

Meetings and Minutes

Minutes of the April 1, 2006 UEC Meeting

Present: Alton, Chertok(video), Diehl, Finley, Gollin, Kopp, Merritt, Trischuk (video)
Apologies: Bertram, Casey, Hughes, Nguyen, Quinn
From the GSA: Aguilar-Arevalo, Welty-Rieger

The Chair called the meeting to order at 9:00 am.

PUBLIC TRANSPORTATION OPTIONS FOR FERMILAB

Michael Fortner, a Fermilab user and Mayor of West Chicago, provided the UEC with an update on some proposals for public transportation to reach Fermilab and its surrounding communities. In addition to serving as mayor, Fortner is the co-chair of the STAR Line commuter rail task force, and the Director of Transportation Policy for the DuPage Mayors and Managers Conference. The Transportation Policy Committee was responsible for the DuPage Transit Plan, adopted in 2002.

The issues regarding suburban public transportation are not new. The current public transportation services in the area are limited to the Union Pacific and Burlington Northern lines into downtown Chicago (neither with a station close to Fermilab) and very limited bus service. There has been no comprehensive implementation of public suburb to suburb transportation. There are a couple of initiatives, reaching back 10 years or more, which are directed at increasing the options. More recently, the Dupage Transit Plan is looking at bus routes, and the STAR Line proposal has emerged with a Phase 1 stage which would connect O'Hare (via a new rail line along the Northwest Tollway) with the EJ&E rail lines around the western perimeter of the Chicago area. [\[link\]](#) This proposal would use small diesel cars, each with its own engine, to provide flexible passenger schedules along this rail line. The proposal would include a station very near Fermilab with possibly a 100-car parking lot along the EJ&E right of way east of the Lab. The service would be every 15 minutes during peak periods and every 30 minutes off-peak. The new line would be able to provide service from Fermilab to O'Hare in about 45 minutes. There would be connection points to the Burlington Northern and Union Pacific lines, although at least in the initial phase the stations would not be co-located and some form of shuttle would have to be provided.

The status of this STAR Line proposal is that it has been authorized as part of the 2005 Federal Transportation Act. The required Alternatives Analysis is ongoing, in parallel with track and station engineering and ridership projections. The goal is to get a Full Funding Grant Agreement in place in the next few years. Due to major construction scheduled on the Northwest Tollway in 2008-2009, there is a good opportunity to have the new rail laid with much less expense and disruption if the FFGA can be in place at that time. One thing the Laboratory and surrounding communities can do to help with this is to insure that the possibility of the new station is mentioned in any long-range planning documents for land use.

In addition, there is ongoing planning for improved bus connections within DuPage county, with customization of service plans for different communities with differing needs. Laboratory users can help with this by completing usage surveys [[link](#)]. Industrial users can make use of various partnership models with bus transportation; Fermilab could investigate which of these models might work in its situation.

Users can send mail with comments on the proposed transportation services to mfortner@westchicago.org.

LHC PHYSICS CENTER

Sarah Eno, coleader of the LHC Physics Center, gave a presentation on the LPC. The LPC's purpose is "to ensure the US gives the strongest possible assistance to international CMS in software preparations for Day 1 and to enable physics analysis from within the US." Participation in CMS from the US is easily larger than from any other single country (525 USCMS collaborators) and the largest CMS institution in the US is Fermilab (58 collaborators). Eno discussed the changing model of how students and postdocs interact with the sites of their experiments, and pointed out that it is no longer necessary in HEP to have every person from the collaborations spending a lot of time running shifts on site, or making hardware repairs directly to the detector. The reasons for traveling to or staying resident at the experiment's site (for current experiments) have more to do with keeping informed about the experiment and interacting with experts from various areas, and also with establishing one's own reputation and connections with collaborators and others in the field. For USCMS, the LPC aims to satisfy these needs at Fermilab, within closer time zones for all US users than CERN provides.

The physical components of the LPC are meeting rooms, office space for transients and residents, and a remote operations center (ROC) which will be used in the upcoming cosmic slice test and test beam activities. The people in the LPC include working groups which are developing expertise in all areas of the experiment's physics and software. Last summer, more than 50 university physicists from CMS spent 2 weeks or more at the LPC, and a similar number is expected this summer.

The LPC has already had some significant impact on international CMS. It has provided reengineering of the CMS event data model, which will be used in the upcoming cosmic slice test. It formed the first trigger and simulation groups within CMS, and these groups have been promoted to international CMS groups. Its ROC plans have inspired the Meyrin ROC at the central CERN site.

The LPC will support many different models of university-LPC interaction.

The LPC's plans for next year include commissioning the ROC and strengthening the working groups and the new physics group. The physics group meetings at full CMS meetings are more like conferences than working group meetings, because talks are short and strictly timed. The physics group at the LPC should be more able to accommodate discussion and should be a good forum for students and new groups to learn about CMS physics.

The Committee then heard a report from the Users Meeting subcommittee.

USERS MEETING (Casey, Trischuk, Bertram, Alton, Nguyen, Kopp)

Brendan Casey, subcommittee Chair, submitted a report by email. The confirmed distinguished speakers are

- Congressperson Judy Biggert, Illinois 13th District
- Professor Norman Augustine, National Academy of Science
- Professor Harold Shapiro, Chair, EPP2010 Panel
(Vice Chair Sally Dawson will also attend)
- Dr. Robin Staffin, Director, DOE Office of High Energy Physics
- Dr. Jon Kotcher, National Science Foundation
- Dr. Pier Oddone, Fermilab Director
- Professor Michel Della Negra, Spokesperson, CMS Collaboration
- Professor Hiro Aihara, ILC, T2K

Effort was recruited for some of the Users Meeting tasks: Wyatt Merritt will do the web page. Dave Finley will coordinate with Audio-Visual staff and with the GSA. Max Chertok will coordinate the printed program brochure.

There was discussion of the final distribution of talks, and some members were given assignments in this connection. There is a version 4.0 of the schedule which was distributed to the committee.

The election of new members to the UEC will be organized to start, as usual, at the Users Meeting. More information on the election will be available soon from the Users Meeting web page.

DISCUSSION WITH DIRECTOR ODDONE

The Director congratulated UEC Chair Kopp on the success of last week's NUFO meeting, which brought representatives of the user organizations of all the DOE laboratories to Fermilab, for discussions of common interest. (NUFO is the National Users Facilities Organization; see [link](#) for further details.)

Could you give us an update on the Tritium situation? Does the Illinois EPA citation which the lab received affect the NuMI turn-on? Now that Fermilab has been cited for violation of a government environmental regulation (for the first time in its history) due to operation of the beam, will this alter the procedure Fermilab has used in the past for obtaining permission from DOE to turn on the beam?

Director Oddone hopes that the Laboratory's turn on will not be impacted by the notice itself. The notice will be responded to within the necessary 30 days (by Apr 21) by modifying our permit to operate. He does not want to promise that the run will start immediately at full blast, since it may be useful to carry out some experiments to understand fully the tritium situation.

MINOS is expecting to get a factor of 2 increase in data by summer, since they have 50% more data in the can and also they plan to make fiducial improvements. We want to see another factor of 2 from beam by the following summer, which will give very pretty results.

The committee asked if there were any implications from this issue for any activities other than turning on NUMI, and the Director said no, he did not expect any other implications. The Director commented that the shutdown is going very well and that he hopes to see a good turn-on also. It would be very beneficial for the lab to turn on quickly, since it would be a big factor in meeting the base milestones. He is hoping to see warmer weather after a record cold March, to enable the Lab to address the zebra mussel issue [see [story in previous minutes](#)].

We learned during the DC trip meeting with Ray Orbach (Director of the DOE Office of Science) that he is focussing on a "fast-track" version of the ILC. We would be interested to hear your reaction/thoughts on the "fast track" ILC, and how that affects the previously envisioned "mid-term program."

The Director believes that for Director Orbach and others in the Office of Science, getting data out of the current program is still a very high priority. Getting good results out of Tevatron and neutrino running is a necessary foundation for our credibility. The Tevatron and neutrino programs are not threatened by a fast-track ILC. In FY08, there is a crisp choice, whether NOvA is in or out. FY08 is a crunch year for funding, because the ILC needs to go from 60M\$ to about 100M\$; NOvA will need \$50M; and the B Factory and the Tevatron will still be running. However, it is within the capability of the Office of Science to cover this program, and the Director has laid out the strong science case for NOvA as competitive and different than the present Japanese program. The committee commented that MINERvA is thankful for receiving some R&D funding which the Director was able to find this year. The committee asked about this fast-track view from the US Office of Science in the context of the broader view in the world which suggests waiting for LHC results. The Director stated that the pressure on the US to define the ILC project is greater than on other regions. The US would like to define a procedure for bidding to host the ILC as soon as the cost estimate is available from the RDR, without waiting for a TDR. The question is whether other regions will be willing to engage in serious siting discussions at that point. The Director thinks it can happen, because other nations also see the danger to the project of not going forward. He pointed out that in order to start the project in 2011, the demonstration of operating a string of 50 cryomodules will be after the project start, not preceding it.

How are the lab and university communities responding to increased emphasis on ILC R&D? Are you satisfied with the year's work in that area, and what are the technical and morale/commitment issues which concern you in ramping the effort up?

There is no doubt that the level of effort has to be ramped up, but the Lab and universities are making a good effort. The technical concerns include getting to a point where the gradients in the RF cavities are systematically achievable, and being able to industrialize their production. Industry in the prototyping stages will not be able to afford the necessary test facilities, so the Laboratory must prepare to provide these here. Technical Division is responsible for the component design and for working toward industrialization, but it is the Accelerator Division

which will be responsible for integration into working systems. Argonne and Fermilab will be signing a cooperative agreement for ILC development on April 21, Illinois Accelerator Day.

What are your impressions of the meeting in Bangalore of ILCWS06?

The Director was primarily involved in the GDE meeting, but found that India has much to contribute to an ILC. He learned that India has contributed \$20M to CLIC, for example. It has a number of technical centers with tremendous capabilities and with a very favorable cost structure.

Next the committee heard reports from its DC Trip and Quality of Life subcommittees.

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

As mentioned above, UEC Chair Kopp hosted a meeting here at Fermilab of the chairs and administrators of other DOE laboratory user organizations. One of the aims of that meeting was to explore the idea of common Washington DC visits with a common theme (support for science in general). There was positive reaction from the other organizations to this proposal.

During this year's trip to DC in cooperation with SLUO (SLAC Users Organization), we had 132 meetings with Congressional offices (SLUO had 62, UEC had 70), 4 meetings with Congressional committee staffers (Mike Holland, Kevin Cook, Scott O'Malia, Mike Ringler), a meeting with DOE Office of Science Director Ray Orbach, a visit to DOE offices in Germantown, and 1 meeting with the NSF.

In following up on the DC trip, the idea of having assignments of physicists from the Users Organization as long-term liaisons to important political offices in Congress and the Executive Branch has been floated. The intent would be to establish longer-term relationships than the 2-year UEC term allows.

It was pointed out that the wave-shifter rulers were a big hit in the Congressional offices, and we do not have enough left for next year's trip. There should be an effort starting now to procure more. If we want to use a map showing distribution of HEP users next year, we should also work on methods of generating it, starting now. Ideas for more effective material in next year's packet for the Congressional offices were discussed. We would like to commission an issue of Symmetry magazine which would have material useful on the trip, and this should start in October or November. There needs to be discussion of coordination with USCMS, and possibly US ATLAS as well.

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

Tom Diehl, subcommittee Chair, reported that Kurt Riesselmann is involved with the West Chicago task force on the STAR Line proposal (see above), but that we need to get a West Chicago resident from the laboratory community involved. We also would like to insure that Fermilab becomes a stop on the "Community Circulator" bus service schedule next year. The subcommittee will solicit user involvement to advocate for this, and for the provision of

necessary connecting transportation to the bus stop. If any user is interested in helping to advocate for a bus stop, please contact a member of the QOL subcommittee [see [link](#)].

Aguilar Arevalo of the GSA reported that the updated version of the Guide to Life at Fermilab has been vetted by the Housing, Recreation, and Users Office, and is ready for posting on the GSA site, pending some tweaks to the html version.

There was also some lively discussion of ideas about Career Night.

NEW BUSINESS

No new business was proposed.

FUTURE MEETINGS

Future meeting dates: May 6

Users Meeting - May 31-Jun 1

Submitted by Wyatt Merritt, UEC Secretary