

Calibration and characterization meeting (TID/LCLS Ops) - 2/15/2024

Attendance:

Philip, Kaz, Dionisio, Zongde, Julian, Nolan, Lorenzo, Bojan, Alex, Bhavna

Agenda/Notes

1. Review staffing for shifts - still light on Saturday shift 2

	Friday	Saturday
Shift 1 (6p-1a)	Philip, Dionisio, Kaz, Lorenzo, Alex (remote), Xavier	Bhavna, Philip, Julian, Bojan, Xavier
Shift 2 (11p-6a)	Bhavna, Zongde, Julian, Bojan, Dionisio (tentative), Alex (remote)	Kaz, Zongde, Alex (remote)

2. Analysis scripts
 - a. need runs at MFX/RIX to test scripts properly, Alex to take that data
3. Some concern about noise in the HR, based on what Philip/Zongde have seen in single photon data
4. What we need to do and check during bedtime
 - a. Pedestal scan:
 - i. Check pedestal noise
 - ii. Check temperature stability – nominal temp and stability
 - b. Linearity scan:
 - i. Check switching point
 - ii. Check residuals
 - iii. Gain ratio between high/medium/low
 - c. Flat field:
 - i. SNR for single photon
5. Analysis bookkeeping:
 - a. Maybe shared slides to throw plots into and keep everyone update in realtime and to declutter slack
 - b. If there's enough personnel on a shift, have someone take notes of discussions of what we're seeing

Resources for beamtime

[Grafana page to monitor HR](#) in MFX/RIX

[Grafana page to monitor DAQ](#) (# of damaged events, etc)

(Kaz's) beamtime run notes for Feb shifts: /sdf/home/n/nakahara/analysis/detectors/IH/epixhr_20240216

[G-drive folder](#) for data analysis results and notes

Data-taking scripts (all same as before?)

1. seq_epixhr --rate RATE --daq subharmonic_division --tgt TGT
 - a. e.g. seq_epixhr --rate 5160 --daq 2 --tgt 0.834e-3
 - i. This would be runrate=5160, daqrate=5160/2
 - ii. --tgt may not be needed.
2. epixhr_timing_scan --linear START STOP STEPSIZE --events EVT_PER_STEP --record
 - a. e.g. epixhr_timing_scan --linear 2000 40000 1000 --events 1000 --record 1
3. start_ns default location same as before? (24000?)
4. epixhr_pedestal_scan --record 1 --event 8000 (start with FH)