

Users Group Board Meeting June 10, 2009  
Minutes

Board Members present:

Andrei Afansev  
Phil Cole  
Wally Melnitchouk  
Ioanna Niculescu  
Nilanga Liyanage  
Paul Eugenio  
Patricia Solvignon  
Larry Weinstein  
Katherine Myers  
Latifa Elouadrhiri  
Ron Gilman  
Zein-Eddine Meziani

Board Members not present:

Franck Sabatie

JLab Management present:

Larry Cardman  
Rolf Ent  
Hugh Montgomery  
Dennis Skopik  
Tony Thomas

Zein-Eddine Meziani is now chair. Zein-Eddine thanks the outgoing members (Wally Melnitchouk, Larry Weinstein, and Latifa Elouadrhiri) for their service, and welcomes the incoming members.

### Long term future of JLab

Zein-Eddine discusses the possible long-term future of JLab, in particular ELIC, and asks what is the lab's vision?

Mont gives a commitment from the lab; it is time to start looking more extensively at the physics case.

Larry C reminds us to expect the timescale is about 16 years, based on JLab, RHIC, and FRIB (so far) experience. It is time to start working on the physics case.

Mont points out that what we heard at the Users Meeting resulted from the laboratory's focus on 6 and 12 GeV, and is related to the limited manpower devoted to ELIC and to trying to keep below the expected cost of the full ELIC machine. There is a choice of machine on the table.

Zein-Eddine asks how are we going to proceed with involving the community and how does the lab want to go about it.

Mont indicates the constraints: only one US collider in the end, in a while. DOE does not want the FRIB situation when plan comes around. The issue is bigger than US, due to European proposals.

Tony states that we will have at most one in the US, and maybe only one in the world. LHeC is superior to eRHIC for saturation physics, but is designed to investigate physics very different from ELIC. We need to decide if we want a machine, and if we want one here. MEIC has in his opinion the greatest physics potential for the likely money. An  $L=10^{32}$  machine for 2020s would not be sufficiently ambitious. The ELFE collider disappeared because of cost, and the plan went to a 30 GeV fixed target machine that was never built.

There is a good relationship between the EIC groups in working on common physics justifications for the different machines, but the lab-lab interaction is different. BNL claims to have ~20 people working on a white paper due within a year. We absolutely need groups of users working with lab staff to generate a white paper within a year.

Zein-Eddine suggests we can try to focus and get things going with users. What is available within the lab to work on physics and detectors? It would be good to have 2 detectors.

Mont indicates that the lab resources are limited, we should plan on only a modest contribution. There are many more users. Rolf mentioned 4 interaction regions, 1 with arbitrarily defined parameters. The lab asked for supplementary funding for visitors to look at the machine in addition to the 1 and 2-halves people working on it. There is no request for more money currently for the experimental work. There are maybe 1/2-1 FTEs available in each Hall; it is a question for Larry C.

Rolf says that we know who has been coming to meetings over the past 5 years.

Tony reminds us that there is limited collider expertise in the lab. We need

people from places like H1, ZEUS, and Fermilab, with collider experience, actively engaged in designing experiments and detectors.

Wally reminds us that eRHIC has lots of theorists working on its physics case, and there needs to be more theory involvement in ELIC

Zein-Eddine points out that eRHIC is organizing a workshop at INT. eRHIC is giving talks at many conferences. We need to publicize going forward. Users need to put in time and feel ownership.

Mont reminds us that while there is more work at BNL, the absolute numbers are modest. We can rapidly have impact.

Rolf agrees that eRHIC has more presentations and people. About 2/3 of the physics plots are made by a few of us.

Zein-Eddine complains that too many plots are for  $L=10^{33}$  physics. They are not justifying a \$1B machine. He has had arguments with Abhay about  $10^{33}$  vs  $10^{35}$ .

Rolf states that it has been shown in several places that you need  $10^{35}$ . There are three or four cases that justify  $10^{34}$ . It is easy to show the simple  $10^{33}$  cases.

After some actual physics discussion, Mont concludes that people are basically in violent agreement. The case needs to be clearly made for high luminosity. He agrees that we need to do this better, and we should go do it.

Tony suggests that the Users Group work with Rolf to identify people to work on each of physics chapters. He does not think there is a lot of time.

Mont tells us not to neglect Larry C's idea of workshops, there is likely a need for multiple approaches.

Wally asks how useful is the joint EIC working group? Most people on it are from BNL.

Rolf says that the EIC spokespersons have thought there should have more university people, the efforts should not be dominated by lab people. It should be university science driven. They are planning to change it.

Latifa asks what have we been doing not right so that we do not have major users involved in EIC?

Larry C reminds us that we intentionally focused on 12 GeV up to the last long range plan.

Latifa points out the next long range plan will be roughly 2012.

Tony indicates that the major recommendations in the long range plan will likely include finish 12 GeV, build FRIB, and operate labs. So EIC is likely 4th at best.

Rolf suggests we are like we were in 1999 -- we had 1994 and 1998 workshops.

We had 5 topics, before having workshops 3 years before the LRP.

Tony points out the difference - the difficulty now is two labs competing for the machine. We cannot go to the LRP and fight over the physics. It has to be figured out over next year or so. The two machines have different physics cases. It is not clear if a joint committee is helpful.

Zein-Eddine believes we need to focus our investment in time go towards our lab's physics case.

Mont says we need to make the physics case. We have to have presence and show work to get invited to give talks. The DIS conference wanted a discussion and Tony went and talked about options at Jefferson Lab.

Rolf says that BNL sees us as competition. Our physics case is orthogonal to their gluon saturation case. We need to make proposals more complete.

Zein-Eddine asks, since Larry C mentioned workshops, but users want working groups, and we need something out in ~1 year, how can we merge these things?

Mont indicates that we will take the community contributions no matter how they want to organize their work.

Larry C points out several issues that guided his thinking. There is value to the community here for the 12 GeV program, which will not be running at the time of the next LRP in 2012, to continue to build momentum and excitement for it. There are two broad aspects to a new collider program. One part complements and completes what we are planning to do already at 12 GeV. Another part is, what are the new three star physics topics? Parity trivially has the potential to be one. There can be a phase transition in our attitudes with the first major

workshop with community interest in non 12 GeV stuff. Proposed workshops should be part of the plan.

### Other Discussion with Management

Mont is asked about other issues on the agenda. The search committee for the new theory head has been formed, and a charge drafted. He is going ahead on the senior management position slightly differently.

CERN is doing a survey of users as there have been issues at CERN with a large influx of Americans. It is best that we aim before firing. Larry C indicates that we had a survey a few years ago. Ron asks who we should speak with at the lab if we decide to go ahead with a survey? Ron, writing the minutes, in the middle of the night, cannot recall the answer.

### Area Reports

Nilanga gives a running experiments report. In Hall A, d2n was largely completed, with 1L04 problems causing most of the impact. The quasi-elastic polarized  $^3\text{He}$  experiments currently running are going unexpectedly well, with 60% target polarization, vs. 40% expected, and with all 4 spectrometer arms running well. In Hall B, the Eg1-DVCS run has had several problems, related to the scheduling process and compatibility with other halls. Compatibility with the upcoming HAPPEX-III run this fall is a concern.

Latifa explains concerns that we need to make sure beam polarization requirements are taken into account. Larry C responds that they are in three places, in the proposal, by the TAC, and in the running request. Latifa points out that if the physics does not require polarization, but it is on cover sheet, it impacts other experiments. Dennis says we should complain to hall leaders if they are not doing their job. Larry C points out that people have complained about polarizations when being confused about the units. Sometimes they compare the absolute polarization in one hall to the polarization as a fraction of the source polarization in the other. Latifa is also concerned about requirements that sometimes do not make it to the schedule. Dennis and Larry C indicate that the accelerator is looking at asymmetric linac setup for 100% polarization to HAPPEX-III while maintaining high polarization in other halls.

In Hall C, after all the target problems, SANE got 65% of statistical request.

Wally gives the theory report. Their main issue is future theory leadership at the lab. We need to balance direct experiment support activities with giving theorists

some freedom to explore new ideas with longer-term applications. Theorists want to maintain representation at the Asso. Director level. Theory money all comes from DOE Theory, it is a separate pot of money from JLab operations, which would complicate the funding were Theory not to be a separate Division.

Larry W gives a very short report on PAC issues. Zein-Eddine indicates that several people complained about lab staff on PAC too much pushing their own physics. Larry C indicates that the general policy is to not have lab staff on the PAC, but sometimes when PAC members indicate late that they cannot come, it is lab staff whose arms can most easily be twisted to make them serve on the PAC. Several people are leaving the PAC, so Larry C would like names of PAC candidates and possible backups, in of order one month. Suggestions may be sent to him or Zein-Eddine. Users should note that Mike Pennington will continue as chair. Dave Bowman, Pierre Guichon, Naomi Makins, Marco Rippani, and Roy Holt are all leaving the PAC; we thank them for their service.

Latifa reports on the Women in Physics meetings. There was an active, good meeting, that Gail Dodge reported on at the Users Meeting. There is some discussion about whether the women in physics meeting should have been women only. Patricia indicates that the women should not be isolated from the men. Ron and Dennis point out that the committee at the lab is women (Gail and Latifa) and men (Dennis and Hari Areti). The lunch function is another thing. Larry C wonders if we would be in a new era if men complain about child care. Dennis says that men at JLab have already raised complaints about child care at the lab.

Zein-Eddine asks how could the lab make things easier? Paul indicates that the issue is getting women into science, not keeping women in science.

Patricia mentions a new problem: women are not happy with the planned unisex Hall D bathroom. After discussion, Zein-Eddine on behalf of the board expresses our unhappiness with having only a unisex bathroom in Hall D.

Paul Eugenio discusses computing issues, the discussion focusses on CLAS, which has the highest demands other than theory/lattice. CLAS always can use more disk space and CPUs. CLAS historically fought for more disk rather than more farm nodes. The new 37 TB system allocated by run groups has helped quite a bit. Now CLAS wants more compute capacity. There is a desire for a virtual silo concept for staging data for the farm. CLAS currently has 10s of TB of data for a calibration pass, stored into silo. It is retrieved and used. On recalibration though, old calibrations are worthless but keep being stored. Files can be marked for delete, and perhaps they will not be copied when the silo

tapes are upgraded. A virtual silo would let old calibrations go away nicely.

There are bottlenecks in off site data transfers. Authentication from off site is useful.

There is no money this year for new compute nodes, though muon collaboration nodes will be generally available.

There is a potential problem with having multiple operating systems, requiring multiple different libraries. We have Fedora core 8 on the farm, and RHEL on workstations, requiring two sets of libraries to be maintained. The muon systems are 64 bit, with centos 5.3, an open version of RHEL. The plan is to get rid of Fedora Core 8. We now have 64 bit nodes in farm running in 32 bit mode for compatibility, which are turning off in a year or two. You can imagine having to have 3 operating systems to maintain. A machine has been made available for testing, but there have been problems.

The IT steering committee has meetings announced at short notice without an agenda. Dennis will talk to Roy about being better organized.

Patricia Solvignon indicates that postdocs are not complaining. The grad student postdoc organization here is very efficient. Patricia is wondering about having a postdoc only luncheon. Grad student seminars not well attended by postdocs. She is thinking of JSA Initiatives for money to bring postdocs together over lunch. Ron indicates that JSA in reviewing Initiatives Fund proposals has not liked this sort of thing in the past. It would be better to have a workshop and waive registration fees. Zein-Eddine suggests having the postdocs give talks, presenting their work. Perhaps this could be in conjunction with the Users Meeting.

Katherine Myers talks about the graduate students. The 32 posters at the Users Meeting was a challenge. The grad students / postdocs meetings are once a month. There is a barbecue etc next week, from initiatives funds. She is thinking about getting IF money to bring someone from industry to give talk? Paul thinks it might be a negative for the student to learn how much more people in industry make, but Zein-Eddine thinks it will be an overall positive impact. Ron asks what the students were asking about at the lunch meetings. There was some physics, but a lot of career questions. The grad student / postdoc association has a wiki page - it used to not be accessible from off site but should be now. Only the officers have the password and can edit it.

Phil asks whether the judges can send out comments concerning the poster

judging to the students. Katherine replies that the judges mostly used number scores. The students should ask the judges. Patricia talked to some students, and is happy to talk with more.

Ron asks for comments about the meeting? Zein-Eddine indicates that there was not enough food. Ron indicates that we had a large number of last minute registrants, after the food was ordered, but despite this we only broke even. Registration fees will likely have to go up again next year. Andrei thinks that any registration fee under \$100 is a bargain.

Zein-Eddine assigns Ioanna Niculescu to take over Larry Weinstein's job on PAC Issues, and Phil Cole to take over Latifa Elouadrhiri's job on Quality of Life.

There is a moderately long discussion on the topic of whether we should accept / review theses for the Thesis Prize in languages other than English. We have students from several other countries, but theses submitted have only been in English with a few in French. Ron believes that two French theses have won the thesis prize, those of Maud Baylac and of Ludyvine Morand. The Board previously decided to request theses be in English, but we could change this. There are benefits to having all the theses in English, but we could change this. We could have the students generate a short thesis summary, or have the first chapter translated, but this is more work for the students. The Board puts off any further action on this for now.