

2021-06-01 Detector Planning Meeting notes

Attendees

- [McKelvey, Mark E](#)
- [Philip Hart](#)
- [Kazutaka Nakahara](#)
- Conny Hansson
- Bhavna Nayak
- Chris Koerber

Goals

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

Discussion items

Time	Item	Who	Notes
10 min	Beamtime support update		<ul style="list-style-type: none">• CXI ePix10k timing test opportunity?• XCS/MFX constants status (PH train Bhavna on processing CI data?)

30 min	Priorities Review	All	<ul style="list-style-type: none"> • 2021 events: <ul style="list-style-type: none"> ◦ Projects new starts: <ul style="list-style-type: none"> ▪ VFCCD/ePixM downselect ePixM selected, science leadership has chosen smaller ePixM plus XPCS version. ▪ SparkPix-S Phase II (full-size ASIC for sparsification, Tixel-based, underway, likely needs LGAD to meet PW spec) ▪ ePixHR V: Prototype detector project underway, deliver sm camera in time for LDAC results. ▪ TXI Detectors (2Mp and 140kp based on ePixHR @5kHz) CDR Closed out, project underway. ▪ ePixUHR (130nm TSV structure to reach 100kHz), planning, need to consider SparkPix-ED results. ◦ Production: <ul style="list-style-type: none"> ▪ spare modules (0.5 & 1mm) Module order in work, new sensor order out ▪ Approved 3d copy of ePix10k2m: underway, November delivery ▪ Approved spare quads for MEC: underway, August delivery ▪ Proposed in-air 2m/1mm, planning in work. ▪ Proposed UED detector upgrade, planning in work. ▪ Proposed ePix10k4m (concept) ◦ RIXS-CCD/cooler test and verification: Delivery delayed until mid-July...readiness?? ◦ HiZ collaboration tests: SSRL Lol needed, Ge chamber tests ◦ Outreach for R&D support (SparkPix-ED, SparkPix Delta). ◦ Support effort for LCLS-II-HE instruments (performance verification/implementation planning) ◦ SBIR effort for UXI. • Group priorities review: <ul style="list-style-type: none"> ◦ Testing <ul style="list-style-type: none"> ▪ Run 'standard' cal on two 10k smalls with new firmware, log tracker. ▪ CompEnOn study during CXI checkout time? 111, 1a vs 19? ▪ Any ePix100 detectors in ASC? Can we figure out what's wrong with ePix100/7? ▪ RIXS-CCD cooler test planning. ◦ Analysis <ul style="list-style-type: none"> ▪ Gather and process relevant commissioning data for Mp travellers on Confluence. <ul style="list-style-type: none"> ◦ Solid pedestals ◦ Noise map ◦ Response uniformity (mini-X cu-fluorescence) ◦ Bootstrap gain (sealed source) ◦ Linearity (signal injection) ◦ Documentation <ul style="list-style-type: none"> ▪ Complete on-line travellers for Mp detectors ◦ Development ◦ Lab 'commissioning' <ul style="list-style-type: none"> ▪ DAQ <ul style="list-style-type: none"> • Storage nodes configured, put in use? • LCLS I/II compatibility? ▪ Chase racks anchored....cables, water status? ▪ Vac chamber for in-lab tests? Compatible with XPP alcove? <p>Actions:</p>
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30 min	Status	<p>Self-assessment period should be open...sequence accelerated this year...go ahead</p> <p>Cal team meet ton Friday??</p> <p>LDAC Panel assembled</p> <p>Coming up on self-assessment period...aiming for early salary adjustment period</p> <p>KN:</p> <ul style="list-style-type: none"> • @MFX for wave8 this week.FIM beamtime this weekend • Rayonix folks here this week. • Maciej has provided timing info for new 10ka firmware, needs more test. • Spare JF Power supply received, need cold plate. • UED MPOD? <p>PH:</p> <ul style="list-style-type: none"> • Started processing CI on CompEn exp....nothing jumps out. • MEC experiment on Thursday, detectors should be OK <p>CH:</p> <ul style="list-style-type: none"> ▪ Will use portable vac chamber for Hi-Z <p>BN:</p> <ul style="list-style-type: none"> • Run cal on new ePix firmware. • Grafana setup to alert Slack channel. • Made updates to detector website, in work. • Working with PH on porting PyRoot to Python. <p>CK:</p> <ul style="list-style-type: none"> • Run 19 deployment schedule through July. • Lesker chamber quote in work. • Materials for chase cable trays.Ge chamber assembly • Order/borrow Variac. • XPP having trouble with pgp server that runs 2M.
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5 min	Budget Update	mmck	<ul style="list-style-type: none"> M&S Status (Through March) <table border="1"> <thead> <tr> <th rowspan="2">PA Proj_Act</th> <th rowspan="2">PA Activity_Desc</th> <th rowspan="2">LSTM Desc</th> <th colspan="2">Values</th> <th rowspan="2">Remaining Balance</th> </tr> <tr> <th>KCST BA 1.1</th> <th>ACTUALS</th> </tr> </thead> <tbody> <tr> <td>10918-A4001</td> <td>DET Dist Exp Support</td> <td>M&S</td> <td>\$0</td> <td>\$0</td> <td>(\$0)</td> </tr> <tr> <td>16152-A4001</td> <td>ePix Support</td> <td>M&S</td> <td>\$63</td> <td>\$18</td> <td>\$45</td> </tr> <tr> <td>16158-A4001</td> <td>Other Detector Support</td> <td>M&S</td> <td>\$13</td> <td>\$0</td> <td>\$12</td> </tr> <tr> <td>16253-A4001</td> <td>C-S PAD Support</td> <td>M&S</td> <td>\$6</td> <td></td> <td>\$6</td> </tr> <tr> <td>18303-A4001</td> <td>Jungfrau Support</td> <td>M&S</td> <td>\$11</td> <td></td> <td>\$11</td> </tr> <tr> <td>16287-A4001</td> <td>DET Department Management</td> <td>M&S</td> <td>\$11</td> <td>\$6</td> <td>\$6</td> </tr> <tr> <td>16826-A4001</td> <td>DET Department Research</td> <td>M&S</td> <td>\$57</td> <td>\$25</td> <td>\$32</td> </tr> <tr> <td>16159-A4001</td> <td>DET Dept Infrastruct & Dev</td> <td>M&S</td> <td>\$137</td> <td>\$81</td> <td>\$56</td> </tr> <tr> <td>17341-A4001</td> <td>Detector Program Management</td> <td>M&S</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>17439-A4001</td> <td>DET Department OIP Projects</td> <td>M&S</td> <td>\$40</td> <td>\$40</td> <td>\$0</td> </tr> <tr> <td></td> <td></td> <td></td> <td>\$339k</td> <td>\$170k</td> <td>\$169k</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Labor snapshot (December actuals): <table border="1"> <thead> <tr> <th rowspan="2">PA Proj_Act</th> <th rowspan="2">PA Activity_Desc</th> <th rowspan="2">LSTM Desc</th> <th colspan="2">Values</th> <th rowspan="2">Remaining Balance</th> </tr> <tr> <th>KCST BA 1.0</th> <th>ACTUALS</th> </tr> </thead> <tbody> <tr> <td>10918-A4001</td> <td>DET Dist Exp Support</td> <td>Shop Services</td> <td>\$134</td> <td></td> <td>\$134</td> </tr> <tr> <td>10918-A4001</td> <td>DET Dist Exp Support</td> <td>SLAC Labor</td> <td>\$19</td> <td>\$3</td> <td>\$16</td> </tr> <tr> <td>16152-A4001</td> <td>ePix Support</td> <td>Shop Services</td> <td>\$77</td> <td></td> <td>\$77</td> </tr> <tr> <td>16152-A4001</td> <td>ePix Support</td> <td>SLAC Labor</td> <td></td> <td>\$3</td> <td>(\$3)</td> </tr> <tr> <td>16158-A4001</td> <td>Other Detector Support</td> <td>Shop Services</td> <td></td> <td>\$12</td> <td>(\$12)</td> </tr> <tr> <td>16158-A4001</td> <td>Other Detector Support</td> <td>SLAC Labor</td> <td>\$115</td> <td>\$32</td> <td>\$83</td> </tr> <tr> <td>18303-A4001</td> <td>Jungfrau Support</td> <td>Shop Services</td> <td>\$6</td> <td></td> <td>\$6</td> </tr> <tr> <td>16287-A4001</td> <td>DET Department Management</td> <td>Shop Services</td> <td>\$25</td> <td></td> <td>\$25</td> </tr> <tr> <td>16287-A4001</td> <td>DET Department Management</td> <td>SLAC Labor</td> <td>\$136</td> <td>\$80</td> <td>\$56</td> </tr> <tr> <td>16826-A4001</td> <td>DET Department Research</td> <td>Shop Services</td> <td>\$9</td> <td></td> <td>\$9</td> </tr> <tr> <td>16826-A4001</td> <td>DET Department Research</td> <td>SLAC Labor</td> <td>\$197</td> <td>\$55</td> <td>\$142</td> </tr> <tr> <td>16159-A4001</td> <td>DET Dept Infrastruct & Dev</td> <td>Shop Services</td> <td>\$63</td> <td>\$55</td> <td>\$7</td> </tr> <tr> <td>16159-A4001</td> <td>DET Dept Infrastruct & Dev</td> <td>SLAC Labor</td> <td>\$264</td> <td>\$92</td> <td>\$172</td> </tr> <tr> <td>19775-A4001</td> <td>Commissioning - 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