LCLS UEC Meeting Minutes: 2022-01-28

Present: E. Biasin, Y. Cao, G. Doumy, M. Dunne, N. Hartley, J. Kern, C. Knotts, A. Marinelli, E. McBride, M. Mitrano, D. Oberthür, B. Ofori-Okai, C. Rajendran, D. Rolles, R. Sension, M. Trigo, G. J. Williams, G. George, T. Gorkhover, M. Khalil.

Absent: L. Conradson, P. Sun

Guests: S. Boutet (LCLS Operations Director), P. Jones, Thomas Wolf, James Cryan.

Updates from Mike Dunne (with slides):

- **Operations update:** Run 20 just started and we are likely to add extra weeks at the end of the run schedule due to the changing LCLS-II timeline. We are beginning to see regular onsite presence at SLAC. LCLS-II cooldown started, some expected delays (few days to weeks).
- **Outcome of triennial review:** The LCLS has received triennial review recommendations and the management is preparing 30-day and 90-day responses. Reviewers are requesting feedback on:
    - How can we get to optimum staffing level with resource needed?
        - Currently removed some shifts from schedule because don't have staffing levels and to reduce stress in the system (e.g., due to lower-than usual user presence).
        - UEC feedback regarding staffing is sought.
    - Career development paths for beamline scientists
        - It was noted that LCLS has moved staff from development to operations in readiness for the transition to LCLS-II (+30% beamline staff, +90% in accelerator staff).
    - Communication flow both up and down between management, staff and user community.
- **LCLS-II High Repetition Rate XFEL**: Beam planned to come online by Oct.-Nov. 2022.
    - Performance remains uncertain, hence we will carefully ramp up the average power.
    - Run 21 call for proposals is going to be issued on 01/31/2022, and the proposal submission date will be 03/30/2022.

Update on Run 21 by Sebastien Boutet (with slides):

- Superconducting (SC) Linac runs will last approximately from Nov. 2022 to mid 2023. SC Linac beamtime will be split evenly between commissioning and beam to instruments.
    - Run 21 SCRF beamtime will be a managed process with commissioning and Early Science (user community lead commissioning)
    - Top priority for the new instruments is getting qRIXS ready for science
    - Early Science (on TMO and ChemRIXS) will be based on the experience of Run 18 in TMO, so that we can apply lessons learned from that process:
    - Call for "Early Science" proposals: Letters of interest (March 2022), announcement of scope (June 2022), community declare intent to participate (Sept 2022)
- Cu Linac will continue to operate as usual, from Oct 2022 onwards.
    - Hard x-rays available for general PRP proposals, endstations will get modestly more beamtime.

Update from Thomas Wolf (Chemical Sciences Dept Head) and James Cryan (AMO Science Dept Head):

- We want to be flexible and move in stages for commissioning and into Early Science. We have learned from previous commissioning that having enough flexibility to allow for a dynamic response greatly increases the efficiency of the commissioning process.
- Early Science would be organized and run through the department heads (Thomas Wolf, James Cryan, Apurva Mehta)

- Open enrollment for participants to early science, with timeline as above

General Discussion:

- **Question: Is there a plan to use hard x-ray end stations with high rep-rate capabilities?**
  - Nominally this has to wait for TXI (2023 in the tender X-ray regime), then LCLS-II-HE for the hard X-ray regime
  - Looking into 3rd harmonic option into XPP (needs motivation from user community)
- **Question: Are the LOI specific for the Early Science phase?**
  - LOIs will specifically target Early science at AMO, ChemRIXS, and possibly qRIXS.
  - The town hall in March will go over the LOI process and offer topical breakout sessions covering LCLS-II SC Linac and hard x-ray Cu Linac. Suggestions on how to structure the Town Hall are welcomed.
- **Comments:**
  - We must consider lessons learned from TMO (UEC members should provide feedback).
  - We should consider empowering department heads to identify key scientific priorities.
  - Can you support fellowships for students/early career researchers to be based at LCLS during the commissioning?
    Mike will investigate this. This is very likely to be possible, and suggestions from UEC and others are welcomed
- **Question: Can you put new department structure on LCLS website? This will help the community in understanding the new structure.**
  - Yes. Details are also on the Call for Proposals for Run 21
- **Question: What will be the priority discussions for the next meeting from the structured list presented last year?**
  We will discuss:
  - Overview of the new LCLS capabilities.
  - Long term growth of the facility, in particular the LCLS-X project aiming to feed ~10 beamlines (~30 end stations) in parallel.
- We need to extend the User survey through the March Town Hall to increase number of respondents. Right now we have 259 responses (half SSRL, half LCLS) out of approximately 4,000 users, hence we need to acquire more significant statistics.