

Minutes of the November 13, 2008 UEC Meeting

Called to order 8:48 am

Attendees: B. Ravel (chairing for J. Parise), G. Mitchell, J. Keister, D. Fischer, M. Vaughan, G. Flynn, C. Sanchez-Hanke, J. Jordan-Sweet, J. Sutherland, A. Heroux, A. Leslobijan, H. Strey, B. Raghothamachar, F. Alamgir

A) Minutes:

Minutes from August accepted unanimously

Motion (passed unanimously): email draft of minutes to UEC as soon as possible, and after acceptance via email, post them on the UEC web site.

B) **Next meeting:** proposed February 18 (Wed), voted on and passed at end of meeting.

C) Users Meeting Update (B. Ravel):

“Meeting Big Challenges of Small Length Scales” Planning committee: B. Ravel, L. Venkataramen (co-chairs), C. Sanchez-Hanke (workshops), J. Jordan-Sweet and S. Wong (sponsors), G. Webster, Kathy Nasta and G. Cisco (all the hard work).

Workshops: 4 on Monday, 3 on Wednesday (out of 10 submissions)

Main meeting: confirmed speakers so far: Harriet Kung and Mildred Desselhaus. Others invited: Don Brownlee (Stardust), Franz Pfeiffer (coherent XRS), and Paul Weiss (nano-imaging)

Fees: \$220 general/unlimited, \$110 student/unlimited, free plenary session.

Vendors: 34 in 2007, 39 in 2008. Space for 40.

Sponsors: 8 in 2007, 14 in 2008

Awards: Julian Baumert- nominations early November
Community service

Discussion: Comment: hard to determine # attendees for workshops- need central lunch.

Q: how is reception paid for? By vendors. Then should be open to everyone.

Q: other funds- BSA gave \$13k last year. Have to account for spending and hand back if unused. \$ from directorates also (NSLS, NSLS-II, etc) folded in with BSA. Will ask for same amount this year. Spend more on workshops?

Q: raise workshop budgets? Yes.

D) Industrial Research at NSLS (Jun Wang):

Motivation: competitiveness, leverage, wealth

Current status: partnership since the beginning- 14 of 45 PRTs are all or partly operated by industry. 7% of users. Showed % by industry type. #days used by industry at each beamline.

Plans: To improve collaborations: More focus on applied research. New opportunities and strategies will be necessary for future- PRT model not practical, too expensive.

New efforts: New position of Industrial Program Coordinator (Jun), make connections with other facilities, direct new industrial users to correct beamlines, pursue joint funding opportunities. Examples: 1) GE and DOE/EERE/ITR to develop ceramic

sensors- NSLS to provide new furnace and control system. 2) IBM and NSLS- upgrade of X20B for high-throughput thin film analysis.

New activities: International Workshop through JPSI Industry Working Group; Industrial user web page (applications, examples of research)

Future plan: New coordinated initiatives: 5 year strategic plan for NSLS-I and II. Goal is to bring state-of-the-art capabilities to industrial user community and educate the public. JPSI will play important role in promoting industrial connections.

Questions: What % of beamtime is proprietary? ~1%. Any plans to increase? No. Also no issue with getting enough proprietary time so far- is self-limiting. Discussion of definition of proprietary vs. non-proprietary beamtime. Non-proprietary: if patented, gov't gets to use. If not patented, gov't can patent. Proprietary: gov't has to keep secret.

E) User Admin Update (K. Nasta):

FY08 statistics for BES:	2007	2008
Users	2219	2128
PRT/CU hours	230,584	207,572
GU hours	84,862	84,298
Beamline-hours	437,004	380,250
Hours used	340,367	313,146
Publications	986	972
End-of-run forms	360	277

EOR surveys required as DOE report. New on-line system 10/07. FY07 response rate 16%, FY08 rate 13% (Should base response rate on #runs on SAFs, not #users).

New procedures to track comments and issues- monthly communication at operations meetings, article in e-news after UEC meeting. In future will have an area in PASS to review issues and their resolution. Spokespeople and local contacts can see their beamline EOR forms on PASS, including if #ops hrs sufficient, beam performance, scheduling/service, facility support, BL support...

EOR form comments: beam dumps, thunderstorms, beamline tech eqpt too slow, happy with staff, safety regs are overboard, language/acronyms hard for foreigners (training), nanomaterials requirements, vending/food no good.

Proprietary users are now required to pay 100% of anticipated usage for entire year! No longer 25% unless over \$25k/yr. Current fee is \$111.40/hr. Invoices to collect difference in amount due will be sent in December.

NUFO requested listing showing # users by zip code and foreign users by country, mostly for benchmarking and lobbying/education use. NUFO lobbying volunteers are contacting local and DC officials to garner support. 2009 NUFO meeting will be at ANL. <http://nufo.org>. Governing Board is S. White-dePace, Susan Stasser, ORNL user admin (Judy T?) and 3 UEC chairs.

F) Beamline Transition Working Group (S. Hulbert):

Working plan: list of resources (beamlines, people, etc.) reflects diversity. Presently meeting with beamlines and refining data. Draft list under review by NSLS Science Division (Ron and Lisa) and management. Need to mesh with NSLS 5-year plan and NSLS-II strategic plan. Some examples:

- 1) Entire beamlines (NIST- soft, tender and hard spectroscopy, working with contractor and development at NSLS D&I beamlines. Case Western – metallomics program, Mark Chance)
- 2) Endstations: (IBM X20B). Multiple medium-size investments
- 3) New beamlines (MaDiS- Materials Diffraction- proposal for NSF major research instrument funding, 120° strip detector by Siddons. Commission on D&I beamline)

Future: seek funding for upgrades. Group together beamlines for upgrade and transfer. Work out specifics: cost and schedule. List is still being refined. Will assist interested parties with optical designs, performance calculations, and technical analysis.

G) NSLS-II Update (S. Dierker):

Milestones are unchanged- CD3 due in Dec '08.
 June 2014 ring available to beamlines.
 June 2015 CD-4 (start of ops).

Showed pictures of meetings, prototypes, multilayer Laue lens dep system. Final design plan is “phased completion”: projected design % complete based on nature of subsystems.

Experimental facilities: user workshops, LOIs (11 received and reviewed, report 6/08; chosen project beamlines announced 9/08):

IXS (inelastic x-ray scattering)	BAT meeting 12/5
HXN (hard x-ray nanoprobe)	BAT meeting TBD
CHX (coherent hard x-rays) (30m to hutch)	BAT meeting 12/9
CSX (coherent soft x-rays)	BAT meeting 1/8
XPD (x-ray powder diffraction)	BAT meeting 11/24
SRX (sub-micron resolution x-ray spectroscopy)	

Conventional facilities: 100% Title II package rec'd 8/25/08 (design). General contractor bids due 12/5/08. 6 firms considering, all local on LI. Largest procurement in BNL history. Complete bid package put out 10/1/08. Anticipate on-schedule award and construction start. Continuing resolution may impact dates- some of \$180M contingency will be used for ring contract. On 9/5/08 DOE CFO ruled that NSLS-II is no longer categorized as a new start, so can spend construction funds even in continuing resolution.

Expected funding in FY'09: \$103M (\$10M R&D, \$27M PED, \$66M construction). Continuing resolution provides \$21.5M until 3/6/09- most of money will be spent later in FY. If new funds aren't approved, could have substantial delays and cost increases.

CD-3: Office of Science Lehman review 9/30-10/2 had 3 recommendations: include all 3 bypass corridors, implement a “lessons learned” plan, and approve CD-3.

OECM review 10/20-24: 7 major findings. Final report 11/20.

Q&A:

1) Are we at a point where lobbying could help? Yes- wait until Congress returns (Dec or Jan).

2) How aware are Local politicians? Local politicians are well aware of project.

Action item: draft letter to support stimulus package for Long Island and visit local reps.- meet with Bishop.

- 3) What is timeline for strategic plan and future LOIs? No change: ~1 month delay. Workshops Feb-April.
- 4) ground breaking: do it with general contractor coming in- April-May.
- 5) UEC: NSLS-II user group: UEC asked for input last meeting and got no feedback. We will look at charter and revise and consider how NSLS-II can be included. Proposed that J. Parise meet with SD and C-CK to address user rep issues. Form working group and present for discussion at Feb meeting, and report at User Meeting in May.
- Action Item:** meet to hash out NSLS-II user group- what parts of charter to be changed?

H) NSLS Update (C-C Kao):

Budget: FY09 continuing resolution: \$36.5M. FY08 supplemental \$1M not spent yet or added to base. Fewer staff working on NSLS-II because their budget is worse than in FY08.

Plans: Reduce ops budget (similar to 2008). Move on safety and ops projects to keep machine going. Finish X9 enough to start up. Finish X13A endstation. Begin X17 upgrade in collab. with BNL Condensed Matter Physics/Materials Science dept. No additional shutdown planned so far. Will re-evaluate if CR becomes real budget.

Stats: 2128 users, 972 pubs. X-ray hours: 4473 scheduled, 4157 delivered (92.9%). VUV hours: 5377 scheduled, 5236 delivered (97.4%).

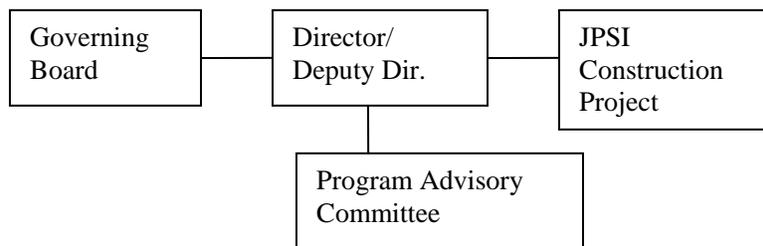
2008 DOE review:

Findings: 1) Number of high-impact publications has remained at high level. 2) User population is holding steady (~2200). 3) Despite age, continue to operate with high reliability- dedicated accelerator staff. 4) Science highlights are well-chosen; detector program is one of jewels. 5) Five-year plan provides clear framework- successfully leveraging relationship with CFN and external groups to grow. Has fully engaged user community and staff in development. 6) Staff morale has improved since last review.

Recommendations: 1) staff is really stretched- should get enough time for research. 2) Develop plan to cover critical skill sets that will be lost and identify critical components. 3) Transition plan must be developed as soon as possible- appoint transition planning team.

JPSI: Funds from NYS Empire State Development Corp., transferred through USB to BNL. DOE mission needs statement has been drafted. Produced white paper and fact sheet. Working group meets regularly to guide development of JPSI and plan a major workshop.

Organization: Type 1 Provostial Center with USB



Joint funding between State and DOE. To catalyze innovations by facilitating industry, university and gov't interactions and collaborations.

In BNL context: To maximize research opportunities provided by NSLS-II. To reach across boundaries between BNL Directorates (move successful programs into Directorates). To serve as portal to industry and universities to maximize impact of science and technology advances, identify collaborations and partnerships, nurture future talent for BNL.

In Program context: 1) Industrial program- strategic alliance with NIST to bring in industry. 2) Exploit existing technologies (ex.1: detector program- \$2.2M for 3D architecture and Ge sensor for high-energy x-ray applications; ex.2: Ultra-fast source development). 3) Research Programs: BES (Misewich and Hill to ID), PD beamline (Parise and Billinge)

Need new ideas for best way to use NSLS-II. No more PRTs. Do this for community.

Q) Role for theory? A) all funding based on proposals. Good idea. Need to focus on specific techniques that need theory in order to structure a fundable proposal.

I) FVA and hosting issues Q&A, (S. White-dePace, K. Nasta, V. Stojanoff):

Presentation of a number of anecdotes about serious delays in approval of guest appointments. SWD and KN addressed some individually and said big backlog from last January has gone away- was a problem with lack of staff in Washington. Also seems like users get approvals at other National Labs more quickly. SWD and KN doubted this was really true and said they need factual documentation. They have no control over finding out where the holdup is, although they know it is offsite. There is an expediting process if needed. Also, it is important for FN guests to renew BEFORE their appointments run out, otherwise it's as if they are applying for the first time and that takes longer. There are extra steps for 11 sensitive countries: background checks are done and approval has to come from two places. It is suggested that GUs file for approval (guest registration) at same time that they put in their request for beamtime (or new proposal). Question asked whether there is any chance of making parts of BNL more accessible than others to make approval easier. SWD would like to get to the point where guests register and get on site without knowing any processes or details about FN vs. sensitive countries vs. non-sensitive countries, etc.

Another question was whether DOE could change categories based on country of passport rather than country of birth. Get NUFO to help? KN will follow up- NUFO steering committee has monthly phone conference. FVA offices should compare notes.

One improvement is that now they can use a short-term visit category to get quicker approvals. This should help a lot with short visits, and they can get 30 day window for rapid access. It would be useful for industry to get involved- make a streamlined agreement process to get access to all facilities at once.

Another issue is how hosts are supposed to keep track of guests- which beamlines they run at, when they arrive and depart. SWD is working in a "guest arrival notification system" where arrival and beamline info are emailed to the host. Also a web site accessed by hosts that lists people scanned at front gate in real time, or based on GANS system and has end date.

J) Educational Opportunities (B. Ravel):

First demo project for web-based tutorial materials depository is being organized by Faisal Alamgir, Scott Calvin, Syed Khalid, and Bruce Ravel for EXAFS. To include

concepts, beamline components, preparing to arrive, sample prep, alignment... Working on story boards. SpIG reps can get on board once this demo project is done in ~ 1 year. Will have two faculty with 1 mo. summer salary to lead Q&A bulletin board, share expertise. Develop program to train the trainers.

NSF will fund an HBCU workshop- combine the two to bring in HBCU faculty to “train to teach”. (Like Hercules program at ESRF?)

JPSI could keep these materials in a repository.

Action Item: schedule an update for February meeting.

K) Nominating Committee for UEC election:

Jean volunteered to be chair. Will find two more members and make sure nominees are willing to run and serve as Vice-Chair and Chair. Report back to John P. with committee membership in a week.

L) Housing Issues (K. Nasta):

Chi-Chang attended an upper management meeting (BSA operations review) and based on a survey made a year ago, they concluded there is no problem with housing, in quantity or quality. There are no plans to do anything to improve housing for NSLS-II. They don't anticipate that there will be any change in the type of user at NSLS-II. BNL cannot subsidize. However, UEC thinks they should expect ~4000/year and that they will be groups rather than individuals. Shorter beamtime, therefore more people. We want better housing for our customers, and this is something the facilities should promote. Housing on site needs improvement before start of NSLS-II.

BNL dorms are \$30. APS guest house is \$57 and much nicer, like a hotel. But DOE discourages 3rd part financing of on-site hotels after ORNL (what happened?). Brookhaven Town and Suffolk County not interested unless off site. There is a proposal for a hotel in Yaphank. UEC thinks Lab should revisit this- build something not comparable to surrounding available units, like a dorm. ALS got DOE \$ to build theirs, but it's a long shot.

Proposal for a link to a simple Housing Survey on the End-of-run form or poll at May Users meeting: 2 questions: 1) If you ran an experiment last year, did you stay on site? Type of housing? What's your opinion? and 2) If you didn't stay on site, why not?

Action Item: Cecilia and Faisal will come up with short survey to be sent out by SpIGs so that we can get data to present to Sam Aronson and Housing.

We need to make a trade-off between cost and improvements, and figure out what is within the realm of possibilities. K. Nasta will put something in e-news along with a link to the Housing survey.

Another issue: Housing now only accepts credit cards or checks, and not account numbers A) There was a meeting yesterday and things are back to normal. Housing had no way to check valid account numbers. Will put programming into place that views account info. Another question about students charging and not being at experiment, and charge being denied by faculty.

M) Charter:

Send comments. K.N. will send both copies to UEC members. Mark up clean copy and send back to JP. Go through another round in Feb.

N) Student/Post-doc update (A. Leskovjan):

Pizza lunch (ASAP announcements, meet others, discuss expts, etc.) Attendance has gone up. Spent \$2600 last two years, one every other week. This year at \$1000/4 months so far. Need ~\$140/week. Asks for \$500 plus \$500 for more in the future.

UEC has \$18,000 from users meeting and more in regular account.

Proposal voted on and passed unanimously: Increase budget by \$1000/yr for SPD pizza lunch.

O) Mugs (C. Sanchez-Hanke):

Wants to replace styrofoam waste with ceramic mugs. Provide 3/beamline and remove Styrofoam. Provide example for rest of Lab. Plain with marker suggested.

Could this be a vendor donation at meeting? Giveaway?

Estimates \$500 will cover.

Proposal passed with one objection and one abstention: Provide Cecilia with up to \$500 to make coffee mugs available to users and staff of NSLS.

P) Next meeting: Wed. February 18.

Meeting adjourned at 4:30 pm.

Submitted by J. Jordan-Sweet

Minutes accepted on February 18, 2009