2021-01-12 Detector Planning Meeting notes

Attendees

- McKelvey, Mark EPhilip 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	Beamti me support update		No experiments until Saturday 1/30 Detector readiness: Monitor 2m repairs at TID Monitor quad repairs at TID (one quad returned) Send ePix100#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	Prioriti	All	
	es		• 2021 events:
	Review		Projects new starts:
			VFCCD/ePixM downselect implementation of REXS for 2.2 -Late April
			 SparkPix-S Phase II (full-size ASIC for sparsification, Tixel-based) PEC today
			■ ePixHR IV: Prototype detector
			 TXI Detectors (2Mp and 140kp based on ePixHR @5kHz) CDR tmw
			 ePixUHR (130nm TSV structure to reach 100kHz)
			o Production:
			spare modules (0.5 & 1mm) Module order in work
			Proposed 3d copy of ePix10k2m (pending)
			Proposed spare quads for MEC (2)
			Proposed in-vac ePix10k2m for CXI
			Proposed UED detector upgrade (2kHz, 125um sensor)
			RIXS-CCD/cooler test and verification.
			HiZ collaboration tests.
			Outreach for R&D support (SparkPix-ED, SparkPix Delta).
			Support effort for LCLS-II-HE instruments (performance verification/implementation planning)
			Support entor to Localina instruments (performance vernication/implementation planning) SBIR effort for UXI.
			Solit effort for OAL.
			Group priorities review:
			○ Testing
			Setup ePix10k, ePix100, JF smalls for test in lab
			Review with TID the stitching progress, look for improvements.
			■ 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)
			o Documentation
			■ Complete on-line travellers for Mp detectors
			○ Development
			RIXS-CCD, review engineering note with w/NEH 2.2
			SXR Downselect prep. May 1?
			O Lab Jaconsoladisolad
			· Lab 'commissioning'
			DAQ
			Storage nodes I CI S //II compatibility
			LCLS I/II compatibility Table seismic
			BIO for racks in chase
			■ DP node purchase
			Actions:

30 min Status Case surge anticipated in January, extra absence. All hands update coming. Avoid being at lab first two weeks of Jan. One person per day? · Focus on remote data analysis as possible. CH: Conference last week, uploaded some talksMeeting w/Chris Iniewski, RAL folks. 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: • ePix100 scan for use in run18...Diling has preferences. • HV cables done, re-install @CXI. Matt found defect in a fiber feedthrough. CXI ePix ran fine in ASC over the weekend. Grabbing JF modules for test in lab, but need power supply board from PSI. PH: MEC deployment, can't read back data from one quad. Circular connectors tough to release...special tool? EMP shielding for in-vac cables isn't tight at connector...revise? UXI loC update. • w/Bhavna & Frederic regarding commissioning data. BN: • Got code working, now need to le it run on some data.... • Lab visit week of thanksgiving, January moving. Thursday updates: РΗ UXI One quad at MEC had wrong event code, set in expert panel edit traveler for event codes Working to understand LV44 data...looks like photons are causing the 'spikes' in fourier space ΚN · 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). СН • Measurements on sm 10k, pedestal application inconsistent in online ami, raw data is fine. · Still see dashed lines in pedestal config. ΚP Bhavna JSA • BIO for move Arranging setup lab move mobile rack o XPP alcove

5 min	Budget Update	mmck	M&S Status (Through July)					
						Values KCST		Remaining
			PA Proj Act	PA Activity Desc	LSTM Desc 🏋		ACTUALS	Balance
			10918-A4001	DET Dist Exp Support	M&S	\$7	\$7	(\$0)
			16152-A4001	ePix Support	M&S	\$105	\$107	(\$2)
			16158-A4001	Other Detector Support	M&S	\$30	\$107	\$28
			16287-A4001	• • • • • • • • • • • • • • • • • • • •	M&S	\$5	\$3	\$1
			16826-A4001	DET Department Management DET Department Research	M&S	\$47	\$3	\$44
			16159-A4001	DET Department Research DET Dept Infrastruct & Dev	M&S	\$112	\$101	\$11
			17341-A4001	Detector Program Management	M&S	Ş112	\$6	(\$6)
			17439-A4001	DET Department OIP Projects	M&S	\$22	Şü	\$22
			17433-A4001	DET Department Oir Projects	IVIOCS	ŲZZ.		JZZ
						328	229	\$99
			Labor snapshot (June actuals):					
						Values		
						KCST		Remaining
			PA Proj Act	PA Activity_Desc	▼ LSTM Desc		ACTUALS	-
			16152-A400		Shop Servi		\$87 \$8	
			16152-A400	• • • • • • • • • • • • • • • • • • • •	SLAC Labo		\$1 \$	
			16158-A400	1 Other Detector Support	Shop Servi	ices :	\$10 \$4	
			16158-A400	1 Other Detector Support	SLAC Labo	r \$:	110 \$8	1 \$28
			16253-A400	1 C-S PAD Support	Shop Servi	ices	\$3	\$3
			16253-A400	1 C-S PAD Support	SLAC Labo	r	\$0 \$	0 \$0
			18303-A400	1 Jungfrau Support	Shop Servi	ices	\$3	\$3
			16287-A400	1 DET Department Management	Shop Servi	ices :	552 \$4	4 \$8
			16287-A400	1 DET Department Management	SLAC Labo	r \$:	209 \$21	5 (\$6)
			16826-A400	1 DET Department Research	Shop Servi	ices	28	\$28
			16826-A400	1 DET Department Research	SLAC Labo	r \$3	208 \$17	6 \$32
			16159-A400	DET Dept Infrastruct & Dev	Shop Servi	ices	\$72 \$13	6 (\$64)
			16159-A400	DET Dept Infrastruct & Dev	SLAC Labo	r \$:	164 \$16	9 (\$5)
			19775-A400	1 Commissioning - DET	SLAC Labo	r :	\$23 \$	7 \$16
			17341-A400	1 Detector Program Management	SLAC Labo	r \$	327 \$27	6 \$51
			17800-A400	1 Jungfrau Detectors	SLAC Labo	r	\$1 \$	1 (\$0)
			19453-A400	ePixM Shingle-Tiling Concept	Shop Servi	ices	\$1 \$	6 (\$5)
			18836-A400	1 L2S-I-DET - Planning	Shop Servi	ices	20	\$20
			18836-A400	L2S-I-DET - Planning	SLAC Labo	r	\$9	\$9
			19733-A400	1 L2S-I-DET-Project Management	SLAC Labo	r	\$2 \$	***
			19734-A400	3 L2S-I-DET-RIXS CCD Procure	SLAC Labo		\$1 \$	
			17439-A400	DET Department OIP Projects	Shop Servi		\$26 \$	· ·
			17439-A400	1 DET Department OIP Projects	SLAC Labo	r ;	\$78 \$7	5 \$3
						1	511 133	\$177
								
15 min	Review ASC First Projects	all	Coordinate/update	lab schedule.				
10 min	Any other busine ss							

Action items: