

## LCLS Users' Organization and Executive Committee (UEC) Meeting Notes

April 12, 2011

2011 LCLS UEC Thomas Earnest Lee called the meeting to order at 10:10 am PST.

User Executive Committee (UEC) members participating:

Dick Lee, LLNL, Matter in Extreme Conditions (MEC)

Linda Young, ANL, Atomic, Molecular and Optical Science (AMO)

Stefano Marchesini, LBNL, Coherent X-ray Imaging (CXI)

Thomas Earnest, LBNL, Coherent X-ray Imaging (CXI) - CHAIR

Phil Heimann, LBNL, Soft X-ray Science (SXR) Hyotcherl Ihee, KAIST, X-ray Pump-Probe (XPP)

Jan Luning, Univ. Pierre Marie Curie-Paris VI, Soft X-ray Science (SXR)

Martin Meedom Nielsen, U Copenhagen, X-ray Pump-Probe (XPP)

Oleg Shpyrko, UC San Diego, X-ray Correlation Spectroscopy (XCS)

Mark Sutton, McGill U, X-ray Correlation Spectroscopy (XCS)

Cathy Knotts, SLAC, LCLS/SSRL Liaison (Ex Officio)

Plus: Joachim Stohr, Uwe Bergmann, John Arthur, Natalya Brown, Joshua Turner.

**Director's Update:** Jo Stöhr opened the meeting with updates on the budget and the impact of the budget on LCLS plans and operations. Our highest priority is to run LCLS as scheduled so that users can fully utilize the beam. LCLS planned a \$143M budget for full operations in FY2012. The President's budget reduced this by \$15 M to \$128M. All LCLS facilities scrutinized their needs and expenses and reported to DOE that LCLS needs \$113 M (plus carry forward from last year) and minimum budget of \$128.5M for FY2012. The FY2012 budget is being negotiated, and the President's budget will likely be renormalized which means that certain maintenance, improvements and R&D cannot be done as planned. We continue working with DOE to explain the consequences of reducing our budget, assuming we operate as proposed at 4100 hours. With this budget we will be able to support our current schedule for the user's time, but belt tightening will effect running the linac. LCLS is working with AD Director Norbert Holtkamp to reduce the AD budget to fit with what we have. Although utilizing the existing linac resulted in significant savings in initial LCLS construction, we still have an old linac which needs continued maintenance and investments in upgrades and improvements. Current deferred accelerator improvements and upgrades carry some risks and can cause the reliability of LCLS to decrease from the current 96%. We will require these improvements in following years to be able to support the growth of new instruments. We need to develop a plan to return to normal operations within 7 years to prepare for LCLS II. LCLS II requires reliability and upgrades on the linac for LCLSII. We plan \$400M LCLS II total project cost, then increase 10-20%, up to approximately \$450M, to make up for current shortfalls.

**Operation Plans:** Uwe Bergman summarized plans for operations over the next few years. In 2011 run 4 should start in June and end in mid October (the schedule will be posted shortly). After a ~2 week break, run 5 is planned to start in November and continue until February/March. Run 5 may be slightly longer than usual with time added for commissioning

CXI, XCS and MEC instruments. Commissioning should be completed after run 5, with more time available for user experiments. for CXI. In run 6 we are planning the end of MEC commissioning. We anticipate having two 4-month runs per year, with shutdowns in between (currently being discussed and coordinated with the AD, SSRL, FACET and other groups at SLAC).

**Proposal Review:** When the new operations schedule is adopted, dates for new proposals will be set approximately 9 months before the run starts, with the Proposal Review Panel (PRP) scheduled to meet 3 months after the call for proposals closes. There was a discussion about whether LCLS should try to develop a more aggressive schedule to reduce the lag time between proposal submission and experiment start time (to 6 months or shorter). Several UEC members expressed concern about having too short a period of notice in order to prepare for the experiments because a significant amount of time is needed to mobilize for beam time, particularly for complex experiments using new instruments. The group expressed that the time from initial notice about whether the proposal was accepted and the beginning of beam time is still critical and needs to be at least 3 months for users to prepare. It was decided that we will continue on a 9-month basis and look for the further efficiencies in the future as we get more experience. The proposal review process remains basically the same, but the process is still undergoing some minor evolution. The PRP has been expanded to 58 members, and observers from the UEC and SAC are still encouraged to attend the final ranking as observers (the next PRP meeting is scheduled May 2-3, 2011).

**Users' Conference Planning and Suggested Workshops:** Joshua Turner who is on the organizing committee opened discussion about the conference agenda. Cathy asked whether budget concerns and restrictions related to travel funds at some labs should be considered and possibly postpone the annual conference. Jo Stohr felt that the was conference was necessary and should continue as planned. Josh suggested, and everyone agreed, that it would be best to organize workshops around common scientific fields or interests whenever possible. Jo suggested to have a keynote talk on 'Frontiers of High Fluency X-ray Physics/Fundamental Interactions of Coherent Laser Light and Matter' and to plan a more in-depth workshop at a later date (Linda Young and John Arthur were recommended as possible organizers of this workshop). Linda agreed to look for the 2-3 potential speakers in this area.

**Instrumentation Update:** John Arthur noted that the Users' Meeting in October was a good forum to explore new instruments so that we are prepared if/when we get funding for new instruments.

**LCLS II Update:** Jo Stohr mentioned that John's Galayda's group is working to put forward the plan for LCLS II. LCLS II plans to have a separate undulator and separate injector. We, and DOE, are interested in having a great facility as a final result, so we need to carefully think ahead for what we need in the future. The LCLS II project will create more capacity, and we need to have workshops to understand what users want for the end result of LCLS II. John Arthur commented that at the end of the workshop we should have a document to define our new instruments.

**How can UEC better diffuse information to the users they represent?** Jan Luning recommended having a link on the UEC website for users to provide input to the committee. Jo suggested that the LCLS Chair write a regular column for the LCLS newsletter which is being prepared every other month. Thomas Earnest agreed to take responsibility for the contents the UEC chair column.