# 2021-05-25 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><li>MEC ePix100 deploymnt....DAQ troubles....status?</li><li>XCS/MFX constants status (PH train Bhavna on processing CI data?)</li><li>Ghost-less 10kSmall in CXI...working?</li><li>Run 18 lessons learned reminder....hold until next week when Conny returns.</li><li>What worked well?</li><li>What we can do better?</li><li>What is the recurring issues needing attention?</li><li>What is most needed to make your job easier?</li><li>What do you wish people would know that would make your work smoother?</li><li>What do you wish you knew that would make your work smoother?</li></ul> |

| 30 min | Priorities Review | All | |
|---|---|---|---|

- **2021 events:**
  - **Projects new starts:**
    - **VFCCD/ePixM downselect ePixM selected, science leadership considering 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:**
    - **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**
  - **HiZ collaboration tests: SSRL LoI 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:**
  - **Testing**
    - **Run 'standad' cal on two 10k smalls with new firmware, log tracker.**
    - **CompEnOn study durirng CXI checkout time? 111, 1a vs 19?**
    - **Any ePix100 detectos in ASC? Can we figure out what's wrong with ePix100/7?**
    - **RIXS-CCD cooler test planning.**
  - **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**

  - **Lab 'commissioning'**
    - **DAQ**
      - **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?**

**Actions:**

| 30 min | Status | | LDAC Panel assembled |
|---|---|---|---|

LDAC Panel assembled

Coming up on self-assessment period...aiming for early salary adjustment period

KN:

- Jungfrau installed at XPP, geometry file missing
- Dan has fixed MFX DAQ, pedestals not applying properly....take peds scripts may need revision.
- Maciej has provided timing info for new 10ka firmware, needs more test.
- Spare JF Power supply received, need cold plate.
- UED MPOD?

PH:

- Started processing CI on CompEn exp....nothing jumps out.
- MEC experiment on Thursday, detectors should be OK

BN:

- 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.

CK:

- 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.

| 5 min | Budget Update | mmck | |
|---|---|---|---|

- M&S Status (Through March)

| PA Proj_Act | PA Activity_Desc | LSTM Desc | Values KCST BA 1.1 | ACTUALS | Remaining Balance |
|---|---|---|---|---|---|
| 10918-A4001 | DET Dist Exp Support | M&S | $0 | $0 | ($0) |
| 16152-A4001 | ePix Support | M&S | $63 | $18 | $45 |
| 16158-A4001 | Other Detector Support | M&S | $13 | $0 | $12 |
| 16253-A4001 | C-S PAD Support | M&S | $6 | | $6 |
| 18303-A4001 | Jungfrau Support | M&S | $11 | | $11 |
| 16287-A4001 | DET Department Management | M&S | $11 | $6 | $6 |
| 16826-A4001 | DET Department Research | M&S | $57 | $25 | $32 |
| 16159-A4001 | DET Dept Infrastruct & Dev | M&S | $137 | $81 | $56 |
| 17341-A4001 | Detector Program Management | M&S | $0 | $0 | $0 |
| 17439-A4001 | DET Department OIP Projects | M&S | $40 | $40 | $0 |
| | | | | | |
| | | | $339k | $170k | $169k |

- Labor snapshot (December actuals):

| PA Proj_Act | PA Activity_Desc | LSTM Desc | Values KCST BA 1.0 | ACTUALS | Remaining Balance |
|---|---|---|---|---|---|
| 10918-A4001 | DET Dist Exp Support | Shop Services | $134 | | $134 |
| 10918-A4001 | DET Dist Exp Support | SLAC Labor | $19 | $3 | $16 |
| 16152-A4001 | ePix Support | Shop Services | $77 | | $77 |
| 16152-A4001 | ePix Support | SLAC Labor | | $3 | ($3) |
| 16158-A4001 | Other Detector Support | Shop Services | | $12 | ($12) |
| 16158-A4001 | Other Detector Support | SLAC Labor | $115 | $32 | $83 |
| 18303-A4001 | Jungfrau Support | Shop Services | $6 | | $6 |
| 16287-A4001 | DET Department Management | Shop Services | $25 | | $25 |
| 16287-A4001 | DET Department Management | SLAC Labor | $136 | $80 | $56 |
| 16826-A4001 | DET Department Research | Shop Services | $9 | | $9 |
| 16826-A4001 | DET Department Research | SLAC Labor | $197 | $55 | $142 |
| 16159-A4001 | DET Dept Infrastruct & Dev | Shop Services | $63 | $55 | $7 |
| 16159-A4001 | DET Dept Infrastruct & Dev | SLAC Labor | $264 | $92 | $172 |
| 19775-A4001 | Commissioning - DET | Shop Services | | | |
| 17341-A4001 | Detector Program Management | SLAC Labor | $330 | $54 | $276 |
| 17778-A4001 | Very Fast CCD | Shop Services | | $8 | ($8) |
| 19733-A4001 | L2S-I-DET-Project Management | SLAC Labor | | $5 | ($5) |
| 17439-A4001 | DET Department OIP Projects | Shop Services | $48 | | $48 |
| 17439-A4001 | DET Department OIP Projects | SLAC Labor | $57 | $22 | $35 |
| | | | | | |
| | | | 1479 | 423 | $1,056 |

| 15 min | Review ASC First Projects | all | Coordinate/update lab schedule. |
|---|---|---|---|
| 10 min | Any other business | | |

# Action items: