

Minutes from UEC meeting, August 14, 2008

Meeting called to order 8:19 am

Attendees: J. Parise, B. Ravel, J. Jordan-Sweet, G. Mitchell, C.-C. Kao, M. Vaughn, D. Weidner, A. Heroux, C. Sanchez-Hanke, G. Flynn, J. Keister, D. Fischer, J. Sutherland, F. Alamgir, A. Leskovjan, M. Dudley

1. Agenda review and introductions:

- A. SpIG reps instructed to listen closely to Hulbert presentation, get info back to members, get involved.
- B. Think of questions for Aronson's lunch visit: beamline transition, updates, etc.
- C. UEC priorities: 1) NSLS-II, 2) lobbying, 3) web site

2. Minutes from May- accepted unanimously with no discussion

3. Users' Meeting update report- B. Ravel:

- A. Participation of NSLS-II: tradition to start annual meetings before construction
- B. Lessons learned from last year:
 - a. need attendance at updates/big picture. Intersperse with big name/draw talks?
 - b. Simplify fee scale? Less patrolling of sessions/workshops. Encourage people to jump around and attend all
- C. Discussion: start later? Have breakfast? Start keynote first? Try Dresselhouse again? A politician? Fee structure of general and student (last year fee was 200/75 for unlimited access). Workshops: most had few \$hundred left. One was covered by consortium, 2 by CFN. Parise requests fee structure to be presented at next meeting. Keister suggested full, one day, and student. NSLS-II participation: who makes up NSLS-II UEC? Dierker says it's too soon. Could call in BATs to elect one... Maybe have two NSLS-II workshops each year, concentrating on 2 of project beamlines. Or one could be on transition plans. Would attendance be high enough? Workshop on imaging/coherence? Press for NSLS-II user structure in place before NSLS-II workshops at NSLS meeting. Have session at meeting about forming NSLS-II UEC? Have a common lunch for all workshops so a headcount isn't needed for each? Ask Aronson to write to Dresselhouse or make speaker suggestion.

4. NSLS-II Update- S. Dierker

A. New staff: Aesook Byron (Deputy Project Director) start 9/1; Jim Yeck (Asst. P.D. for Conventional Construction) start 9/1; Qun Shen (Expt'l Facilities Div. Director) start 7/1; Steve Hoey (ES&H Manager) start 5/12

B. Milestones:

- CD3- Dec 2008 (anticipated)
- Contract for ring construction- 2/2009
- Contract for magnets- 8/2009
- Contract for booster- 5/2010
- DOE Lehman review- 6/08, reported good progress towards CD3 review

Conv. Facilities final design submission- 8/25/2008 for \$200M

Internal design review- 9/2008

Lehman review for CD3- 9/30-10/3/2008

Site prep.- 10/1/2008

RFP release for ring- 9/26/2008

Contract award- 2/20/2009

Construction start- 4/15/2009

C. Design refinements:

a. Beam height increased from 1.0 to 1.2m

b. central chilled and process water redesigned

c. width of expt'l floor increased from 11.6 to 14.6m, max beamline length 60 to 66m

d. bypass corridor redesigned

e. LOB final design deferred to FY2010 ("Phased development"). Will build 2 full and one shell

"Design maturity"- phased development- delay design of accel. systems until immediately prior to project completion: benefits from technical advances over long construction period. Conv. and accel. facilities before CD3, then accel. system (some vendor design), then expt'l facilities.

D. Readiness for construction: "self-performing" NSLS-II project will manage the general contractor. Prototypes are made and in testing for accel. components, girders, magnets, and vac systems. So far 250,000 project hours with no DARTs. Working on safety pans, shielding and fire protection.

E. Beamline acquisition strategy:

BES project: 6 ID beamlines

Early ops: 20 transfer beamlines (start in BE, 2/2012)

MIE: ~ 16 ID beamlines

Non-BES: ~5 ID beamlines (life sciences, NIST, etc.)

NIH panel review 4/28 positive initial reactions, need more info for spectroscopy.

F. selecting project beamlines: workshops 1-3/2008, 7 LOIs submitted for them, EFAC review 5/5-7/2008, report 6/2008. Speak to DOE about decisions on 8/27/2008. Don't need to decide before CD3 review. Had 4-5 written reviews for each proposed beamline before EFAC meeting. Management is considering EFAC composition and conflicts of interest.

G. Strategic planning workshops: demand outweighs supply. Need to prioritize among competing demands. Need coherent facility planning and to develop a strategic plan to guide development of exptl facilities. Will call for future LOI's against this plan. To achieve balance: new ideas vs. existing community; hi-throughput vs. hi-impact; physical placement. Wants to see greater emphasis on new ideas and opportunities. Will synthesize white papers into executive summary, get comments (10/08), solicit new opportunity workshop suggestions(10/08), make strategic plan roadmap (11/08), EFAC/PAC review (11/12/08), new opportunity workshops (1-4/09). First draft of strategic plan mid-2009. Wants to achieve better balance than first-come-first-serve.

H. Beamline funding: None available from DOE (for MIE) or NIH/BER at this time. DOC has funds (NIST). Question about MIE process: is \$ budgeted before

or after LOI? \$100M is trip wire for Congressional approval of line-item in budget, so keep below this by having a series of MIE's, each <\$100M (~5 beamlines at \$15M each), start FY2012 (prep starts FY2010).

I. NSLS-II UEC: nucleate from BATs, workshops? Groups seriously involved will self-identify. Overlap between NSLS and NSLS-II not 100%, doesn't want to take focus off of NSLS by having only one UEC. Expects clearly connected community will appear and self-organize, probably after announcement of project and transition beamlines. Steve welcomes ideas on how to accomplish this.

5. NSLS Update- Chi-Chang Kao

A. Budget: \$1M supplemental for NSLS will go towards replacing essential staff and recover part of lost operations time (2 weeks in December). Also X17A construction, and carry some over to FY09. Support for FY09 is essential.

B. Highlights:

- Synchrotron Catalysis Consortium renewed for 3 more years, X18A upgrade
- Advanced photon detector development proposal got \$750k/yr for 3 years (3-D integrated area detector) What other detectors needed for current use?
- ONR funding for source development lab renewed (accel R&D, ultra-fast science)
- Second HBCU workshop held- need experienced collaborators, develop curriculum on SR techniques- involve Stony Brook, propose NSF Sci & Tech Center.

C. Major revision of Strategic Plan: Focus on transition. Chi-Chang wants user input on the following (draft to UEC and SAC in November):

- White papers from strategic planning workshops
- Beamline transition working group
- Industrial usage of NSLS

D. Technique and Instrumentation developers:

Convert some of NSLS beamlines for Diagnostics and Instrumentation (D&I beamlines) and make new class of users. Free up ports through better detectors, more staff. Submit proposals for months of beamtime, approval by Division heads and Chair. Can be collaborations with NSLS staff.

E. User training:

Needed to increase productivity, efficient use of beamlines, reduce burden on staff. Increase number of short courses, web-based tutorials. Volunteer EXAFS team formed: Calvin, Alamgir, Ravel, Frenkel, Khalid. Chi-Chang wants help from SpIG reps on other techniques. Comment: we need more automation, software analysis development, unified packages.

6. Beamline transition plans- S. Hulbert

Gave out handout listing beamline info to date. Input from interviews with PRTs and strategic planning workshops. One solution for NSLS hard x-ray undulator beamlines is customized shorter undulators that could allow them to occupy floor space near shield wall on long NSLS-II beamlines. Need to estimate costs for upgrades and moving, get champions to assist with seeking upgrade funding (not included in beginning ops \$\$ and

needs to be done earlier). May group transition beamlines as part of strategic plan. LOIs for transitioning in early 2009? Suggestion: make time at UEC meetings to discuss transitions. Need NSLS-II accelerator group to say what undulator parameters are acceptable. Build up ½ of available ports ASAP- Montano wants to use up bends. \$40M in pre-ops funding could possibly be co-opted! The sooner we have a plan the more secure the funding will be... Could get upgrade funds from other agencies? Document should be reviewed by beamline spokespeople before posting on web site.

7. Hosting Responsibilities- R. Pindak

49 hosts at NSLS, of which 11 are not BNL employees
2858 active users, of which 1319 are US citizens, 889 are Foreign Nationals from non-sensitive countries, 649 are from sensitive countries, and 1 is from a “state sponsor of terrorism”

An audit by the Office of the Inspector General in summer '07 resulted in a report to DOE (IG-0791, March '08) with the following instructions:

Item	Responsible party
1. ensure access is terminated when assignment is completed	UA and FVA
2. verify identity and validity of immigration status	UA and FVA
3. ensure counterintelligence interviews are conducted	FVA
4. ensure FACTS data is correct	FVA
5. be familiar with specific security plans	UA, hosts

FACTS=Federal Access Centralized Tracking System, where all non-US guests must be approved before Guest appointment is approved. FACTS tracks indices checks, which are good for 2 years.

BNL has 15 days to close out appointments when visit is done.

The following problems were identified:

1. hosts are not always aware of the full scope of their duties, i.e. not notifying FVA if no more visits are needed, and not being cognizant of the security plan (restricted access, etc.)
2. labs were not validating that hosts were fulfilling their responsibilities

BNL needs to :

1. as of 10/1/08 FACTS will close out a record 15 days after any change in visa status.
2. be vigilant that tighter controls are realistic and manageable
3. be proactive in having hosts accept ownership for all requirements

A steering committee has been formed with members Susan White-DePace (GUV), Doon Gibbs (BNL management), Tom Ludlam (Physics), Alex Harris (Chemistry), and Ron Pindak (NSLS).

Comments from UEC: This sounds like a solution in search of a problem... what exactly is the problem or threat? Answer by Kathy Nasta: case of Foreign National gaining access to Lab a couple of times after documents expired.

Comment by UEC: issue should be brought up with Aronson. Procedure needs to be reasonable. If a local responsibility, we need more local control. When safety requirements increased, NSLS gained safety staff- should we have more staff for this? What exactly are the security issues at BNL? One is espionage of commercial interests, the computer network (using it to launch attacks). Can BNL have islands of security in a more open campus?

Aronson's response at noon:

While the process is easier regarding indices checks, the accountability of hosts has increased. Training exists for hosts- is it not clear?

New Check-in/Check-out system (GANS) generates email when beamline request is changed.

UEC had questions: Does the host then also change? How are they notified? How does a host know if training requirements change? What are the issues at each of the facilities and is the training consistent with the issues? There is a gap between issues addressed and compliance to the letter of the law (i.e. keeping tabs on a guest at all times). Can badge scanning be connected to host notification so they even know when a guest is on site? What are the legal liabilities of hosts? (Aronson says Lab is responsible, not hosts) What are we endangering by not knowing what our users are doing all the time?

Something about flaws vs. misunderstanding of intent?

Hosting will be put on agenda for Nov 13 meeting, with Susan White-DePace and Sam Aronson present.

8. Template shifts- T. Lanzirotti, S. Wirick

Template schedule (0:00-8:00) requested only once in last couple of years. Consider whether still needed- messes up scheduling for some high-throughput beamlines. Consider moving to 20:00-24:00 at end of studies? Parise moved: no more than 1 8-hour shift scheduled at end of studies period (8 pm) per month. Seconded and passed unanimously.

9. Power reliability- S. Buda

Estimated \$100k in equipment loss from LIPA brownouts (dips as low as 87VAC) due to thunder storms or AC demand. Problems with interlocks, power supplies and RF, water, and computers. In 2008, already 28-29 events just halfway through the year, and taking more time to recover in the past two years (flood in '07, 15 min power loss in '08).

Faults: 1) sags or dips (1 to 15 AC cycles of 5 to 20 % amplitude loss): magnet power supplies go out of regulation, RF systems experience drop in output power, possible crowbars. 2) complete power outage (> 1 sec): cooling water, beamline and front end interlocks, vacuum systems, X17 SCW, cryo plant, RF and magnet power supplies.

Causes trips that need manual resets, taking 45-60 minutes. (ring secure- 15 min, cooling

water restart- 1 hr plus call-in time, safety system reset, X17- 30 min, klystron warm-up- 25 min., plus any failures.

NSLS has 125 kW generator power to take up UPS load after 25-30 sec. #.5 MW is required to operate NSLS. Need to assess cost/benefit for next round of improvements: improvements in preventative maintenance, increased staffing, improved diagnostics, new technology. Suggested solutions for >1 sec outages: UPS on interlocks, vac controls (expensive); klystron filaments, auto water startup, auto cryo plant startup, upgrade or replace magnet power supplies. Not much can be done for dips. Need stable power. UEC request: give advice to beamlines on best UPS solutions. Will see what other facilities' experiences are (APS).

10. Lunch- S. Aronson

Agreed to coordinate and write to someone like Dresselhouse.

Doesn't have data on power problems. BNL has no special relationship with any power authority, other than low cost with NYPA. Sam will talk to Mark and get Scott's data.

FVA hosting- see comments under that section.

11. Town Meeting:

- A. Lab cleanup, Safety- A. Ackerman
- B. NSLS Update- C.-C. Kao
- C. NSLS-II Update- S. Dierker
- D. DOE FACTS data base- Lenny Butera
- E. Computer access- beamline networks- Phil Zeo
- F. Machine Update- Boris

12. UEC Charter:

New office: Web secretary

Subcommittee to bring up changes to Charter: Parise, Jordan-Sweet, Fischer, Ravel.

Moved by Parise, unanimously approved.

13. Web sites:

Out of date and not much info. Good place for lobbying. Steve Giordano does updates/maintenance. Give him content. A. Heroux volunteered to be Web secretary.

Will work with Jordan-Sweet to give updates to Steve. Want links to NUFO, SNUG, other UECs.

14. Computer Use Agreements:

Soon will need to sign agreement and take cyber security web training to access any computer resources at BNL. Anything where there could be perception that a violation is coming from BNL.

Submitted by J. Jordan-Sweet

Minutes accepted on Nov. 13, 2008