

Minutes from the JLab Users Group Board of Directors meeting, Jan 23, 2014.

Board members present: John Arrington, Dipangkar Dutta, Jose Goity, Carlos Munoz Camacho (for Eric Voutier), Eugene Pasyuk, Katherine Myers. On Phone: Sebastian Kuhn, Steffen Strauch

JLab/JSA participants: Hugh Montgomery, Bob McKeown, Arne Freyberger, Allison Lung, Rolf Ent, Chip Watson, Elizabeth Lawson, Jerry Draayer

Note that due to cancellation of initial meeting due to weather, many participants were unable to attend the full meeting due to conflicts and talks were reordered at the last minute.

Agenda: [Slides available on the wiki: [https://wiki.jlab.org/cugwiki/index.php/UGBoD\\_Meetings](https://wiki.jlab.org/cugwiki/index.php/UGBoD_Meetings) ]

|       |            |  |
|-------|------------|--|
| 8:50  | Arrington  | Welcome, Intro                                 |
| 9:00  | Freyberger | Commissioning plans                            |
| 9:30  | Ent        | Scheduling, PAC41/PAC42                        |
| 10:00 | Lung       | 12 GeV upgrade status                          |
| 11:00 | Montgomery | Director's overview [busy 10:00-11:00]         |
| 12:00 |            | Discussions with lab management, working lunch |
| 1:30  | Lawson     | JSA update                                     |
| 2:00  | Watson     | Computer Center update                         |
| 2:30  |            | Area reports, Board discussions                |

Items of particular note highlighted in red

#### **Arne Freyberger: Machine status, beam commissioning**

- 6 days beam operations in December before holidays [in injector area – all new beamline]. **New injector chicane commissioning complete (100 uA to injector dump).**
- In January, beam delivery into main machine.
  - **Delivery through east arc (pass 1) and up to south linac; 5 days beam in north linac**
  - Includes 5 new C100 modules in north linac (1025 MeV of goal 1100 as of this morning), new splitter for east arc, updated arc magnets.
  - Working on optics/tune/spot shape/etc.... No major issues.
- HCO (hot checkout process – no beam) updated after problems with early checkout. Status reports collected into graphical online tool for easy access/authorization. More coordinated and detailed review of all elements [see slides for details and examples].
- Recommissioned original 2K cold box (SCM) – not used in over 10 years.
- 6 GeV CHL and cold box (SCN) – same load but lower volume so significant change.
  - Cryo group worked on performance, load, stability issues.
  - Operational in Mid-December, but still optimizing. Getting to stable 2K.
- Issues
  - Still optimizing performance/stability of 2K cryo
  - HCO taking longer than expected. Some additional delay due to cryo (expected last November, delayed until December)
  - 10% problem in RF calibration. Need 1% level for automated controls.
- Commissioning plan step-by-step: pick a destination, complete HCO, transport beam, calibrate diagnostics, calibrate high-level applications (orbit/energy lock), explore beam physics (energy scaling, emittance growth), finalize configuration.

- **Commissioning schedule [more details in slides]:**
  - Run till Feb 6. want 2.2/pass at end of first pass. Completes CD-4A 12 GeV deliverable (Dec 2014 deadline). Optimistic that 2.2 will be achieved, more work needed to achieve stable/useful beam.
  - March: 3 pass beam to Hall A
  - Mid April: 5.5 pass to Hall D
  - Long summer shutdown
  - CW beam once authorization approved and CW beam dump is in use (injector, halls)
  - Fall: photons to Hall D, 5.5 pass optics studies
  - Spring 2015: restoration/commissioning (RF separators), remaining time for physics.
  - Physics possible during any unused schedule contingency (factor 2), or if high-pass setup/commissioning delayed, e.g. due to hardware limitations.

### **Rolf Ent: Scheduling, PAC, PHY Restructuring**

- **Expect official annual scheduling requests to begin 2015 instead 2014. In the meantime, commissioning, physics, and parasitic running scheduled informally through lab.**
- 59 Approved experiments, PEPP0 (commissioning run, already completed) not included.
- **PAC41 for reprioritization exercise** (PAC42 for new proposals)
  - Evaluate experiments that could run in first 3-5 years beyond commissioning; only those ready for physics running in this time period will be evaluated.
  - Provide input to scheduling process from PAC on highest impact science.
  - Short document (~2 pages) has been prepared for each experiment by hall leaders with detailed feedback from proposers. Lab will generate matrix of experiments based on when they will be ready to run.
  - Lab is putting together 1 page info sheets for each run group – will contact spokespeople for comments.
  - Readers will be assigned based on category (7 categories, with TMD/GPDs separated)
  - Extended discussion/question period; answers summarized here:
    - There will be a clear charge and defined criteria for the PAC (not yet completed)
    - The lab wants the PAC to rate experiments based on existing information, does not want users to have to spend time on updates, summaries, etc.... It's up to the PAC members to evaluate the impact on experiment which were only partially approved.
    - The concern was raised that spokespeople would not being able to make the case for the importance or urgency of the measurements. The original proposals and updates will be made available to the PAC. There are no plans to accept additional input from the experiment spokespersons.
    - Expected output of PAC is list of "gold star" experiments in each physics category, which lab can take into account in scheduling. No change to grades, rating, etc... This is meant to provide an additional input, based on the criteria that will be given in the charge, to be used along with existing metrics (grades, physics interest within the field/lab, etc...).
- Eugene asks about timing for releasing PAC reports: The previous PAC implemented new procedures to speed up the report, in particular having report writing done before PAC leaves, with the goal of releasing the report within one month. Previous PAC report was significantly later due to some one-time issues which should not affect future reports.
- Carlos asks about timeline for announcing new PAC members formally. Notes that based on indirect information, there don't appear to be any members who are experts in GPDs. Bob responds by noting that there are constraints due to fact that some foreign bodies have designated seats, and

funding of honorarium is an issue for foreign members (has to come from JSA, not DOE funds). Membership based on input from Rolf and Patrizia, hall leaders, and PAC members. In addition, saying that PAC members should not be considered as promoting certain constituencies, they should be considered impartial experts. John points out that UGBOD used to be asked for input, was able to provide user concerns on balance/composition of PAC.

- Rolf goes over long list of reviews taken place over last year [see slides for details]
- Experimental readiness review process has changes. There is a more generic safety walkthrough, which will be required of all users.
- Updated on EIC/MEIC related activities.
- **Restructuring within Physics Division [see also slides and Mont's presentation]:**
  - Ground rules as driven by funding expectations: Assume hall multiplicity of 3.5 halls (maintain 4 hall capabilities, merge some functions), operational 2.3 hall multiplicity with 30 weeks/year running in out-years.
  - Fewer weeks, lower multiplicity → less running, less equipment, less manpower needed.
  - Work focus: maintain efforts to begin 12 GeV physics ASAP, maintain EIC efforts, maintain capability to operate FEL as need arises.
  - Decisions made by senior management based on set of formal criteria including maintaining necessary skills/positions/capabilities. Input obtained from Hall leaders when necessary.
  - Organizational changes:
    - DAQ/Target groups largely unchanged
    - Hall A and Hall C scientific staff merged (engineering, technical groups separate)
    - Combined spectrometer support group for Halls A, C
    - Combined detector support group for Halls B, D (reporting to Patrizia Rossi)
    - Fast electronics group will assign people to Halls B and D.
    - Radiation detector/imaging group - will provide more support for PMT based detectors

#### **Allison Lung: 12 GeV upgrade.**

- Rebaselining of project approved in September
- The review following the rebaselining went well, yielded positive feedback.
- Currently, focus is on spectrometer magnets as long lead time, high-risk items: “moderately good progress” (slow but steady).
- Work on accelerator, detectors, etc... all moving along [see slides for more detailed report]
- Hall D detectors: good progress but going slower than hoped.
- Hall B: cost/schedule issues with HTCC, LTCC, SVT
- Hall C: HB progressing but slowly, Q1 now likely to be first magnet to arrive. Dipole still not in production; coils still being prototyped but everything else ready to go
- Director's review planned for late March 2014 [full project progress]
- OPA (Office of Project Assessment) review, April 8-10 2014
- Accelerator progress detailed in Arne's talk; expect to beat CD4A by many months
- Project is 85% complete and 96% obligated. Beam commissioning in Halls A/D in CY2014.

John: Introductory remarks summarizing feedback from users on the restructuring.

#### **Hugh Montgomery: Lab Overview**

- Highlights

- TEDF project competed in 2014, received LEED Gold certification; project director nominated for award
  - Significant progress in making efficient use of GPU for leadership computing
- Lab received performance evaluation for FY13 in December: Small improvement from FY12.
- Presented brief overview of 12 GeV and commissioning schedule [see talks by Allison, Arne]
- Indications from ONP that there could be LRP (long range plan) charge in spring.
- BNL-JLab EIC advisory committee being reconstituted [Walter Henning as Chair]
- Three-year schedule now available: address the need for longer term plan without day-by-day level details.
  
- **Budgetary issues:**
  - FY14 project funding profile decreases from FY13, operations funding needs increase but FY14 numbers not yet known
  - Continuing resolution plus some help from DOE allowed for accelerator commissioning plan to move forward.
  - Recently approved budget is very close to the Tribble Report “Modest Growth” scenario, where it is feasible to maintain efforts at JLab, RHIC, and FRIB.
  - FY14 total NP funding close to Presidents request; line items included for 12 GeV Upgrade, FRIB, and RHIC. All are close to requested numbers and consistent with operating budget plans for out-years. However, with close to half of total request included as line items, any adjustments must come from remaining items. Concerned about possible impact on university research, JLab operations.
  - **Directive to provide full up-front funding for grants below \$1M could act as significant one-time hit to NP budget (estimates in the \$20, \$25 million range were mentioned). Concerned about possible impact on university research, JLab operations.**
  - UIM (Utilities improvement) project approved for \$29M [See slides from 2013 UGM]
  - **Beyond FY14:** So far, only rumors. Delay in OMBs comments on budget proposals. Possible delay of president’s budget beyond February. No reason to expect large changes, but it’s very uncertain. Lab is currently working on hypothetical budget scenarios that are not favorable. Not confident of sufficient funds to maintain planned ramp-up to operations.
  
- **Restructuring:**
  - Several pressures on JLab funding over last year
    - General cuts due to negative budgets, sequestration
    - Loss of FEL funding (victim of Sequestration)
    - Reduction/volatility in work for others: e.g. BESAC report on light sources
      - APS light source upgrade at ANL delayed (loss of JLab work for others)
      - Priority shifted to LCLS II at SLAC. Possible opportunity for significant JLab participation.
  - Work Force Restructuring undertaken with goal of aligning to expected future ONP budget, uncertainty in work for others.
  - Voluntary Separation Program in 2012 and 2013
    - Plans for Involuntary Separation Program announced to employees September 2013: ~40 employees, layoffs to be announced and to occur Jan 15<sup>th</sup>, information on benefits, severance, job placement services, etc... For further details, see the Sept 29<sup>th</sup> memo at <https://www.jlab.org/memo/archive/2013/09>

- Mont noted that his slides at the DNP meeting included the fact that there would be a Work Force Restructuring implemented in early 2014 to align the lab to future ONP funding plans and work for others expectation. It was noted that the users did not understand this statement very well and many felt that there was no advance notification given when they received Mont's email on January 15<sup>th</sup>. Note that while it not a generally well understood phrase, 'work force restructuring' has a relatively specific meaning within DOE (in the context of DOE contractors).
  - All parts of lab were examined (no division exempted); permanent and term employees treated equally, no differentiation of 12 GeV project positions (no penalty for employees who moved to work on 12 GeV project). Selection based on objective criteria with significant component based on evaluation of what positions were necessary to maintain necessary lab capabilities. In the end, 46 employees were laid off (out of ~800 total lab employees)
  - 12 GeV program and MEIC efforts maintained as key activities. No FEL division, but reorganization designed to maintain operations capability for physics, MEIC R&D, future external funding opportunities.
- Summary: Restructuring was a difficult experience, but undertaken to position lab for future. Office of Science/ONP support of lab has been strong, with explicit support of 12 GeV upgrade project. Accelerator commissioning is making good progress. Efforts for future development are focusing on MEIC development, working with Newport News, Virginia, and physics community to move forward.
  - **After the presentation, there was a significant period of discussion on the restructuring.** The details of the discussion are not included here, although some of the straightforward information that was presented in this discussion is included in the notes above. I will summarize some of the discussion here but these points are subject to issues of poor memory, misunderstanding and the like significantly more than the main presentations:
    - As part of this discussion, the board expressed the strong concerns that we heard from many users about the way the layoffs were implemented, the lack of information provided to users, and the potential impact this could have on JLab. The board also passed on complaints about the lack of acknowledgement of the work done by the employees who were let go as part of the restructuring.
    - It was noted that many of the details as to how the process of reorganization planning was carried out cannot be discussed publicly.
    - It was stated that the reaction of laid off employees cannot be predicted, and both physical violence and white-collar type violence are possibilities, so no advance notice was provided and all terminations were handled in the same fashion.
    - Employees who were laid off were brought by their supervisor to meet with the division manager and an HR representative. They were then escorted to meet with TIAA/CREF, representatives from an outsourcing company and the employee assistance program (as desired), and then to their office for a very brief period to gather their belonging. They were invited to come back to the lab at later time if they had anything else they needed to do/get, and to arrange to get computer access/information where relevant.
    - Lab management concluded that there were issues with the way information was communicated to users. They plan to provide additional information to users on both the need for the restructuring and the impact of the structural changes (presented in Rolf's talk) on the users.

- It was also noted that the memo on the 15<sup>th</sup> was composed with the staff in mind. Because outside users had not received all of the information made available to the staff, it was not as clear as intended when acting as a primary source of information to the users.

#### Elizabeth Lawson

- The portion of CSC that partnered with SURA to form JSA was acquired by PAE. Transition took some time but is now essentially complete with no substantive changes to JSA/DOE contract.
- **Owners (SURA and PAE Applied Technologies) committed \$400k to the JSA Initiatives fund for FY14.** Six proposals (a set of recurring, high-priority, time-sensitive initiatives) were approved in advance. Expect February or March awards for remaining proposals. Note that this was required by the contract for the first 5 years, but has been a continuing voluntary contribution from the JSA owners for three years now. This funds a large part of the UGBOD activities, including awards, meetings, and several important user-initiated proposals.
- First round review: users group (complete) + lab management (almost complete). 2<sup>nd</sup> round review: IF Evaluation Committee (appointed by JSA Program Committee chair).
- SURA relations and outreach.
  - Involvement with very broad outreach (science policy, etc... across science)
  - Direct lobbying, much more focused (at least \$250k/yr)
  - SURA Distinguished Friend of science
- RESFAC: FY13 occupancy was uncharacteristically low (approx. \$350k in revenue, \$410k costs) largely due to low occupancy during shutdown period and restricted travel budgets of users. FY14 expect to be better, but still not quite break even. While occupancy much lower than usual, guest evaluations and comments are very positive overall. Note that SURA does not charge overhead for RESFAC operations, which allows rates to be kept down, and is a significant contribution to the lab.

#### Chip Watson – Computer updates

- FY14 – not much going on; improve software/operations [minimal funds this/next year]
- FY15 – first major 12 GeV upgrade – 5k-6k cores
- FY16 – further upgrades
- Data challenges for 12 GeV. 10/25/50/100% of scale 24/18/12/6 months in advance (including data transfer, analysis, push to tape, pull from tape to analysis]. Set up as milestones for the computing efforts for the recent software review.
- Hall D, already finished 10% goal, should have completed done 25%, but planned next month. Slightly behind schedule, but goals left little cushion given early Hall D start date. Rebuilding lattice nodes for use as farm nodes to perform tests without requiring additional upgrades. That borrowed time needs to be returned to lattice at some point.
- Offline evolution
  - Define/track a workflow, auto-retry for failed jobs, monitoring progress of workflow, manually adjust.
  - Write through disk cache (files held for a while, then pushed to tape. Allows for time to check files before pushing to tape, [like a cache disk that doesn't fill, everything ends up tape eventually without 'active' management). Never fills – overflows to tape. Can be used by Global Online WAN file transfers to write to JLab tape library. Has been used for a while for lattice QCD.

- Stage-out unused work disks. Have 100s of virtual disks (e.g. experiment-specific work disks), many completely idle. At some point, disks that are totally idle will be moved to tape.
- UIM project funded (lab infrastructure), includes improved networking infrastructure, some redundancy, etc.... To be implemented over next few years.
- Restructuring questions: IT had been slowly shrinking [not making replacements] over last few years, so smaller hit on IT. Did involve some shifts in positions.

**Area Reports:** Note that because of some schedule conflicts and the weather-induced shift of the meeting from Wednesday to Thursday, a limited number of board members were present at the end of the meeting. Area reports and discussions of future plans, Users Group Meeting organization, etc... were brief and will be continued by phone. Please contact any of the UGBOD members if you have issues you would like to see discussed.

Carlos

- JLab has stopped (or significantly scaled back) signing MOUs with foreign institutions, due to additional costs involved. The alternative "Collaborator Agreements" don't always satisfy the needs of the institutions or funding agencies for foreign users. This has led to significant delays and confusion when trying to arrange work, visits, equipment loans, etc....

Dipangkar:

- Got in touch with SURA lobbyist. Ready to make hill visits annual (JSA organized - Kent, KK, Gordon, Sebastian), help coordinate. Planning to do it again this summer.
- Updated contact lists: general representatives (users in permanent position) and key-constituency list.

John:

- Continuing to think about ways to improve communication, outreach
- Would like to assemble 'speakers list' of speakers who can present JLab physics well to a broader audience. Looking for suggestions.
- Feels that more continuity on the board might help. Perhaps going from 8 to 9 at-large members, and having three-year terms with 3 rotating off each year. There was a concern that this could make it harder to get people to stand for office. It will have to be discussed further and approved by the user group. Comments on this (or similar ideas) welcome.