APS Monthly Operations Meeting

Dennis Mills

March 30, 2011

Agenda

- APS Update
  - Safety Note
  - Budget Update
  - APS Scientific Advisory Committee (SAC) Review

- *"Summary of the Directors Review of the APS-U Project"*
  Geoff Pile, APS-U Project Manager

- "*User Week 2011*",
  Peter Eng, Vice-Chair of the APSUO Steering Committee

FY11 ANL Safety Goals Memo

- The Director's Safety Council approved FY11 safety goals and indicators as supported by the Board of Governors Environment, Safety, Security, and Health Committee. These goals and indicators encourage senior and division management involvement in safety at the point of work and provide a vehicle for managers to interact with our scientists, engineers, and other workers in our work spaces. The FY11 safety goals are:
  - Zero injuries
  - Continuous improvement in total number of injuries
  - Continuous improvement in injury impact on productivity as measured by lost and restricted workdays.

- ALDs and DDs are expected to:
  - Conduct a walkthrough of work spaces (to include review of workplace safety) once per month on average and ***engage staff regarding hazards and controls for the work they are doing***
  - Communicate safety information or emphasize safety topics to employees in a variety of "organization all-hands" forums, to include written and verbal communications from the directorate or division management office

One Last Reminder Regarding Electrical Equipment Inspections

- Memo sent out March 28 from Brian Stephenson regarding Electrical Equipment deadline of October 1, 2011.
- APS will work with the CAT electrical inspection contacts to assess the effort needed to complete the inspections and to schedule inspections during the May shutdown. (SBC, GMCA, and CNM beamlines should work through their respective ANL Divisions.)
- Equipment not inspected by September 30 will be tagged and taken out of service.
- If you have questions, see Jim Lang.

APS Budget Update

- Until recently, APS was receiving only about 90% of the FY10 budget during the FY11 continuing resolution.

- To get by during the first several months of FY11, we used carry-over (money left over from last year) to keep afloat. However, we knew this was an unsustainable situation for the entire year.

- After explaining the situation to DOE, we were asked what the minimum additional funds that would be required to:
  - maintain 5000 hrs per year operations
  - continue the APS-U Project up through CD-1.

- When provided with the amount of additional funds required, ***DOE agreed to increase our FY11 budget to that level and have now asked what would be needed in addition to this to keep the APS-U Project on track for FY11?***

What Does This Mean?

- Even though we did get additional operations funds, that number represents a "minimal" budget and it will be a lean year.

- Brian Stephenson has sent a memo to DDs with austerity guidelines that will need to be followed even with the additional operation funds.
  - Freeze on hirings (exceptions require ALD approval)
  - Overtime should be reviewed and closely monitored
  - M&S budgets should be reviewed and reduced wherever possible (try to reduce travel by 50% from FY10)
  - Anticipate that LDRD funding may be reduced

- DOE considers APS Operations and the APS-U Project as high priorities for BES and we are hopeful that both will received adequate funding for the remainder of FY11 to maintain full operations and to keep the APS-U Project on schedule, even given the budget-cutting mentality in Congress.

Review Process

- 35 Scientific case documents were prepared by teams of users with support from APS staff
- Reviewed by five subpanels of SAC, with additional experts
- Goal is to prioritize all proposed sub-projects, along with global improvements (e.g. higher current, stability, etc.)
- Review criteria:
  - Science
  - APS relevance
  - User community
  - Technical feasibility

Panel	No.	Primary Areas Covered	SAC Member	Guest Reviewer
1	8	Ultrafast Dynamics/Spectroscopy	P. Bucksbaum, J. Corlett, B. Hedman	J. Wark, B. Bunker
2	8	Coherence/Materials Science/Interfaces	F. Van der Veen, K. Y. Lee	J. Brock, S. Kevan
3	7	Inelastic Scattering/High Pressure/High Magnetic Fields	M. Klein, W. Stirling, G. Waychunas	J. Kortright, Sam Bader
4	7	Imaging/Coherence	J. Kirz, R. Leach, S. Wakatsuki	P. Pianetta, Q. Shen
5	6	Bioscience	H. Einspahr, L. Johnson	R. Leapman, M. Kiskinova

Priority Levels

- Each component was assigned one of 4 priority levels:
  - **A1 - Very Strongly Recommended**
    - Physical Sciences: Include in scope of APS Upgrade Project
  - **A2 - Strongly Recommended**
    - Physical Sciences: Include in scope of APS Upgrade Project if at all possible
  - **B - Recommended**
    - Physical Sciences: If not possible to include in Upgrade, include in APS strategic planning
  - **C - Not Recommended**

  Within these groups, the relative scientific priority is comparable. Other considerations, such as siting, program balance, schedule, cost, or other funding opportunities can be used to refine the scope decision.

- ***No components presented were evaluated to be in category C!***

Very Strongly Recommended Proposals

CDR	Title	Panel Number	Priority
4.2.2	SPX Facility Hard X-ray - Diffraction & Imaging	1	A1
4.2.2	SPX Facility Hard X-ray - Spectroscopy	1	A1
4.3.2	Wide-Field Imaging Beamline	4	A1
4.3.4	High-Energy Tomography	4	A1
4.3.7,4.3.8	In Situ Nanoprobe/Cryonanoprobe (NGN)	4	A1
4.4.4	Resonant Inelastic X-ray Scattering (MERIX)	3	A1
4.5.4	High-Energy Diffraction	2	A1
4.5.5	Magnetic Spectroscopy	3	A1
4.6.2	XIS - Tunable ID Beamlines	2	A1
4.6.4	Micro and 3D Diffraction	2	A1
4.7.3	Cryo Sample Preparation Facility	5	A1
4.7.4	Enhanced SAXS/WAXS	5	A1
4.7.5	Microfocus MX Beamline	5	A1
4.7.6	Enhanced Pump/Probe for Physical Sciences	1	A1
4.7.6	Enhanced Time-Resolved MX Beamline	5	A1

Note that the cost to move any BLs to accommodate these proposals is included in the APS-U Project budget.

Strongly Recommended Proposals

CDR	Title	Panel Number	Priority
4.2.2	SPX-ray Facility Soft X-ray Beamline	1	A2
4.3.3,4.3.7	TXM	4	A2
4.3.5	XPCS and Coherent GIXS	2	A2
4.3.6	Fluid Dynamics Imaging Beamline	4	A2
4.4.2	Advanced Spectroscopy Beamline	1	A2
4.4.3	LERIX-2 Beamline	1	A2
4.5.2	High-Magnetic-Field Scattering	3	A2
4.5.3	High Pressure Studies Using Sub-micron Beams	3	A2
4.6.2	XIS - Fixed Angle ID Beamlines	2	A2
4.6.5	Resonant Interface Scattering	2	A2
4.7.2	BioNanoprobe	5	A2
4.X.X	Long Wavelength PX Beamline	5	A2

Recommended Proposals

CDR	Title	Panel Number	Priority
4.2.3	Laser Initiated Time Resolved XAFS/WAXS	1	B
4.3.2,4.3.3	High Speed Imaging	4	B
4.3.3	Coherent Diffraction Imaging	4	B
4.4.5	HERIX	3	B
4.4.6	Nuclear Resonant Scattering	3	B
4.4.7	Catalyst Center	1	B
4.6.2	XIS - BM Beamline	2	B
4.6.3	Liquid Surface Scattering	2	B

Outcome – Overall Considerations

- **Very Strongly Recommend:**
  - Improved Beam Stability
  - 150 mA Operation

- **Strongly Recommend:**
  - Improved Undulators for Additional Beamlines
  - Computing and Data Infrastructure
  - Improved Detectors and Detector Pool
  - Optics and Metrology

- **Recommend:**
  - Preparation for 200 mA Operation

Where Do We Go From Here?

- The SAC is writing short critiques on all the Science Cases presented and these comments will be shared with the Lead Authors and Theme Leaders.

- What's next in regards to the science cases?
  - How do we maintain the enthusiasm of all the users and staff when we are limited in what can be in the scope of the project?
  - How to we continue to involve the community as the beamline designs mature?
  - Will there be a way to update/modify the science cases/BL proposals based on the comments from the SAC?

- Now that we have received the priority rankings by the SAC, we need to begin the process of developing ***an APS strategic plan that incorporates the APS-U Project and those sub-projects not included in the scope of the APS-U such as bioscience beamlines, some Category A2 and B beamlines, infrastructure needs, etc.***

Comment on the Process through the APS-U Steering Committee

- For now, if you would like to comment on the process or any other part of the APS-U Project, I suggest you contact someone on the APS-U Steering Committee and they will bring it to the attention of the APS-U Project Director and/or APS Director. Members of the Steering Committee are:

  Denny Mills
  Rod Gerig
  George Srajer
  John Maclean
  Michael Borland
  Tom Irving (APS PUC Chair)
  Paul Fuoss (APSUO Rep)
  David Tiede (APSUO Rep)
  Bob Fischetti (Life Sciences Council Chair)
  Dan Neumann (SAC Member)