

# User Group Board of Directors Meeting

## Tentative Agenda

Dec 11, 2007 L104

9:00	<i>Dennis Skopik</i>	Long Range Plan last 6 GeV PAC: feedback, new members
9:30	<i>Christoph Leemann</i>	director search, lab budget
10:30	<i>Kees de Jager</i>	Hall A report
10:45	<i>Volker Burkert</i>	Hall B report
11:00	<i>Steve Wood</i>	Hall C report
11:15	<i>Elke Aschenauer</i>	Hall D report
11:30	<i>Allison Lung</i>	12 GeV
11:45	<i>Lia Merminga</i>	ELIC
12:00		Working lunch
	<i>Ron Gilman</i>	JSA Initiatives Fund report and assignments
	<i>all</i>	5 minute area reports
13:00	<i>Ron Gilman</i>	Postdoc Fellowship evaluation plans
13:15	<i>Ron Gilman</i>	thesis prize plans
13:30	<i>Ron Gilman</i>	the gate
13:45	<i>Ron Gilman</i>	2008 User Group meeting plans
14:00	<i>Aidan Kelleher</i>	UGM poster session proposed standard
14:15	<i>Ron Gilman</i>	2008 election setup
14:30	<i>Latifa Elouadrhiri</i>	Women in Physics
14:45	<i>Ed Brash</i>	Resfac connectivity / computing, startup time
15:00	<i>Ron Gilman</i>	NUFO/APS letter writing
15:15	<i>Karl Slifer</i>	feedback page, postdoc talks
15:30	<i>Todd Averett</i>	bridge positions
16:00	<i>Christoph Leemann</i>	closeout

## **D. Skopik:**

A major activity in physics division is planning for the end of the 6 GeV era. The end starts with a 6 month down in May 2011 – Qweak will start before this shutdown, and finish after it, before the long accelerator down that starts the main accelerator upgrade. There are about 4 years left until the big shutdown. The budget redirect to 12 GeV, agreed to all along, leads to completing about 80% of the physics running if there are no more budget pressures.

The Qweak beam and liquid helium requirements are a real challenge. The planned ESR upgrade is not expected in time to help with this.

PAC33, the upcoming last 6 GeV PAC, has 27 proposals, 13 in Hall A, 8 in Hall B, 5 in Hall C, and 1 for Halls A/C. This includes jeopardy proposals. The large number is indicative of the great interest in the 6 GeV program, but no increase in beam time allocation was considered. The time available is 35 days for Hall C, and 45 days for each of Halls A and B. In addition, there is the time available in each Hall corresponding to the jeopardy experiments.

Experiments for 6 GeV that do not run, for example, can come back in the future and run with 2.2, 4.4, or 6.6 GeV in the 12 GeV era, but they have to compete with 12 GeV proposals. It might be possible to run 11 GeV beams into 2 of the 3 existing Halls, but this is a upgrade not included in the project.

PAC34 will review the planned 6 GeV program for remaining 4 years, as well as new 12 GeV proposals. There will be no jeopardy, since 6 GeV proposals cannot come back for new time. It is desired for the closeout of the 6 GeV era to run as much as possible, maximizing Hall multiplicity. We usually run 2.4 or 2.5 multiplicity at best, due to conflicting requirements for beam energy and polarization, so we need extra experiments to enable efficient scheduling, and to run the maximum physics overall. No more reviews of the 6 GeV program are expected after PAC34, although if there are ongoing budget problems subsequent reviews might be needed. Reinhard Beck and Piet Mulders will be on the PAC, starting with PAC34. At this point, it is expected that user input to the planning of the 6 GeV program closeout will enter at the Hall level.

A number of the remaining 6 GeV experiments require close to 6 GeV. At this point we still expect 5.9 GeV by May '08, and full 6 GeV capability by the end of summer '08.

The long range plan is essentially unchanged since last summer's Galveston meeting; it is nearly final. Topics emphasized for JLab physics include GPDs/TMDs, the quark/hadron transition, exotic hadrons, and PV for beyond standard model physics.

The Lab has an advisory radiation safety committee, part of radcon in past. Ed Brash volunteers to join the committee to provide user input. There is an upcoming DOE mandated integrated Safety Management review across the laboratory, including users.

## **C. Leemann:**

The federal budget situation is messy. We are currently spending money at the FY07 level, 89.6 M including 12 GeV funds. The FY08 president's budget is 103.15M, 14 M more, including 12 GeV. The impact is a little less, since 12 GeV has to ramp up staff and defer some spending from FY08 into FY09 – DOE has agreed. Still, we are about 8 M short on

operations. Inflation in purchasing, and adjusting salaries are among the reasons why.

There is much in the news about the omnibus bill being prepared. It is 11 B above the president's request, and where this will end up is unknown. The plan was to have the bill on the house floor on Dec 12<sup>th</sup>, then to the Senate, and then to send it to the president before the current Continuing Resolution expires on Dec 16<sup>th</sup>. So a path is in place to pass a budget before holidays, but OMB director on Saturday threatened a presidential veto if the bill is for 11 B more than the president's budget. From the Washington Post this morning: David Obey says he will send president a bill that meets spending amount by removing earmarks, republican priorities, and war funding. It would likely be vetoed. If there is no bill by the end of the year, we will likely have a CR to the end of January. Since we did well in the PB, and money was added by congress, we should do well. But looking at FY06 and FY07, we could easily end up worse. Orbach tomorrow has a call with lab directors, which might concern this and / or FY09 budget.

We have added 27 staff since Nov 1, mostly for 12 GeV, so to live under a possible FY07 budget again we now have a hiring freeze. Extended offers will be honored. No new offers will be made. Christoph does not want to commit to new joint / bridge positions at this time. The FY09 budget went to OMB in Sep., came back, and appeals went back to them two weeks ago.

On the state side, the Secretaries of Education, Finance, and Commerce have all visited. The visits went well. The state is thinking of investing 9.5 M into the 12 GeV project, for Hall D construction, possibly putting the money into the 2<sup>nd</sup> year of its 2 year budget. State revenues have been slow. From the lab perspective, 2010 is good, but 2009 would be better.

Users were concerned by the long holiday shutdown. The explanation is that extensive electrical equipment work needs to be done, it is not a money saving effort. There are plans to leave the library and a large conference room open in the ARC building, but the batch farms and CEBAF Center are shut down. The UGBoD finds it especially troubling to have a long shut down of the batch farms shortly before the PAC, during the break in the experimental schedule.

Christoph is asked about rumors floating around about fencing in the entire site and putting up security cameras. There is no budget for this, and he has not heard about it.

Christoph is asked whether the 125 k directors discretionary fund – the amount is contractually determined – is adequate. He could use more, but it also seems to be that people are inordinately fond of having food served at any meeting longer than about 2 hours.

On March 15, 2007, Christoph announced his intention to step down as lab director. JSA has extended an offer, and they expect an answer this month. We are hopeful the candidate will agree and no plan B is needed from the search committee.

### **Kees de Jager:**

All is going well in Hall A. Thirteen proposals were submitted to PAC33, including some conditionally approved experiments and some jeopardy resubmissions. Seven are completely new. There is also one A/C proposal. The total request is for 281 days, vs. a 101 day

allocation. It will be interesting to see what Larry will allow the PAC to do with a mortgage.

Hall A ops are hampered by budget uncertainties. Scaling from the CR over all down to the physics division budget leads to a large uncertainty.

The Coulomb Sum Rule experiment is now running well after a rough start, with the installation of the new NaI calorimeter in the focal plane. An extremely large number of energy/pass and spectrometer angle/momentum changes are needed. There are 10 more days for the experiment in January, 2008. The 2008 schedule then runs the threshold  $\pi^0$  experiment with Bigbite until the June / July shutdown. Afterward, with the polarized  $^3\text{He}$  target, the transversity and  $d_2^n$  experiments run until the end of the current schedule. The  $^3\text{He}$   $A_y$  experiment is on the tentative schedule. A huge design / engineering effort is on schedule. New items include detectors for Bigbite, the RICH detector, a 3<sup>rd</sup> pair of Helmholtz coils for the polarized  $^3\text{He}$  target, new target ovens needed for Rb+K gas for higher polarization.

The hiring freeze does not impact Hall A, because the unfilled physics and tech positions in the Hall have been on hold for a while. A few years ago a review of medium energy physics concluded that the Hall A budget should be increased significantly, but nothing happened as a result. A discussion is overdue on what the considerations are for running in parallel with Qweak. The original Qweak request is for 180  $\mu\text{A}$ , but Kees has urged Larry to limit Qweak to 150  $\mu\text{A}$  so experiments can run in parallel in Hall A.

### **Volker Burkert**

D Heddle and Y Prok now have joint positions, Hall B and CNU. During 2007, Hall B ran the g13a/b experiments, searching for new N\*s with polarized beam and polarized targets on deuterium and hydrogen, and the g9a frost experiment. The g12 hybrid meson experiments are about to run. The DOE S&T review gives Hall B excellent physics marks. The FROST target is fully operational. The 12 GeV CD2 cost and schedule review results were excellent, as was the EVMS review. Hall B also has an excellent safety record.

There are 395 days of A rated experiments already approved to run through 2011. Some of the experiments that would run later in this period either need or prefer 6 GeV, and their compatibility with Qweak is not entirely clear yet. The hiring freeze is having an immediate impact on Hall B. A search for an engineer was stopped when the hiring freeze was imposed. Mark Ito has moved to Hall D, and cannot be replaced.

The NSAC long range plan highlights generalized parton distributions, a central goal of the CLAS 12 upgrade. But the recent efforts to increase the project contingency have put much of the early physics program at risk. In particular the SVT and PCAL detectors cannot be built until the funds are released, and are not expected to be available for early data taking.

### **Steve Wood**

Steve Wood is the new Hall C leader.

Hall C this year has run several expts: G0 backward angle, parity violation in the N- $\Delta$  transition, a Rosenbluth separation in ep elastic scattering to look for two-photon effects, and determinations of F2 and R in deep-inelastic scattering. Several infrastructure upgrades have been performed, including the HMS hodoscope, magnet control systems, the drift chamber

gas system, the scattering chamber, and the cryotarget. Hall C is currently run the Gep-III, Gep-2gamma, and real Compton experiments. The Hall is about appropriately staffed, but due to the hiring freeze, Steve is unable to hire a young staff scientist to fill his former position. There is a lot of work for designers to do for 12 GeV, Qweak, and HKS. It is being done in part by having some work done by accelerator, such as the HKS beam line and Compton polarimeter. The future of SOS will be decided after the next PAC.

### **Elke Aschenauer**

The physics goal of Hall D and the GLUEX collaboration is the search for exotic mesons / hybrids / glueballs. The experiment uses high  $10^7$ - $10^8$  energy photons per second, and detects charged particles and photons.

The civil design has been 100% complete since November. The experiment has a large complex detector with numerous elements, including a barrel calorimeter within the solenoid, a central drift straw tube tracker, a forward strip detector, a lead glass forward calorimeter located after a time-of-flight wall, and an upstream lead/scintillator veto wall. The barrel calorimeter is readout using new Peltier-cooled silicon PMTs. Currently one has to use arrays to get the area needed, but hopefully a larger monolithic chip will be available.

The expected DAQ rate is about 100 times larger than the current CLAS rate. The 29000 channels on 1000 boards requires an upgrade to CODA. The first-level trigger uses a calorimeter energy sum and a track count from the forward TOF detector. Active electronics board development is ongoing, with 5 of 6 needed modules prototyped already. Hall D staffing is up in past year. from 4 to 6.5 scientists, and from 2 to 4 engineers. Still need more people for a planned RICH detector, a DIRC, and 1<sup>st</sup> and 3<sup>rd</sup> level triggers. There is a planned workshop March 6-8, 2008 – see <http://conferences.jlab.org/php2008/index.html>.

### **Allison Lung**

A lot has happened in the 12 GeV project this year.

Earlier this year, the Lehman independent project review wanted a higher escalation rate and a higher budgetary contingency. The standard government escalation rate (approximately inflation rate) was deemed insufficient. The budgetary contingency was to be increased by approximately \$10M. These two recommendations required an overall cost reduction of \$10M-\$15M which meant potential lost capability. In order to preserve maximum capability the reduction was addressed in several ways, including increasing the total project cost by \$4M, accounting for confirmed non-DOE scope contributions, moving some facility hardening scope off the project, and de-scoping a few million dollars of labor and equipment. Items identified as possible “scope contingency” for FY10-12 procurement remain fully incorporated in the project plan, will be designed to 100%, and are expected to be available for early data-taking. The CD-4 milestone defines completion, and is now in 2 pieces: an accelerator piece and an experimental equipment component that follows several months later. The actual schedule is unchanged.

In August, documents were updated to reflect these developments. By end of August, they were submitted to the external independent review, which had 4 major findings, 11 findings, and 11 recommendations. By the end of October, the 4 major findings were resolved, and the lab responded with a corrective action plan for the remaining findings/recommendations. All

of the findings and recommendations are expected to be dealt with by the end of the year. The 12 GeV CD-2 package went to ESAAB, which advises R. Orbach, and CD-2 Approval was obtained on November 9th.

CD-3 is expected about September 2008. DOE requires 9-12 months schedule float for CD-4, with the accelerator part in Dec 2014, and the experiment part in June 2015. The formal shutdown is for 1 year starting May 2012. The Halls turn on starting with Hall A in October 2013.

There is a lab wide ISM review coming up in May 2008, which involves 12 GeV. A search committee is looking for a replacement for Will Brooks. To improve communications between the users and 12 GeV management, a new quarterly meeting is being set up between management and user representatives from each Hall, plus the Users Group Board Chair. The user representatives are collaboration or steering committee chairs or 12 GeV representatives. The JLab Facilities Management Group has begun tree clearing and construction of a retention pond as part of the Ten Year Site Plan effort.

### **Lia Meringa**

The ELIC design continues to be refined. Roughly one needs the hadron beam to have 10 times the energy of the electron beam. The design now allows polarized ions up to Lithium, and unpolarized ions up to lead. It is even possible to consider injecting the electron beam into both rings, or generating positron beams and accelerating them through CEBAF into the rings, so  $e^+ e^-$  collisions are in principle possible, if the dipoles can be switched quickly enough. The same luminosity is expected for positrons as for electrons. A physics program is needed for  $e-e^+$  or  $e-e^-$  collisions.

Luminosity is increased by have short beam pulses with a head on crab crossing and a 1.5 Ghz beam structure. A question was raised about possible problems from interactions with residual gas in the beam line.

The UGBoD plans to have an ELIC session at the summer annual meeting. Preceding this is a Hampton ELIC workshop in May.

### **Ed Brash**

Ed looked into computing issues at ResFac: he surveyed a number of people staying there, and found no complaints, except one linux user needed a day to work out the connection. Apparently no one uses the machines in the rooms, because everyone brings a laptop. People would love a printer in common room – the printer that used to be there probably was JLab property, and got removed during the JSA transition.

There has been an issue with new machines here at the lab is getting an IP address. In the past, you would have the machine and do some setup, and then request an IP address and wait a day or so to get it. The computer center will now allow you to request an IP address before you get your machine. The instructions are being cleaned up. It would also be good to know in advance if you are moving a machine from one location to another whether you need to get a new ip address.

Karl has had outstanding requests for months asking about using VNC, videoconferencing

software, on site. No answer yet.

There is a problem with having little real computing power in the Hall C counting house. Ed talked with Sandy Philpott about having dedicated on line batch queues.

The UGBoD has noted in the past that batch farm / computing shutdowns seem to inconveniently happen shortly before PACs. Once again we have a planned outage from Dec 21 – Jan 2, just before the PAC on Jan 14. This upcoming last 6 GeV PAC seems to be inconvenient for submitters and defenders, with proposals due shortly after Thanksgiving, and defenses shortly after the farm shutdown. But somehow the time is convenient for PAC members, as they continue to favor mid January and August.

### **Karl Slifer**

The web page feedback form is ready and tested; it needs to be linked from the UGBoD page. The plan is to continue to allow anonymous submission. Emails are sent to all board members.

John Arrington pointed out that a lot of JLab postdocs seem too isolated, and there is a perception that they have difficulty giving good job interview talks. They do not appreciate the differences between giving a seminar to colleagues and a colloquium to a broader audience. There are several possible ways we can help. We can encourage them to use lunch seminars. There is an idea for a Hampton University summer school beyond HUGS, at which they could teach. There is a program at W&M that all SURA people can attend – a not for credit class on speaking. Should we have an evening session for the postdocs at the users group meeting? There was an excellent Physics Today article in the Nov 2006 issue, about getting a job at a liberal arts college.

### **Aidan Kelleher**

Aidan proposes a standard for evaluating the Poster Prizes at the Annual Meeting. The basic information to give the students and community is that the scoring is based  $\frac{1}{2}$  on the poster itself, and  $\frac{1}{2}$  on the presentation given by the student to the evaluation committee.

The graduate student organization used to be funded from the director's discretionary funds, but there is no money now, and the last president is now no longer a graduate student. We encourage the organization to request money from the JSA Initiatives Fund next year.

One problem is that the list of graduate students is not a good list of grad students. In principle we know who the students are from the forms people fill out when coming on site, but getting that information into Jlist has been a problem.

Another problem is that even general talks are often over the heads of young graduate students – there are many aspects of physics research that they simply are not taught. We should consider having a  $\frac{1}{2}$  day basic introduction for new grad students at the user meeting.

### **Latifa Elouadrhiri**

A Women in Physics / at JLab Committee has been formed and is starting work, defining its goals.

## **Ron Gilman**

### *Director Search*

The Board discussed the current state of the search for the next laboratory director.

### *JSA Initiatives Fund*

The JSA Initiatives Fund has \$500 k per year. About \$300 k is needed for the ongoing programs of the past several years: the director's discretionary fund, faculty sabbaticals, graduate student fellowships, and the Isgur Fellowship. These programs have broad support, leaving about \$200 k for additional Initiatives. There were 21 request totalling about \$1.2M. Of these, 11 were endorsed by the UGBoD, for a total of about \$100 k. About \$30 k was directly sought by the UGBoD to support our annual activities: the user group meeting, satellite meetings at APS, the thesis prize, the poster session prizes, the new JSA Postdoctoral Fellowship, and a Washington trip – except for the final two activities, which are new this year, all are ongoing. On Dec. 6, the JSA JLab Committee met and decided to recommend all of the UGBoD endorsed proposals for approval by the JSA Board. They appreciated our detailed proposals, that we did not assume funding was automatic, and suggested that in future years we also point out as a matching contribution the time and effort spent by the board on carrying out the various initiatives.

### *JSA Postdoctoral Fellowship*

As reported to the JLab Committee we have several excellent applicants for the Fellowship. The Board has defined the evaluation standards and started evaluating the applicants. From the Fellowship announcement, we consider the candidate's records of accomplishment, the physics impact and budget of the proposed program, and the promise for future JLab research. We expect to be ready to award the Fellowship by mid January.

### *JSA Thesis Prize*

On Nov 15, an announcement for the 2007 JSA Thesis Prize went out. The deadline for applications is January 31, 2008. People who defend their thesis during 2007, or defended during 2006 but were not nominated previously, are eligible.

### *User Group Meeting Plans*

The 3-day all plenary session format last year seemed to work well, so we should again follow this plan. We need to have talks from the funding agencies, the thesis prize and postdoc fellowship winners, as well as a business session.

We have now had a number of people who have been awarded APS Fellowship based on their Jefferson Lab research. We should try to honor them by inviting them to talk at the annual meeting. The UGBoD congratulates the new 2007 Fellows honored for their work at the lab Haiyan Gao (form factors and transition region) and Sebastian Kuhn (nucleon spin structure). Also in the field of electromagnetic physics / hadron structure, Richard Milner was honored for his work on HERMES and BLAST, and Ed Kinney for his work at HERMES.

We plan to have sessions at the meeting on 6 GeV physics, 12 GeV physics, and ELIC. For the 6 GeV physics, the plan for the final years at the lab should be advanced enough that it can be discussed. ELIC represents the long term future, which we cannot continue to neglect.

### *2008 User Group Board of Directors Election*

We need to elect 6 new members in the 2008 election, including the chair elect and the graduate student and postdoc members. The continuing members will be Ron Gilman (chair, Rutgers, mostly Hall A), Latifa Elouadrhiri (Hall B), Larry Weinstein (Hall B), and Wally Melnitchouk (theory). As usual, we will ask the nominating committee to come up with a diverse slate of candidates that will allow voters the opportunity to have a diverse board. It is desirable that the board have both physics diversity, to represent the wide range of science done at the lab, and geographic diversity, to represent the wide national and international interest in JLab physics.

### *“Politics”*

The recent efforts by the American Physical Society concerning ongoing budget issues have been hard to respond to, since forwarding an email through the cuga list hosted by JLab is perhaps not allowed. Due to various technical problems (linux/windows incompatibilities, limitations to free email web sites, experimental shifts) it took several days to forward the APS list to the user group. It has been difficult, will be difficult to maintain, and difficult to transition to the next chair. There is agreement within the JLab Committee that SURF should host a user group email list. RG will try to get this set up.

The National User Facilities Organization (NUFO) is attempting to set up a series of local Congressional visits. RG will try to contact users about this.

### *Various concerns*

Recently there have been several reports of uncomfortable temperatures in F wing 3<sup>rd</sup> floor. It appears that conditions vary dramatically depending on your proximity to the HVAC vents. The average is fine, the variance is too large.

A number of the new hires are being moved into F wing. Space is going to continue to be an issue.

There has been a lot of discussion recently about the gate between the ResFac and the JLab site. It is an annoyance for people going to or from shift at midnight. Users generally see no issue in keeping both the old gate outside ResFac open as well as the new gate between ResFac and the JLab site. Mike Dallas tells us we are required by DOE to have a single point of access, so one of these gates must be closed. Also, there is no money now to put up a card-reader operated gate, like at the entrance to accelerator site. The UGBoD welcomes your input on this issue.

### **Adjournment**

The UGBoD meeting adjourned at about 3:45, to join the CD2 celebration.