

**Minutes**  
**APS Users Organization/Partner User Council Joint Meeting**

July 9, 2014

Advanced Photon Source  
Building 401, Room A5000  
Eric Landahl, Chair, APSUO SC  
Mark Rivers, Chair, PUC

Action Item:

--Investigate changing joint meeting day of week to Friday. Proposed dates:

- Joint Meeting, Friday, January 23
- PUC Users Meeting luncheon, Tuesday, May 12
- APSUO SC Users Meeting luncheon, Wednesday, May 13
- Joint Meeting, Friday, July 17
- Joint Meeting, Friday, September 18

**APS Update – Stephen Streiffer**

Overview of recent reviews held in May-June 2014: U of C Argonne LLC Board of Governors Annual Review, ANL Annual Lab Plan Presentation to DOE, Quarterly Board of Governors meeting, Argonne strategy meeting with Ernie Moniz, and the DOE Triennial Review of APS. Recurring topics were the Upgrade, leadership planning, and site infrastructure (electrical and network). On the subject of infrastructure, the concept of expanding LOM space was raised; initial thoughts were to build “up.” Now the Lab is considering new construction sites. The severity of the problem varies by sector. The issue of third-party financing was raised. (For example, the TCS building, partially third-party financed, now brings in public groups to use the space). At APS, however, the location would be problematic for regular public use.

At the DOE Triennial review, strategy and budget were the primary issues of the meeting. Review period showed good growth and progress in all metrics (experiments, publications, machine performance, growth of community, etc.).—Streiffer reviewed these in detail (see Streiffer slides). The machine performance is strongly supported by a prominent preventative maintenance program. Streiffer discussed the balance between the costs of preventative maintenance programs and the impact of a reduction of this effort on machine performance. Maintenance is not a large part of the overall operations budget—but the APS needs to determine what balance can be struck that would minimize the impact to a diverse user community’s typical use of the machine. Shutdown lengths also play into the equation. This issue is typical across synchrotrons. Rivers stated that he believes the user community is very happy with the current performance level and would like to see that not change dramatically.

Science talks and reviews were successful; Streiffer thanked the users for their hard work in preparation and delivery.

Streiffer next reported Peter Littlewood’s (Argonne’s Director’s) take on strategic planning: uniting imaging and scattering by bridging the length scales between them. The upgraded APS can be the machine to do this. The Upgrade will enhance source properties to enable key advances for pushing into new realms of measurements and experiments.

Goals set for strategic planning allow APS to prioritize investments, with clear areas identified. Strategic R&D areas and Upgrade goals (optics, detectors R&D initiatives, timing, etc.) were also reviewed.

FY15: IEX beamline currently commissioning; first measurements are expected in the 2014-3 run. Construction of RIXS at 27-ID is progressing; commissioning and limited user ops are planned for 2014-3 and 2015-1. Other ongoing beamline construction/commissioning efforts include

- 6-BM-A and B, supported by COMPRES, BNL-PS, and APS (designed to accommodate NSLS users)
- DCS sector 35 commissioning. The user community will be notified when shots are fired so they can watch for any impact on the beam when the testing takes place. Sensors are being put in place to watch for vibrations. Mechanical stability check is scheduled for end of July. The project is confident no impact will be felt.

Budget: In anticipation of reduced funding for the next fiscal year, the APS is seeking efficiencies and working to optimize staffing levels.

Other business: End of Experiment Forms (EEFs) and hosting foreign users: EEFs are a good feedback mechanism—they make it possible to spot opportunities for improvements from the users perspectives. These vehicles are not used for staff evaluation. CAT beamlines are encouraged to make use of the EEFs by creating custom questions.

Streiffer briefly reviewed the current and proposed methodology for assigning beamline hosts for experiments.

#### 10:00—11:00 **APS Upgrade: Overview and Status** – *Stuart Henderson*

Henderson first provided context for the current Upgrade plan: The worldview of current synchrotrons is that many efforts (both competitive and collaborative) are underway to advance the technology of diffraction limited storage rings. BESAC report (July 2013) laid out the case for change in direction of the APS Upgrade to maintain the United States' leadership position

Henderson stressed that this is not just an accelerator project, it is a science-based project; user community support is crucial (and greatly appreciated). Right now the APS and users need to explore capacity of the source, develop the opportunities, plan for optimized beamlines, and explore the impact of construction.

The overall strategy is to rebuild the storage ring with a multi-bend-achromat lattice and optimized insertion devices. (See Henderson's slides for details on the performance goals and a comparison of the current APS ring parameters and those of the projected Upgrade.)

Next steps: A series of seminars and workshops are planned. Crisp and compelling stories to promote the project are critical to promote the scientific case for the Upgrade.

The present project scope was reviewed; it emphasized the importance of a well-defined installation and testing period (recent external review found the one-year plan is achievable). Currently the APS-U staff is evaluating each beamline to determine needs. APS-U (very approximate) cost is \$550M (a bottom-up analysis being conducted). FY14 is fully funded; the President's FY15 request is \$20M. Mission need statement needs to

be revised by the Office of Science to reflect new scop3. The plan is to be “CD-1 ready” by the second quarter of FY15. Henderson also reviewed the challenges the project will face, including the unique approach the project is taking for installation (nine months for ring removal and installation, followed by three months of testing w/ beam).

11:00—11:30 **Updates on NUFO and the User Office** – *Susan White-DePace*

White-DePace described the progress of an Argonne task force charged with investigating systems and procedures to seek out efficiencies. Many potential areas have been identified: foreign visits and assignments, access to the Argonne site, training, Human Resources systems, authentication systems, and hosting of foreign nationals.

In response to a challenge posted by an audit of another national Lab (and an upcoming audit of Argonne in August 2014), the APS and Argonne are building an improved hosting program. The APS ESAF process will be used to assign hosts and hosts will receive additional training. It is anticipated that this new process will begin on October 1 for the third run of CY14.

Update on policy for minors at APS: Work on an Argonne policy, under the direction of the Argonne Office of Communication, Education, and Public Affairs, continues. An interim APS procedure has been developed.

The APS is working hard to phase out legacy user agreements. Currently there are 552 legacy agreements in place. The APS User Office is working to identify those institutions with active users to replace these legacy agreements with master agreements. Those with no active users are slated to be phased out. Several new agreement types have been created: government agreements, novation agreements (for company name changes and buy outs—saves time and effort), and reinstatement and amendment agreements for self-employed users.

NUFO Science Exhibition report: Attendance included staff from 37 congressional offices, seven house and senate committees, DOE and NSF reps, three congressmen, and two subcommittees. The exhibition was preceded by 50 congressional office visits and a meeting with the House Science and Technology Coalition. A National Laboratory Day is set for September 16, 2014, on the Hill. The format will be different than that used for the NUFO exhibition. NUFO is now pursuing formal incorporation as a non-profit organization. In the coming year, NUFO and its incorporated entity will focus on providing good science stories (such as the path from basic research at the APS to solar shingles manufactured in a new plant employing 1200 people initially) to ScienceCounts (an American Physical Society initiative to get message out to public about importance of science).

11:30—12:30 **Working Lunch Discussion:** *Stephen Streiffer and George Srajer, discussion leaders*

Srajer presented an introduction to strategic plan development: The ultimate goal of a strategic plan is to predict the future, which is hard to do. A working draft of a plan for APS operations, with an overarching science vision, was complete for the Triennial Review. The next step is to present this plan to staff and stakeholders. SAC input is expected by mid month. Additional meetings with staff and users will be held in July, with a final plan expected by the end of calendar year 2014. The lifespan of this plan is expected to be approximately 3-5 years.

Eight major areas were identified, and the accompanying Work Breakdown Structure of those areas will be used as management tool. Staff science broken out specifically but user science is not—user science is wrapped in x-ray operations. The plan is set to align with the facility mission to support user science/user facility. The APS needs user community input and needs to identify effective ways to get feedback to APS management. Srajer asked the PUC and the APSUO to consider identifying reps for communication points of contact.

Srajer was asked how the APS could keep the innovation aspect of this activity alive during this process? He replied that The APS needs to engage people to avoid the over-interpretation of “winners and losers” in the language and directions. This is where the APSUO and PUC can be most useful in facilitating this interaction.

## **PARALLEL SESSIONS**

### **Partner User Council Breakout Session, A5000**

12:30—12:35 **PUC Routine Business:** Approval of minutes from January 23, 2014, Partner User Council Meeting.

12:35—3:00 **Discussion** – *Mark Rivers, discussion leader*

- Committee members questioned whether the renovation of the LN<sub>2</sub> system was complete. The electronic measurement system is in place; the status of the purge valves system needs to be determined.
- The PUC members felt that a workshop in the fall on an Upgrade science case was premature; it will be difficult to motivate the community.
- A nominating committee was formed to seek new PUC chair: Tom Irving (Chair), Bob Fischetti, and Steve Sutton will provide a slate for both a Chair and Chair-elect for election at the September meeting.

## **APSUO Steering Committee Breakout Session, B5100**

12:30—12:35 **APSUO Routine Business:** Approval of minutes from January 23, 2014, APSUO Steering Committee Meeting.

12:35—3:00 **New Business** – *Eric Landahl, discussion leader*

- 2015 APS/CNM/EMC Users Meeting planning involved a number of issues
  - The EMC will be a Group in the CNM so will not participate as a separate user facility; might the ALCF be interested in participating in a joint meeting
  - The budget and list of roles for the meeting will be distributed to the Steering Committee for discussion and selection at the next meeting.
- Election of APSUO Vice Chair and selection of Users Meeting chairs has been deferred until the September meeting.
- Members asked that a call-in ability be established.

3:00— **Closeout/APS Management** – *Stephen Streiffer /Dennis Mills*

- The APSUO is interested in exploring the possibility of moving joint meetings to Fridays – Connie Vanni will send out potential dates for discussion.
- Stephen Streiffer agreed to reach out to the ALCF to see if they have some interest in participating in a joint users meeting.
- Participants asked to have a draft strategic plan distributed to the APSUO Steering Committee and PUC members.
- Can a Box account be set up for shared documents?
- The PUC asked if mesoscale is an appropriate word to use in the science case for the Upgrade. The response was that it harkens back to the original Upgrade theme of real materials in real time in real settings (hierarchical scale).