Fermilab

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Update on Recommendations from Previous Meeting

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Requests for More Information

- **Do we have a list of requests that the facility is unable to fulfill?**
  - Not anything official (at the moment)
  - Most often, I hear requests for people to test radiation hardness. Also, people looking for < 500 MeV beams to test in as well.
  - We have had some requests for a magnet. I have passed these requests on to the accelerator division and they are working on identifying a magnet that might fit users' needs.

- **Some of these users go to SLAC and others probably go to CERN. Is there a community that FTBF should be serving? For instance, low-energy hadrons or leptons? An irradiation facility?**
  - I contacted CERN test beam users (list from previous committee meeting). It's more convenient for European collaboratos to work at CERN. However, American collaborators are likely to come here. Sent information on getting beam time to the various experiments.
  - As the lab shifts focus to neutrino beams, it's worth trying to figure out what needs to be done to work well with neutrino beams.

Requests for more information, continued

- **Please provide some extrapolations for the usage of the facility for MTEST and MCENTER in two scenarios:**
- **1. MCENTER as an extension of MTEST;**
- **2. MCENTER as a dedicated long-term use facility (i.e., exclusive usage for projects like LARIAT).**
  - MCenter is an exciting new beam line that has just been brought online. There has been interest by other groups to use the space after LArIAT, particularly one that is using a water Cerenkov system and is working on a proposal right now. MCenter is primarily being used as another beam line like MTest. This year, we intend to gather information from users as to what type of facility is really needed. One possibility is to continue cryo operations after LArIAT completes their program.
  - Another possibility is to optimize MTest for > 1GeV beams and optimize MCenter for < 1 GeV beams. Continue to host either longer term experiments or short experiments.

Requests for information continue

- **Details of personnel currently in FTBF staff**
  - Aria Soha, Group Leader
  - Bill Frank Senior Technician (on assignment with g-2 currently)
  - Todd Nebel Operations Specialist
  - Mandy Rominsky Applications Physicist
  - Ray Safarik Technical Specialist (retiring in < 6 months)
  - Eugene Schmidt Jr. Applications Physicist
  - Ewa Skup Engineering Physicist
- **What the requested additional FTEs would do.**
  - There is much to be done for the beam line simulation and for instrumentation. We could easily keep another person busy working on instrumentation development.
  - There are many models to get the work done that we need. We can use student help for example. More on this later.

Request for more information

- **What is the budget of FTBF?**
  - The current FTBF budget for FY16 is $68,000. This is a decline from previous years by a significant amount.

Response to Recommendations

- **Reconsider approvals and delegation of authority. We spent a lot of time discussing the experimental**
  - We had a meeting between FTBF personnel, program planning and the head of ES&H (Safety) to discuss this issue. While they were sympathetic to the fact that it could be burdensome to gather signatures, they were concerned with where to draw the line on what the facility could approve. We suggested that a list could be made of the types of things that the facility could approve (PMTs, scintillator paddles, etc.) and perhaps have additional training in what to look for.
  - At the same time, the lab is looking to overhaul both the TSW and ORC processes to make them more streamlined and have all the divisions on the same page. More on this in a later talk.
  - In the meantime, the facility has implemented electronic signatures for the ORC process. While this doesn't always make the process faster, it does allow for some off-hour approvals to take place (someone can sign from home).

Recommendations

- **Dedicate time and resources to beam tests and development.**
  - We will devote 6 weeks to facility studies. We have been working with the accelerator division to develop a plan to study the beam line based on the current instrumentations. But the studies need to be planned out before we take time away from users.
  - We will take advantage of any downtime for users and do studies then.
  - We have some ideas on what new instrumentation is needed. There is an extended down time in January where we can install instrumentation for a spectrometer and perhaps a time of flight system.

Recommendations

- **Complete the characterization of the beam lines presented in part by Mike Geelhoed. Establish what other capabilities are possible. A full understanding of the beam composition, intensity, momentum resolution and spot size would be very useful to the user community.**
  - This is a big part of our future planning. The Minerva test beam experiment has shown some interesting trends in the beam we need to study. In addition, one of our other users developed a beam line simulation that worked reasonably well. We intend to continue these studies and publish the results for the community to use.
  - In addition to studies, we will explore beam line simulations.

Recommendations

- **Establish methods to track performance of users from simple metrics like how many beam-hours are used to downstream questions like number of articles published.**
  - For the most part, many of these statistics are collected. The goal for the next year will be to keep in better contact with groups after data taking to find out about publications. In addition, keep track during their beam time of what they have taken for beam. One possible way to track this is to have a logbook category for what beam time they have taken. In addition, the accelerator could help provide information.

Recommendations

- **Consider having regular users' meetings.**
  - This is a great suggestion. I am polling users' to find out their opinions on the matter. So far there is has been very positive feedback and the goal will be to have a meeting in the summer of 2016.

Recommendations

- **Examine streamlining safety training requirements. How can we ensure that we can turn around a new user within 24 hours of their arrival on site?**
  - Many of the training requirements can be done ahead of time online. One of our procedures is that several weeks or months before users come, we collect their ID numbers and check their training. That gives them time to complete any online training they need to do and allows us to have enough time to arrange for classes if classes aren't being offered during the users window.