of ~ 20 e⁻ / spill and defocused.
- Place telescope in holder.
- Take data with beam and be sure that the event display corresponds to the beam parameters.
- Take full frame data and look at ADC distributions.
- Pick threshold cut values and ranges for test.
- Test each threshold value with a short normal data taking run and track performance with online display.
- Take longer full frame 0 degree data with a full range of threshold values.
- Take $\sim 10^4$ events at the combinations of -20, -10, 0, 10, 20 degrees in x, and the same range in y, normal data taking (through cluster finder)
- Take $\sim 10^4$ events at -30 degrees with full range of threshold values, normal data taking (through cluster finder)
- Take more full frame data at 0, 30 and -30 degrees to calculate relative efficiencies.