

2021-02-09 Detector Planning Meeting notes

Attendees

- [McKelvey, Mark E](#)
- [Philip Hart](#)
- [Kazutaka Nakahara](#)
- [Zimmerman, Kayla](#)
- Rebecca Armenta
- Conny Hansson
- Bhavna Nayak

Goals

- Set and status planning activities for detector development and deployment.

Discussion items

Time	Item	Who	Notes
10 min	Beamtime support update		• Covered in Monday's meeting, Chris to take over from Kayla • Detector readiness: ◦ 2m.1 back at MFX ◦ Quads back at MEC ◦ New HV module received....return ASC unit to XCS? ◦ ReturnePix100#7 for repair? ◦ Receive/test ePix100 spares and side-look 1mm ePix10k ◦ Baseline JF and 2M 'traveller' pages on Confluence. ▪ Collect and analyze any remaining in-lab test data.

30 min	Priorities Review	All	• 2021 events: ◦ Projects new starts: ▪ VFCCD/ePixM downselect implementation of REXS for 2.2 - April 28 ▪ SparkPix-S Phase II (full-size ASIC for sparsification, Tixel-based) Has passed PEC ▪ ePixHR IV: Prototype detector ▪ TXI Detectors (2Mp and 140kp based on ePixHR @5kHz) CDR Closed out. ▪ ePixUHR (130nm TSV structure to reach 100kHz) ◦ Production: ▪ spare modules (0.5 & 1mm) Module order in work, new sensor order out ▪ Proposed 3d copy of ePix10k2m (pending) ▪ Proposed spare quads for MEC (2) ▪ Proposed in-vac ePix10k2m for CXI ▪ Proposed ePix10k4m ▪ Proposed UED detector upgrade (2kHz, 125um sensor) ◦ RIXS-CCD/cooler test and verification (ship archon and cooler supply to STA) ◦ HiZ collaboration tests. ◦ Outreach for R&D support (SparkPix-ED, SparkPix Delta). ◦ Support effort for LCLS-II-HE instruments (performance verification/implementation planning) ◦ SBIR effort for UXL. • Group priorities review: ◦ Testing ▪ Setup ePix10k, ePix100, JF smalls for test in lab ▪ Review with TID the stitching progress, look for improvements (meeting 2/10) ▪ Can we figure out what's wrong with ePix100/7? ▪ RIXS-CCD cooler test/ship plan ◦ Analysis ▪ Gather and process relevant commissioning data for Mp travellers on Confluence. ◦ Solid pedestals ◦ Noise map ◦ Response uniformity (mini-X cu-fluorescence) ◦ Bootstrap gain (sealed source) ◦ Linearity (signal injection) ◦ Documentation ▪ Complete on-line travellers for Mp detectors ◦ Development ▪ RIXS-CCD, review engineering note with w/NEH 2.2 ▪ SXR Downselect prep. May 1? ◦ Lab 'commissioning' ▪ DAQ • Storage nodes (ordered) • LCLS I/II compatibility ▪ BIO for racks in chase (Chris to take over hounding) Actions:
--------	-------------------	-----	---

30 min	Status	CH: • Ran Quad 1 at different biases. Working analysis. • Pedestal scripts not working since last last update. Need Silke's help. Permissions issue? • Need function to pull spectrum (histogram) for each pixel. • MPOD messes up above 200V, goes higher than programmed. RA: • Meet re cooling concepts...met with Jim re outside space: not much. KP: JSA summary list circulated • XPP/MFX/XCS fibers due this week, other wise need ugly solution. • Small Rayonix testing can be done by others. • XPP/XCS power cable pinout (controls needs to tell us MPOD working) KN: • Spare JF Power supply received. • Seb looking for low-intensity diode. • UED MPOD? • Rayonix pressure issue manifold replaced, refilled, monitoring. PH: • Lent light meter to MEC to test feedthrough. • MEC working new cables to improve grounding. • Circular connectors tough to release...special tool? • EMP shielding for in-vac cables isn't tight at connector...revise? • UX1 IoC update. BN: • Made updates to detector website, in work. • working with PH on porting PyRoot to Python. KN • Sunday MFX finishes, 2M comes off, box delivered to MFX today. • XPP having trouble with pgp server hat runs 2M. • CXI fiber 450uW becomes 50-60uW, defect in port feedthrough sometime limits to 2uW(?), replacement flanges on order (8-9 weeks). CH • Measurements on sm 10k, pedestal application inconsistent in online ami, raw data is fine. • Still see dashed lines in pedestal config. KP • RMA for MPODs • Lab cleaning tonight.
--------	--------	--

5 min	Budget Update	mmck	<
-------	---------------	------	---

Action items: