

Meetings and Minutes

Minutes of the May 6, 2006 UEC Meeting

Present: Alton, Casey, Chertok (video), Diehl, Finley, Gollin (video), Kopp, Merritt, Quinn (video), Trischuk

Apologies: Bertram, Hughes, Nguyen From the GSA: Aguilar-Arevalo, Degenhardt, Maki

The Chair called the meeting to order at 9:35 am.

CHAIR'S REPORT

Chair Sacha Kopp thanked all the outgoing members of the UEC (Alton, Bertram, Finley, Hughes, Nguyen) for their excellent service to the organization.

He updated the committee on his visit to the CMS collaboration meeting, to discuss their future involvement as Fermilab users, and with the UEC. There was some discussion of the direction in which the UEC should evolve, in the new era when many of the experiments of interest to our community are not located at Fermilab or SLAC. There is a consensus that the committee should work with the other constituencies (US LHC, US ILC, ...) to understand a good model which the field can use in the future, to continue to serve the traditional UEC-SLUO function of representing the field as a whole in Washington, DC. Chair Kopp has begun to work with these other constituencies already, and will continue this work.

The Committee then heard reports from the Users Meeting, Quality of Life, and DC Trip subcommittees.

USERS MEETING (Casey, Chertok, Merritt, Finley, Degenhardt, Trischuk, Bertram, Alton, Nguyen, Kopp)

Brendan Casey, subcommittee Chair, noted that many of the members of the UEC for have been active in the Users' Meeting preparations, beyond just the subcommittee. He reported on the substantial progress in getting ready for the Users Meeting. Preparations for the dinner are well in hand; posters advertising the meeting have been distributed; the pamphlet information is being collected. As of the May 6 UEC meeting, twenty-eight posters had been submitted for the poster session (as of May 15 this number is 45); judges for the graduate student poster prizes have been selected; display hardware for the session has been organized. Audio-visual arrangements are in hand. For the public lecture by Norman Augustine, more than 500 tickets have been issued so far, most of them to the general public. Users should be reminded that tickets are required for this event, even though it is free.

The committee to select featured student talks for the Users Meeting has reported its selected talks, which are:

- Anadi Canepa CDF Tripleton searches at CDF

- Petteri Mehtala CDF Hadronic top mass measurement at CDF
- Mikko Voutilainen D0 Inclusive jet cross section measurement at D0
- David Schmitz MiniBooNE Secondary production measurements for MiniBooNE

These talks have been assigned to slots in the [posted schedule](#).

The GSA wished to record its thanks to the Featured Talks Committee: Ben Kilminster, Wyatt Merritt (chair), and Chris Quigg.

The schedule has been planned so that each session covers a diversity of subjects.

The committee discussed whether there should be name tags for Users Meeting registrants, and concluded that yes, there should be name tags.

Fermilab Today articles about the public lecture and the Users Meeting are forthcoming. There will be a press release also; it is not determined when that will go out.

QUALITY OF LIFE (Diehl, Alton, Finley, Merritt, Kopp)

Tom Diehl, subcommittee Chair, reported that the Quality of Life subcommittee had two meetings in April, devoted to planning for Career Night and the QOL survey. It was decided to decouple the survey from the Users Meeting, and distribute it at a different time. Career Night has typically consisted of three speakers who cover post-graduate school career choices. It was discussed that it is difficult to cover the full range of possibilities with just three speakers, and there might be an advantage to going to a two-day and/or panel format. There might also be a web-based pool of contacts in various career types, so that this type of information is available on a more full-time basis. The subcommittee is looking for a postdoc with an interest in career issues who can undertake the planning for these activities.

In addition, the subcommittee continues to work on mass transit issues by identifying users to work to advocate a bus stop at the Fermilab entrance starting this Fall (see Kurt Riesselmann: KurtR@fnal.gov) and is beginning to take on recycling at the Lab. The second issue was raised via the GSA.

The GSA has finished the new Guide to Life and that is posted on the GSA page at <http://www.fnal.gov/orgs/gsa/guide/index.html>.

DC TRIP (Quinn, Chertok, Diehl, Finley, Hughes, Merritt, Nguyen)

Breese Quinn, subcommittee Chair, recapped the statistics from the March trip (see minutes of previous UEC meeting). The trip planning had assumed a reasonable maximum of 5 meetings per participant; on this trip, we achieved 4.7 meetings per person, near the theoretical maximum. The previous year achieved 4.1 meetings/person.

He commented that important budget cycle activities are taking place in Washington this month, and noted that he will be sending a letter to the Appropriations subcommittees on behalf of the UEC, reiterating our request for their support for the increase in Office of Science funding.

He proposed renaming the DC Trip subcommittee to something which better describes the subcommittee's year round activities, but a new name was not selected. Some proposed summer activities for the subcommittee include:

- organizing visits to the district offices of the Congresspeople we visited in Washington
- outreach to other users' organizations and constituencies (see the discussion in the Chair's report)
- planning for another possible trip to DC in the fall, to visit the committees as they are marking up bills. It was noted that this process might be even more delayed than usual this year, possibly even till after the November election.

DISCUSSION WITH DIRECTOR ODDONE

Chair Kopp thanked the Director for meeting with us all year and sharing his news and perspectives regarding issues of concern to users.

What are the implications of the EPP2010 report for NOvA, LHC, and astrophysics experiments?

The Director felt that the EPP2010 committee, like the previous "Gathering Storm" report, was very good for the field and will get attention in Washington.

What are the implications of the EPP2010 report for ILC support from DOE next year?

DOE has already doubled the budget for ILC for next year. There are some issues to be sorted out with regard to this support; for example, whether this money or core program money is used to pay for lab staff who work on R&D that is related to ILC but supports developments beyond ILC. Universities' best way to get involved is through helping on a lab work package.

There also remains the issue, discussed before at UEC meetings, of discriminating between work on a bid to host the ILC, such as site specific design, and the general design. The lab hopes that DOE funding is split along those lines. This is being discussed now. One consideration here is that the work to prepare for site selection may take significantly longer in the US compared with other potential host countries.

Has the shutdown progressed as planned?

Yes, the schedule is being maintained. The silicon installation for D0 has gone very smoothly. The committee asked if the zebra mussel project is underway yet. That will start soon and will get as many as the temperature conditions allow. There is another short shutdown expected next summer for general maintenance, which will provide another opportunity to go after the mussels in warmer waters. Progress in understanding the tritium production situation has also been great,

and the Director has enlisted a modeling group at LBNL to help with simulations of the target hall conditions.

Was there anything surprising in the ANL contract RFP?

The director stated that the draft Fermilab RFP is now out, and there are no surprises in it, though clarification is needed on some points. We are now in the comment period, when such clarification can be requested. Then the final RFP will be issued, from which point the management has 60 days to put in its proposal. Then there are 'oral exams' for the management team in September. In these, the team (Director, Deputy and Associate Directors, CFO, ESH Officer) are given a management problem to work out, and are graded on the observations of how they do this. (Reality TV for HEP?) Of the perfect score of 1000 points, the science strategy and management of the scientific staff account for about a quarter of the score.

The final RFP is out for Argonne, and its management proposals are due June 2.

What do you consider the highlights of your first year, so far?

The Director listed the lab's response to the strong move into ILC work, Tevatron results, getting MINOS working, and the favorable reports from significant national committees. He said the year has been OK (but not fantastic) financially. The response to the tritium issue by the lab was very good. He feels strongly supported by the staff and users.

THE LHC REMOTE OPERATIONS CENTER

Erik Gottschalk started with a brief history of the LHC remote operations center. It has been part of the planning at Fermilab for CMS, and in the CMS budget from the beginning, thanks to Dan Green. A broader project, LHC@FNAL, which also includes remote operations for LARP (LHC Accelerator Research Program), received a charge from then-Director Witherell on Apr 14, 2005. This project was mentioned in Director Oddone's Vision for Fermilab talk in May 2005.

The LHC@FNAL intends to provide access to information in a similar manner to what is available in control rooms at CERN (for both the experiment and the accelerator). It can provide a communications conduit for members of the US LHC community located in North America, and it will also be an outreach tool.

For CMS, there is a remote operations center (ROC) currently on the 11th floor of Wilson Hall, which is participating in commissioning and test beam activities. These functions will become part of LHC@FNAL when it opens on the first floor of Wilson Hall in early 2007.

For the accelerator, LHC@FNAL allows training at FNAL prior to going to CERN, and also remote participation in studies and debugging activities.

CMS is also planning to build an operations center at the main CERN site in Meyrin, in addition to the control room at the CMS site itself (Point 5). The LHC@FNAL group is working with the

group at CERN to share development of these two remote centers. (CMS wants the center at Meyrin because the Point 5 site is 13 km from CERN and lacks some of the infrastructure.)

It is expected that CMS experimenters will be able to run shifts that receive shift credit from the experiment in the LHC@FNAL, but details are still being worked out.

The LHC@FNAL group has been evaluating web tools for collaboration, and has recommended one to CMS. It has already been adopted for some uses within the ILC collaboration as a result of this work. The group visited 9 sites which do remote operations, including the control room for the Hubble Space Telescope, and will incorporate what they learned from these visits.

Phase 1 of the project, which is approved, will turn the current public display space into the remote operations control room, and will use the adjacent meeting room as well, for meetings and for tour groups. The floor plan from FESS is now on display in the future control area. Phase 2, which is not yet approved, envisions an expansion into the space currently occupied by the Office of Public Affairs. Construction is expected to begin in June 2006 and be complete by October 2006.

STACKING STUDIES IN THE PBAR ACCUMULATOR

Keith Gollwitzer, head of the Antiproton Source Department, described for the committee the progress which has been made in pbar stacking studies.

He reviewed the operations of the pbar source. There are three modes of operation: stacking, unstacking, and reverse proton operation. During stacking for normal operation, every two seconds or so, 8 GeV/c negatively charged secondaries from the pbar production target are transported into the Debuncher. Here all negatives but antiprotons are rapidly depleted and a stochastic cooling system compresses the antiproton emittances for the Accumulator. The Accumulator further compresses the emittances and stacks up antiprotons until it is time for their transport into the Recycler.

Normally, they use reverse protons for studies, because antiprotons are scarce and the monitoring is easier with the higher intensity proton beam. However, preparation for reverse protons requires a 3-hour overhead, which makes 1-2 shift study periods very inefficient. A two week study period was planned for December, but was rescheduled to start Thanksgiving weekend due to a component failure in the Tevatron. Further studies were done in January after another Tevatron failure.

The accomplishments from these studies included increasing the vertical and horizontal apertures in the debuncher, and producing an autotune program to deal with wandering orbits. The wandering orbits come from a wide variety of causes, and can't be easily eliminated, but the new autotune works very well to minimize their effects. They also developed a better technique for debuncher extraction.

The bottom line is that the studies have enabled them to reach a stacking rate of 20 ma/hr - a 25% increase - and to set a new stacking record. The goal for the fall is 25 ma/hr, and for 2007 is

30 ma/hr. Optimistically, if all the planned upgrades reach their targets, the final number could be even better than that, but Gollwitzer noted that expecting to reach all targets is unrealistic. In order to reach these further goals, they will be asking for a series of 2-3 day study periods. Longer study periods are extremely taxing on a small department, and hence are limited in efficiency.

The committee would like to commend the Antiproton Source department for this significant progress, and wish them continued success in pursuing the new goals.

NEW BUSINESS

None.

FUTURE MEETINGS

Future meeting dates: This UEC has no more meetings.

The first meeting of the new UEC, after the election of new members, will be in the autumn.

Users Meeting - May 31-Jun 1

Submitted by Wyatt Merritt, UEC Secretary