

JLab User's Group Board of Directors Meeting

December 13, 2010

Boards members present: *Andrei Afanasev, Daniel Carman, Phil Cole, Sucheta Jawalker, Aidan Kelleher, Sebastian Kuhn, Zein-Eddine Meziani, Ioanna Niculescu, Karl Silfer*

Present from JLab: *Rolf Ent, Rachel Harris, Bob McKeown, Dennis Skopik*

1). **Lab Outlook** – *Bob McKeown*

- Bob briefly reviewed the 12 GeV physics program. There are about 40 approved experiments.
- The current accelerator schedule includes a 6-month down time from May to October 2011, followed by a 12-month down time from May 2012 to May 2013. The present schedule for 12 GeV commissioning begins with Hall A in Oct. 2013, Hall D in Apr. 2014, and Halls B/C in Oct. 2014.
- Bob presented an overview of construction progress related to the upgrade, including civil construction and detector subsystem construction highlights from the different experimental halls.
- Bob discussed several planned physics programs in the area of physics beyond the Standard Model, including parity-violating electron scattering and A' vector boson searches (with 3 proposals at the upcoming PAC37 in Jan. 2011).
- With regard to 12-GeV construction, the project is essentially on track in all major areas.
- PAC37 will take place the week of Jan. 10, 2011. The review will include 9 new proposals, 7 returning conditional proposals, and 5 new LOIs.
- Funding outlook: Currently we are in a 2.5 month-long continuing resolution that provides JLab with funding at the FY10 level. There will be an impact on the 12 GeV schedule only if the continuing resolution lasts longer than 6 months.
- Search status (Associate Director, Deputy Associate Director, and Hall A leader) – A long list of candidate names have been compiled from a varied list of sources. Over the next few months the goal is whittle this down to a much shorter list of names and then to start arrangements for interviews.
- Bob discussed the future of photon science at JLab with regard to a basic research program at the FEL. There was discussion of the basic plan at the FEL over the next 10 years and the goal to build up a much larger user community for this program.

2). 6 GeV Program Status – *Dennis Skopik*

- Dennis provided an overview of the 6 GeV program for FY09 through FY12 in Halls A, B, and C.

- Availability of beam from the accelerator and the associated experiment run times for FY11 and FY12 still depends on the availability of funding. The accelerator schedule is firm only through Mar. 2011. Beyond we must wait and see what congress approves.

3). EIC at JLab – *Rolf Ent*

- Rolf provided some highlights of work related to the JLab EIC design over the past 6 months. This included continuation of design optimization, focus on detailed design of major components, and critical R&D work.
- Rolf provided an overview of the current JLab EIC machine design parameters and physics reach.
- An internal review on Sep. 15,16 (with two outside experts) showed that the general design concept was felt to be good. However, a long list of items was identified that needed attention and planning.
- For the upcoming year the plan is to finalize system designs, and flesh out the performance and cost estimates.
- Rolf showed an overview of the site layout and that it fits on the property.
- Some R&D funds may be available for EIC detector work (and maybe some other related work) (potentially) through BNL.
- An overview of JLab-sponsored workshops showed that they have led to excellent development of the physics possibilities. The main research areas so far include the internal landscape of the nucleon, the role of gluons and gluon self-interactions in nucleons and nuclei, and the transition of quarks and gluons into pions and nucleons. However, there is still work needed to continue to develop and define the “golden” experiments.
- There has been convergence of the BNL EIC design and along with the design of the JLab EIC, the plan is for the community to prepare a white paper. This is a high priority.
- Rolf envisions a time line for the JLab EIC to be awarded CD-0 in 2014 with construction taking place from 2019 to 2025. This may be seen as optimistic given other large-scale construction plans already being defined.
- Critical issues include getting input from the JLab user community into the EIC white paper, keeping the design and cost estimates on track, getting more scientists involved in the planning.

4). User Office Space – *Rusty Sprouse*

- The topic of user office space began with a bit of a round-table discussion. The main areas of discussion were regarding the JLab plans for handling and distributing the limited available user space and how to improve communication with the users.
- Presently a “hoteling” system is being considered where a group of desks is available for reservation. The contact is Rachel Harris.
- The board felt strongly that we must always keep in mind that JLab is a user facility and it is crucial to have clear communication with the users on space

issues. Ideas should be presented to the users for feedback before any decisions are set. We must also be sure to carefully consider the user's opinions so that user's are not disregarded.

- It was thought that a poll of the users with regard to space handling might be a good idea.
- Rusty Sprouse then gave a presentation that showed plans for creating some new office space in CEBAF Center (claiming under-utilized areas) and possibly getting some additional space in the ARC building.
- The plan for renovating the space in the upstairs of the Counting House will begin in FY12.
- The plans for user space on the second and third floors of the CEBAF Center F-wing are still be devised. There is limited available space and there are crucial needs for office space for staff.
- It was felt that UGBOD representatives should be invited to attend meetings where plans for user space are being discussed. Major changes regarding office space should not be made without time to get user feedback.

5). Computing – *Chip Watson*

- Chip discussed a number of cyber-security issues. The lab realizes that these may be a hindrance to productivity at times. However, the IT division strives to minimize the impact of these requirements.
- There are security issues with personally owned devices being used on the JLab networks. The IT division believes that these devices are the future and is developing plans, policies, networks, and hardware to be able to deal with the related issues.
- The IT division is working on upgrading the mail and calendar services.
- Chip provided an overview of scientific computing capabilities. This includes 100 Tflops sustained for the LQCD effort, LUSTRE high performance disk storage, 200 TB of user disk space with a doubling of space in the near term, 30% more farm capacity in Jan. 2011, and the complete transition to 64-bit systems.
- 12 GeV planning is well underway to handle the expected DAQ rates, raw data storage levels (expecting 2 Pb/yr from both Halls B/D), and simulation storage levels. This planning also includes the needs for data calibration and data analysis processing capacity.
- There will be an in-house review of the IT division in the first part of next year.
- The IT division is planning on carrying out a user survey. They have been in contact with the UGBOD computing director.
- The IT division needs better feedback from the users (and the Halls) on their requirements and needs. They tend to be unrealistically small or underestimated, which leads to a burden when then “suddenly” require much more capacity than they had originally stated. Better communication is required for better planning.

6). Area Reports:

PAC Issues – *Ionna Niculescu*

- The users seem to favor a summer PAC if there is to be only one per year. Bob McKweon will make a decision after getting some input.
- Three new PAC members will be named shortly.
- PAC38 will likely be scheduled for summer 2011. This PAC may consider new proposals, although this is not certain.

Quality of Life – *Daniel Carman*

- There was a brief review of the situation regarding user office space.
- A question came up regarding rules for passing stopped traffic on-site and the JLab policy was communicated to the source.
- A question came up regarding after-hours entrance to the site and the preferred entrance to the site. Presently there is no real flexibility on this and the entrance will be on Onnes drive and not down by the ARC.

Running Experiments – *Zein-Eddine Meziani for Kawtar Hafidi*

- Zein-Eddine reviewed feedback from the spokespersons for the DVCS, PRIMEX, TPE, and Qweak experiments. Overall they were very positive.
- Users would like to know as soon as possible when schedules are set so that they can make appropriate travel plans.

Experiment/Theory Liaison – *Andrei Afanasev*

- Mike Pennington (new Theory Division Director) attended the meeting.
- Andrei gave an overview of the Theory Group. They provide support for PAC proposal review, topical workshops, experimental proposals, support for GlueX, EBAC operations and work, as well as carrying their own high-rated program.
- The Theory Group should not be considered an experimental “support” group, but they can act as a conduit to channel work to other outside groups (where possible).
- There has been a new postdoc position created that is supported through the Theory Group and the experimental halls that focuses on spin physics.
- Mike Pennington discussed the plans for work beyond EBAC (the Excited Baryon Analysis Center) whose funding expires in 2012. The Theory Group is now looking to establish a new analysis center that focuses on amplitude analysis of both baryons and mesons.

Computing – *Karl Silfer*

- Viewing the status of CCPR requests will soon be available from off-site.

- There have been noted issues with wireless connectivity around site. These are being investigated and addressed.
- Connectivity and use of EVO (web-based conferencing) is rated as important by the users and the system should be attended to by the appropriate folks to ensure the software is up to date.
- It was noted that some work requests (CCPRs) have been closed by the Computer Center without the work being satisfactorily completed. This will be looked into to find out if there is an issue.

Postdocs – *Aidan Kelleher*

- Aidan reported on a “job” club that he has formed. The goal has been to bring in folks that can provide relevant help in getting a job at the next level.

Graduate Students - *Sucheta Jawalkar*

- Funding has been awarded to continue the graduate student lunch-time seminars. These continue to be quite popular.
- Sucheta discussed the planning for the upcoming student poster competition at the Users Group meeting.
- Sucheta did a lot of work to get feedback from graduate students regarding the JLab health insurance options. She will continue to seek out information and communicate with the relevant folks about the preferences of the graduate students. She is still seeking information about how many students use this option.
- There is a need for mentoring of graduate students and there are some training courses available to help mentors learn how to be more effective in this role.
- We need to advertize the role of the UGBOD to the graduate student population better.

7). Hall D Progress – *Eugene Chudakov*

- Eugene provided an overview of the Hall D detector and the physics program.
- Beneficial occupancy of the Hall D complex is expected in Nov. 2011.
- The Hall D physics program includes two PAC-approved experiments. The first is E12-06-102 (GlueX – exotic meson spectroscopy) and the second is E12-10-011 (PRIMEX – eta lifetime). Other physics programs and experiments are actively being considered and developed.
- Eugene walked us through the latest LQCD unquenched and quenched results for the lowest-lying JPC exotics. All indications still show that the relevant mass scale is 1.8 to 2 GeV. There are still no calculations of decay widths or cross sections.
- Progress since Dec. 2009 – tagger magnet in procurement, BCAL module construction 50% done, FCAL and CDC construction underway, FDC construction space being prepared, electronics (FADCs, ASICs, TDCs) well underway.

- The solenoid work continues. Coils 1, 3 repair is finished. Coil 2 repair is in progress. A control system has been built for coil testing. Coil 1 has been tested to 300 A; the ultimate current is 1500 A. The collaboration is still working on the design of a fall-back option.
- University construction contracts are still being prepared and put into effect.

8). Hall A Progress – *Kees de Jager*

- Kees presented the status of experiments completed from 2008 to 2010. This included an update on the analysis/publication status.
- An overview was presented of the experiments still to be run before May 2011 (the start of the 6-month shutdown).
- Funds have been made available to run the new g2p/Gep experiment. Kees provided an overview of the engineering and design work that is ongoing in preparation of the run.
- The 12 GeV program in Hall A includes experiments that account for 960 proposal days.
- The main 12 GeV projects include the new Super Bigbite spectrometer, the MOLLER experiment (approved by PAC34, CD-0 in FY14), and the SoLID experiment (approved by PAC35, technical conceptual design completed by ANL).

9). Hall B Progress – *Volker Burkert*

- Volker reviewed the publication of the last year and the overall publication numbers for CLAS.
- This past year the g9b/FROST experiment and PRIMEX-II experiment ran in Hall B. This second portion of g9b used a transversely polarized proton target and completed the N* search program in Hall B on protons. PRIMEX was an experiment to measure the neutral pion lifetime.
- The current experiment on the floor in Hall B is the “TPE” (two-photon exchange) experiment that measures two photon exchange contributions in e-p and e+p scattering.
- The upcoming HD-Ice experiment that is set for installation in Feb. 2011 will allow for a complete experiment on the neutron. HD-Ice is a polarized HD target.
- Volker provided an overview of the new CLAS12 spectrometer, the CLAS12 physics program (13 approved experiments, 10 PAC-supported LOIs, 3 new proposals and 3 new LOIs for PAC37). So far, 5 years of running time have been approved
- Volker provided some highlights of CLAS12 subsystem construction including the superconducting torus and solenoid, the silicon vertex tracker, the DC, PCAL, FTOF, and HTCC.
- One issue that Volker raised is that in Hall B there is insufficient scientific manpower to accommodate both the required support of the 6 GeV program

and the support of the 12 GeV upgrade. Two new scientist positions are needed to fill the gaps.

10). Hall C Progress – *Steve Wood*

- Steve reviewed the Hall C publications for the past year.
- An overview of the Gep experiments was provided and the Qweak experiment. So far the Qweak experiment has demonstrated high power liquid-hydrogen target operation up to 180 uA.
- Removal of the SOS spectrometer is already underway. The detector hut has been cleared out and work planning is ongoing to remove what can be removed during the 6-month downtime.
- Steve provided an overview of the Super HMS spectrometer planned for the 12 GeV upgrade.

11). Board Discussion:

- Sebastian and Zein-Eddine discussed a desire for a UGBOD controlled web page. This will be looked into.
- We discussed the deadline for the JSA postdoc fellowship prize.
- The summer Users Group meeting is scheduled for June 6-8, 2011. It will be advertized in the upcoming APS newsletter. Zein-Eddine will get folks involved in detailed planning for the meeting starting in the first part of next year.
- Three new directors will be replacing outgoing directors Ionna Niculescu and Phil Cole and Andrei Afanasiev. The names of candidates will to be considered for election need to be considered.
- There was a discussion of the JSA Initiatives Fund and how SURA decides to award or reject funding. Basically there was a desire to make the consideration of the awards at SURA more transparent.
- There was a brief discussion about possible scheduling for a possible EIC workshop.