

**Minutes**  
**APS Users Organization/Partner User Council Joint Meeting**  
Thursday, July 5, 2012  
Advanced Photon Source  
Building 401, Room A5000/B5100  
Pamela Focia, Chair, APSUO  
Mark Rivers, Chair, PUC

Presentations:

[http://www.aps.anl.gov/About/Committees/APS\\_Users\\_Organization/Meetings/2012/index.html](http://www.aps.anl.gov/About/Committees/APS_Users_Organization/Meetings/2012/index.html).

Summary of joint meeting and close out action items provided at conclusion of minutes.

**APS Update – Brian Stephenson**

Stephenson reviewed the following topics (see slides on web).

Safety—Note that DOE/Argonne safety statistics do not count user-related injuries (however, subcontractors are represented). Recent injuries have resulted in users being sent to the hospital. Stephenson noted that in *any* case where a potential medical situation exists, 911 should be called. The recent spate of near-miss incidents has resulted in wording changes about chemical hazards and use of eye protection on ESAFs. It was noted that every sector at APS has a safety officer and does regular reviews.

For CAT beamlines that do a lot of chemical work, it was suggested that signage right outside of hutches and a source of safety glasses right at the hutch door would be good. The comment was made that the ESAF does pop up a generic message about “using appropriate PPE” when chemical usage is mentioned but it does not provide details. Some groups insist that their on-site employees wear protective gear, and thus the users coming in see this and follow suit. Some groups use a lot of pressurized systems and protective eyewear is thus worn all the time.

Question: Were the units that failed (resulting in eye splashes) part of the CAT equipment or did the users bring them in? New equipment brought in (e.g., electrical, biological) is checked for safety—other types of equipment (smaller systems) are not necessarily reviewed to the same degree. There is and should be a shared responsibility for both the APS (Glagola) and the CAT beamlines to check equipment. Simplest solution is to treat any “wet” equipment as an extension of the chemical lab and thus mandate the use of protective eye wear. One possible issue is that physicists (as opposed to chemists) may not be as aware of potential chemical hazards—it might be good to consider having an APS resource to call on for technical oversight. Users need to be aware that excellent resources are available to help with hazard mitigation—it was noted that an experiment has never been forbidden at APS, and many have benefited from having external review and input.

Another issue is the “compound” experimental situation (e.g., chemical and laser work

where the eye protection must be approved for two disparate types of hazards). Mandating the universal use of eye protection is not necessarily the right answer as it may possibly result in users choosing an inappropriate type of protection in an effort to follow the mandate. It was agreed that there is likely no universal solution and that situations must be evaluated on a case-by-case basis. Upcoming safety meetings will result in further input from the Lab.

Operations: Stephenson reviewed recent situations, repairs. APS relationship with FMS is improving and FMS has worked very diligently on recent events for support and work.

Budget: Stephenson reviewed historic trends vs. the FY13 proposed budget for the Presidential, House, and Senate bills for funding of DOE BES, facility operations, APS operations, and the Upgrade. The election year is certain to delay the passing of any budget bill.

Effective July 15, Jim Murphy (replacing Pedro Montano) will lead the DOE/BES/SUF.

GM/CA staff has transferred from ANL Biosciences division to APS/XSD, lending a new facet of expertise to the APS.

SAC beamline review process: Beginning this fall, the APS is going back to looking at each research group individually (beginning with XSD beamlines). With 60 operating beamlines, a five-year review cycle seems appropriate. Regarding CAT publications, not all necessarily need to or should be in the APS publication database (based on how that database is defined), but they should be considered in terms of the review process.

One scientist noted that his group has a particular piece of equipment that is very often used and is noted by many groups and experimenters—these kinds of publications should absolutely be counted and recognized by the CATs but may not necessarily be the type of paper that would require the standard APS acknowledgement. He questioned about the inclusion of such papers in the APS publications database. Stephenson responded that we need to be clear that the APS database is maintained for BES. A question was asked about how to recognize papers that are BES supported but not funded through APS operations? Can these “flavors” of publications be entered into the database with a flag? The scientist asserted that both “use of beam” papers and other papers (equipment technology/improvements) should *all* be captured in the publications database because certain types of reviews mandate that data regarding publications be drawn from the APS publications database. Stephenson said we need to make the distinction between work/papers that support BES versus the papers that highlight work supported by BES. CATs that have multiple funding agencies also experience this problem. BES has a very prescribed set of parameters that they track and want to have reported.

What fraction of the papers currently in the APS database actually includes the APS acknowledgment statement? Probably not all—but the other side of the question is *should* certain papers include the statement? Who can talk to Rick Fenner and Jessica Skwarek about adding a flag to papers that are not actually supported by BES but are APS-related

(APS beamline supported)? This is a timely question because with respect to the Upgrade, beamlines may be moving from one sector to another—how do you track the before and after history of the work done by those beamline scientists in the database?

Bldg. 400a project: This construction being built by the Laboratory for the APS—it's about halfway done and should be completed by end of the fiscal year.

The Advanced Protein Crystallization Facility construction schedule was reviewed (beginning with parking relocation). All work that may potentially involve vibration will be tested during study periods. (Stephenson reviewed the Vibration Task Force team organization and goals.) It should be possible to open the shutters during these times to look at the potential effects on the beam. Scientists will be notified by e-mail when these vibration tests will be run so they can look if interested (APS will enable the ability to open their shutters). Mention to Julie Cross that other beamlines around the ring may be interested in shutter permission during these times to observe any potential impact on the beam.

Office space: The need for beamline office space is being driven by the Upgrade, the NSLS-I to NSLS-II transition (use of up to 14 existing APS bending magnet beamlines that could be turned on to increase capacity), etc. The list (showing potential techniques, estimated capacity increases, etc.) of APS beamlines evaluated with respect to the NSLS I-II transition should be revisited to update and include beamlines such as 19-BM that are not currently included. The ability to offer these interim services for the transition is tied to budget on both ends. The shutting down of NSLS-I is set to happen FY14, but some beamlines may be shutting down earlier, making the demand for capacity here at the APS possibly happen earlier than currently anticipated.

LOM expansion: Stephenson reviewed scenarios both before and after Upgrade, including finishing LOM 437 and possible expansion, building 438F extra pentagon for DCS, possible expansion of another LOM (e.g., 433), and expansion of other LOMs as needed. Possible methods of expansion include horizontal, vertical, and new construction; each has pluses and minuses. The Lab is currently evaluating a FY13 start on the vertical expansion option; however, laboratory space is not included in this.

#### **APS Upgrade: Overview and Status – *George Srajer***

Srajer outlined the DOE review committee participants, the charge given to the committee, the agenda, and the overall conclusions of and recommendations resulting from the status review. Next review in September is the Director's Review (a dress rehearsal for CD-2 review in December). Srajer presented a list of upcoming 2012 technical reviews as well. He also reviewed the Upgrade project structure (five major areas), funding profile, and schedule. He reviewed the roadmap scenario development process, leading to the identification of the base scenario (with two options). Proposed early procurement and construction at currently unoccupied beamlines could produce some early science results and reduce schedule risk. No current programs will be "turned off" until the new beamline is ready to go. Srajer highlighted several R&D development activities related to the Upgrade. He briefly discussed "backfill" staffing plans in terms of

addressing the simultaneous operations and new construction.

**NUFO Update** – *Susan Strasser and Pamela Focia*

Strasser reviewed the focus of the 2012 annual NUFO meeting, which was hosted by LANL in Santa Fe, NM. NUFO had a full slate of outreach activities in 2011-12. Strong bipartisan support for user facilities was reported by NUFO representatives who testified at Science, Space, and Technology Subcommittee on Energy and Environment hearing titled “Department of Energy User Facilities: Utilizing the Tools of Science to Drive Innovation through Fundamental Research.” Strasser reported on the current status of NUFO working groups.

Focia reported on her impressions of attending her first NUFO meeting. She informed the group about how members of the APSUO and PUC can participate in NUFO, asking each organization to consider identifying two to three people who could become involved. Focia presented slides (source: Katherine Kantardjieff) from a talk given at the most recent meeting about social media and its relationship to NUFO’s goals. Strasser discussed how NUFO identifies and represents the user community in Washington. The APS needs to make sure that as a facility it is well represented in the NUFO community. How can the APS recognize the staff and beamline scientists who do much work behind the scenes? Perhaps the APSUO could create an award that would be presented at the Users Meeting? Attendees are encouraged to consider joining a working group (go to NUFO.org to join a list serve).

**Further Mechanisms for User Input into APS-U Timeline and CD-2 Decisions** – *Brian Stephenson*

Stephenson reviewed the past success of involving the user community in providing input to the Upgrade process and asked the group what their ideas are for continuing this involvement. It was noted by an attendee that the impact on CAT beamlines lacks a clear explanation of the Upgrade path for optics, source, etc., such that CATs can seek funding support from their home agencies for improvements that will dovetail with the overall Upgrade plans. Stephenson noted that this is a very CAT-specific thing—proposals have been submitted that seek to integrate the Upgrade with non-BES entities—partnership building with the CATs to combine BES resources with CAT resources. There is some blurring of lines when you consider whether something is part of the primary Upgrade package or ongoing general facility improvement. The APS is happy to talk with each CAT group about this. Srajer noted that there is additional contingency scope that will possibly become available as the Upgrade progresses that could be used to address such proposals. How are CATs going to be made aware of the availability of new technological advances (e.g., new superconducting undulators, new insertion devices, etc.)? Scheduling and resources and the overall complexity of the project make this planning challenging.

It was noted that higher heat load is definitely a part of the Upgrade and users will definitely have to deal with it. Optics components will have to be evaluated on a case-by-case basis to determine the best course of action. The APS may possibly need to go around the ring beamline by beamline to evaluate the best approaches/funding issues on

an individual basis. Studies are planned to evaluate the impact of shifting to 150 mA. What happens if a future survey around the ring demonstrates a change in the majority's feelings about horizontal emittance? How much flexibility does the Upgrade plan have?

For the next meeting, Srajer suggests having a presentation about the status of new insertion devices to review the latest information and potential schedule considerations. Future talks could cover other topics (e.g., polarizing undulators).

**APSUO Routine Business:** Focia called meeting to order. Approval of minutes from January 18, 2012, and May 9, 2012, APSUO Steering Committee Meetings was completed.

**Steering Committee Election of a Vice-Chair:** Focia reviewed the basic responsibilities of the APSUO Vice Chair. There was an opinion stated that the Vice Chair should not be an Argonne employee. Robert L. Leheney (Johns Hopkins University) was nominated and elected unanimously as Vice Chair.

**Preliminary 2013 Users Meeting Planning/Organization:**

2013 Users Meeting Subcommittees:

- APS-specific workshops organizer—Binhua Lin (The University of Chicago)
- APS plenary speaker organizers—Robert M. Suter (Carnegie Mellon University) and Matthew Miller (Cornell University)
- Compton and Poster Session organizers—Oleg G. Shpyrko (University of California, San Diego) and Eric Dufresne (Argonne National Laboratory)
- Cross-facility workshops—Eric Landahl (DePaul University)

**Banquet and Entertainment:** A short list of possible venues for an off-site banquet was discussed. Conference Services will be contacted to do further research on options before the next meeting. Funding is a primary factor in the ability to offer an off-site event.

**Possible energy-related keynote talk:** Eric Toone, Principal Deputy Director of the Advanced Research Projects Agency – Energy (ARPA-E), responsible for oversight of all of ARPA-E including direct oversight of ARPA-E's Electrofuels program.

**Compton Award:** A rolling reactivation of past Compton nominees from the previous award year (two years earlier) was suggested. The meeting organizing committee can contact the original nominators for solicitation of any additional supporting information for the package.

**Action Items:**

Extend invitation to speak at the 2013 Users Meeting to Jim Murphy, new leader of DOE/BES/SUF.

Talk to Rick Fenner and Jessica Skwarek about adding a “flag” to papers submitted to the

database that are not BES-supported but are APS-related (APS beamline supported).

Contact Julie Cross to inform her that other beamlines around the ring may be interested in shutter permission to observe any potential impact on the beam during vibration investigation times.

Update the list (showing potential techniques, estimated capacity increases etc.) of APS beamlines evaluated with respect to the NSLS I-II transition to include beamlines such as 19-ID that are not currently included.

The APSUO and PUC organizations were asked to consider identifying two to three people who could become involved in NUFO.

It was suggested for the next meeting to have an Upgrade presentation about the status of new insertion devices.

Investigate the availability of Google+ video conferencing and Skype—need to push for a speedy resolution of this ability for future meetings.

For the beamlines that are being moved as part of the Upgrade effort, we need to find out from management about how they intend to handle the administrative and facility support for them during the process.

Eric Landahl will write up proposal for a Beamline Scientist of the Year award that may become an annual part of the Users Meeting.

### **Joint Closeout/APS Management** – *Brian Stephenson/Dennis Mills*

PUC (Rivers):

Interested in the follow up with the publication database action item from joint session.

LOM expansion questions: Would like reports on how LOM space going to be charged as LOMs expand—per sq. ft.? Same rate? Different rate? The Lab has standard charge rates for space—to the extent that we are adding office space, it would be primarily not CAT staff. CATs are lacking sufficient laboratory space—LOM labs have hoods/vent and electrical labs. It may be that based on hazards and safety that some activities could be carried on there. The scientists who are moving to sector 25 would be sharing the lab space with a large number of other sectors. More stations mean more people—all need space. If new space will be ‘green’ and energy efficient, will the cost then go down (or up)? How is this rate set?

Pipe at sector 20: What will happen with access around there? Ramp? No ramp? No decision has been made yet—not even sure if any options have been costed.

Question: early on in Upgrade planning process, CATs were asked for their “wish list” ideas (e.g., IDs, long straights)—what is the status of the smaller requests that did not make it on the big list for the Upgrade? On some time scale, these items will eventually be worked on—possibly as contingency scope work. When does the list of contingency work need to be identified? Users would like to see these kinds of items on a list somewhere—and now that the primary framework of the Upgrade has been set, it may be time to go back and talk to the community about the prioritization of the items for the contingency list: additional ideas for prioritizing the contingency scope list (possibly scale them by price range).

Life Sciences Council Report—workshop on May 2 was successful, discussed access to ACPF and how outside researchers can get access to it. Moffat is investigating with NIH, BER about how to best approach this.

Reviewed the topics discussed in the APSUO breakout session.

**Action Item:**

At next stakeholders meeting, ask Srajer to address the pipe at sector 20.