

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

Friday, November 18, 2011
Advanced Photon Source
Building 401, Room E1100/E1200

Peter Eng, Chair, APSUO

APSUO Attendees: L. Assoufid, E. Dufresne, P. Eng, P. Focia, B. Lin, and A. Sandy

APS Staff Attendees: M. Beno, R. Gerig, D. Mancini, D. Mills, W. Ruzicka, B. Stephenson, S. Strasser, and C. Vanni

General Update—*Brian Stephenson*

Stephenson reviewed recent science highlights: HP-CAT discovered unusual high-pressure phase of aluminum on BM line, XSD's 3-ID used new nuclear resonance vibrational spectroscopy technique to look at iron-based heme molecules, DND-CAT's 5-ID attached DNA to nanoparticles to create crystals with the particles arranged in the same configurations found in nature, and GM/CA-CAT discovered details about how an HIV antibody attaches to the virus (with cross-facility cooperation from SSRL and SLAC). Pull quotes from any of these important works would be excellent evidence for continued support for the facilities, both on jobs and future science levels.

An increased focus on safety continues throughout the Laboratory. Stephenson reviewed the letter sent out by Brinkman in response to a recent uptick in accidents and injuries in FY2011 compared to rates in FY2010. The goal must be zero injuries and accidents. As a community, the APS needs to continue to focus on accident prevention, discuss work being done, and communicate effectively about solutions at both the CAT and facility levels. A recent accident was reviewed: a lifting injury resulting from moving 22-lb. lead bricks by hand. The possibility of mitigating circumstances (aging, prior injury in a non-work setting, etc.) was discussed.

A five-year program to inspect all existing non-NRTL (Nationally Recognized Testing Laboratories) equipment was completed in September.

Stephenson reviewed statistical trends of users (both on-site and remote) participating in experiments spanning FY1998-FY2011 and the number of experiments. Strong growth is being shown in both areas.

Results of standard DOE questions regarding satisfaction with facility operation, scheduling, service, support from staff, and support from beamline staff were reviewed. In general, high satisfaction is being indicated. A write-in section allowed respondents to note what they would like to see done differently. Suggestions included changes to the GUP process (provide more statistics about each beamline); easier access for industrial users (a topic being discussed across all DOE facilities); and improvements in teaching new users how to process data and more information about experimental procedures. Other comments included bringing back the CAT system to have science driven by users and not "insiders,"

that the tricycles are dangerous, and that year-round availability should be offered. Time-sensitive experiments run into problems when all SR facilities have their shut down periods at the same time. How to bring in new users was also discussed: possibly offer new user workshops for SR users. Such events do happen (e.g., a recent BioCARs workshop), the summer school (a broadly focused course for graduate students), the EXAFS workshop, and the upcoming SAS workshop. CATs need to let the APS User Office know about these opportunities so that they can be widely advertised to the community. The biggest obstacles are staffing and funding. APS could possibly investigate having “day before” workshops at large meetings like SPIE to pursue educating potential new users who are not currently at the APS. (It was noted that the Denver x-ray conference does many workshops of this type.) Outreach to new users is a key activity.

A big issue discussed by the group concerned the procedures surrounding radioactive materials review and safety protocols. It seems that the APS has procedures for the handling of these samples that are distinctly different (and more burdensome) compared to other synchrotron facilities. It was noted that recent incidents with radiological issues at Argonne might be driving a more stringent approach to what is happening at the APS. Procedures from another facility should be presented to Argonne radiation safety staff for consideration. Proper procedures for handling and transportation of both radioactive and hazardous materials at the Lab need to be strongly communicated to users. The first step is to compare procedures between APS and other facilities.

APS Reviews

The triennial review in September included both presentations from APS and user staff, as well as informal meetings between the reviewers and general staff. The closeout discussion was encouraging; the written report is due in December. A theme seen in the comments was a desire for increased “informal” communication, more transparency, and regular reviews of productivity and management of each sector.

The written report from the UChicago review has been received; comments in general were positive.

Scientific Advisory Committee Meeting (October 12-13): Discussed future beamline reviews. New programs can only come about through the evolution or replacement of existing programs once the APS sectors are all fully occupied. The SAC has agreed to take the lead in beamline reviews and the process for this is being drafted. Anticipate a five-year cycle, but this is not an immediate activity.

BES Facility Directors Meeting (November 8): Briefly discussed the agenda topics including industrial user programs; possible changes to master user agreements; how to define what are high-impact publications; and data analysis, storage, and distribution (this is a very technology-dependent subject).

Staffing and budget planning is ongoing in developing a plan that includes Upgrade and operations activities. Multiple scenarios are being considered as a result of fiscal uncertainty in Washington. Currently the APS is operating under a continuing resolution through December 16.

Stephenson has begun weekly “Educate the Director” meetings that will continue over the next year. He anticipates extending this activity into the CAT communities. It could be interesting to bring the APSUO/PUC members together with groups such as the power supply group to foster more familiarity. Recent meetings between the CATs and the accelerator group have been very well received. Randy Alkire noted that the APS provides a wide array of services (vacuum, leak testing, alignment, etc.)—need to ensure that these often critical support activities are not lost during the Upgrade process. The beamlines are aging, too. Support and repairs are going to become more important as a result.

Space planning plays a large role in the changes that will take place and the new hiring going on for the Upgrade. “Unused” floor space will cease to exist at some point. Clutter and housekeeping are prime safety concerns. An APS Space User Guide is being developed; feedback is needed regarding the guide and for long-term planning. CATs could benefit from having a set amount of space for storage off site (decent conditions and close proximity to the ring would make use of this space easier). The infield was mentioned as a possibility for storage accommodations. Expansion of LOM space was also discussed as a way to increase user space. Architects are being asked to conceptualize this expansion (e.g., adding a second story to expand office space).

Groundbreaking for the Advanced Protein Crystallization Facility (a State of Illinois funded facility) took place on August 30. The APS should possibly investigate having someone make a presentation at the monthly meeting about progress on this project.

The dynamic compression sector (NNSA-supported beamline) was reviewed—phase 1 is inside the building, phase 2 may be located outside in a separate building. A workshop is being held in January 19-20, 2012, that will include a poster session to explore possible synergies between SR research and this facility. Long beamlines and the actinide facility were also mentioned and briefly discussed.

Stephenson reviewed the current plan for the roadmap of new and upgrade APS beamlines (see slides). Pros and cons of each possible scenario are being discussed and will be presented shortly to the community.

Potential Changes to GUP Review Panels—*Denny Mills*

General User Program Review Panels are being overloaded with work. The number of GU proposals continues to grow, but the number of PRP members has not. Options to ease the workload for reviewers are being discussed by both PRP members and GUPAC (general user program advisory committee) members. Consensus is that changing the make up of the PRPs would not create much benefit; however, adding more reviewers would improve the situation (for imaging, spectroscopy, and HP in which the chair determines how to divide and assign the proposals for review). In the most recent review cycle, having a chair organize the proposals and assign them to separate groups was tested and it seemed to work well. The group also discussed expansion of the existing categories, getting more reviewers involved, and needed changes in software. Changes would likely not be in place until the call for 2012-3 cycle. Regarding histograms for beamline ratings: this does not really apply to mail in programs, PX—it would be a waste of time. Please send any comments to the GUPAC, D. Mills, or S. Strasser.

Potential Impact of NSLS-to-NSLS II Transition on Demand for Certain Research Techniques (e.g., EXAFS)—*Denny Mills*

This transition will impact the entire DOE user community—how can it be mitigated? Over the past five years, DOE SR facilities have hosted nearly 9000 users. Plans for operations switching from NSLS to NSLS II in 2014 will result in a substantial reduction in capacity for several years. How can we minimize adverse impact to user community? We need to identify and communicate the availability of similar capacities at other facilities and adjust where possible and sensible. Need to also identify the most needed techniques and determine which facilities can expand current capabilities to meet these needs using modest additional levels of funding. These findings then need to be presented to BES. CATS will be asked to find out how they can participate in this process (e.g., increased use of bending magnet lines). How can the beamline processes be maximized to limit dead time? Will PX be impacted or not? Differing views exist—staff is also needed (not just more time on the beamline). Would PX staff from NSLS move out here? Specific capacities at Brookhaven (e.g., IR) will be going away completely—how can this need be met?

APS Upgrade: Overview and Status—*Derrick Mancini*

Mancini overviewed the road map work process flow and the steps that have been completed to date (updated external boundary conditions, define physics requirements documents, ID primary stakeholders, and identify dependencies). The current focus of activity is to evaluate and update possible scenarios using a large spreadsheet to generate virtual situations for review by the stakeholders. Scenarios will be evaluated for cost and potential impacts and then prioritized to identify a baseline scenario. The baseline situation will then be reviewed and updated based on feedback from the stakeholders for eventual incorporation into the project planning process in preparation for CD-2. Q: Are the scenarios available for general perusal? A: They are being created right now. The plans have been very dynamic up until the last few weeks—many variables are in play and changing constantly. The mode of presentation to the stakeholders (both primary and secondary) and the general community is being discussed. The site plan for how to upgrade the LOMs (with an effort to keep office space proximal to the floor) will play a significant role in this process. Currently the process flow is about one month behind in time, but the overall project is also being impacted with respect to funding due to the situation in Washington. Mancini reviewed the current work that is ongoing as allowed under the current funding situation. Mancini reviewed and discussed several R&D tasks that are moving forward well during this time period. A meeting to communicate the scenarios (some reasonable number) and/or to discuss the process and any community concerns should definitely be considered in the near future for the user community at large.

Users Week 2012—*Peter Eng*

The dates for the meeting have been shifted later by one week to accommodate both requests from university staff and other conflicts with availability. General meeting format remains the same.

Alexis Templeton (the first winner of the APSUO's Rosalind Franklin Young Investigator Award) has agreed to come back and give a talk at the APS parallel plenary session on Monday afternoon (May 7).

APSUO Executive Session— Building 401, Room A5000

Business

Approval of minutes from the July 11, 2011, APSUO Steering Committee Meeting—approved.

Planning for User Week 2012

Currently the draft schedule for the 2012 meeting has the same general layout as 2011 meeting; the timeline of activities was well received by all. We need to get the call for proposals for APS-specific workshop topics out quickly via User News. Jeremy Kropf, Lahsen Assoufid, and Alec Sandy agreed to coordinate the submission of APS-specific workshop proposals.

In considering a draft list of invited speakers for the Monday morning session and the APS plenary (Monday afternoon), an assortment of names was discussed including a science editor from National Public Radio as the scientific keynote. Possible DOE speakers included Bill Brinkman (or a designee from him), Pat Dehmer, or Harriot Kung. Politician suggestions included Representative Judy Biggert (R-IL13). The NUFO report will be presented by Tony Lanzirotti (University of Chicago and Chair of the NUFO Steering Committee). We also need to solicit invited speaker names suggestions via User News. Matthew Miller and Robert Suter agreed to coordinate submissions of potential invited speaker names. User News also needs to send out a Franklin Award call and a general announcement of meeting events. The Franklin award will need selection committee members (Pamela Focia and Peter Eng will act as APSUO liaisons).

The group discussed a NUFO letter from all the user organizations from the various facilities—user facilities represent tens of thousands of users and many fortune 500 companies who use the facilities to advance cutting-edge products from flat screens to drugs to fuel efficiency. Neutron facilities research—letter is going to Brinkman and other DOE staff to ask for continued funding support. Later, a trip is being planned that will require a handout for the lobbying effort aimed at garnering support for the 2013 budget. Other advocacy efforts and a letter writing campaign are also in the planning stages.

Closeout with APS Management

Pater Eng, Pamela Focia, and Susan Strasser reviewed Executive Session discussion with Brian Stephenson and Dennis Mills.

Action Items:

Procedures from another facility(s) for handling radioactive materials should be presented to Argonne radiation safety personnel for review and comparison. Possibly ask staff members Bruce Glagola, John Vaca, or L. Soderholm (new chair of the ANL Radiation Safety Committee). (Peter Eng)

Investigate possibly having someone make a presentation at the monthly meeting about progress on the Advanced Protein Crystallization Facility. (APS management)

Consider a meeting for the user community at large to communicate the Upgrade scenarios and/or to discuss the Upgrade process and any community concerns. (APS management)