

# Report of the Second Meeting of the Fermilab Testbeam Committee

March 30, 2015

## 1 Discussion

This is a report of the second Fermilab Testbeam Committee meeting held on January 29, 2015, at Fermilab. The Fermilab Testbeam Facility (FTBF) is a valuable resource for the HEP community. This meeting was intended as a follow-up on the meeting in 2014, to understand the progress on the recommendations made during that meeting, and to review the performance of the facility as reported in the first annual report. Overall, the goal of the committee is to give advice to the Fermilab Directorate on how to optimize the impact of the facility and its use. The charge for the meeting is presented in the Appendix.

## 2 Summary of the meeting

The meeting was very productive. The FTBF manager (J.J. Schmidt) presented a list of responses to the preliminary suggestions from the first committee report. Much progress has been made here and we commend the staff for this. Aria Soha presented the status of the facility usage in 2014 and projected 2015 usage. Twelve new experiments ran in the last year, and nine new TSW were approved. In 2015, preliminary estimates suggest that the usage is down compared to 2014, likely due to either reduced soliciting of new users or due to the LHC facility re-opening. Erik Ramberg discussed the scientific impact of the facility by enumerating the experiments that took place last year. Erik also mentioned the possibility for developing an irradiation facility at MTA. Ewa Skup presented recent technical changes to the FTBF and plans for the future, including momentum tagging, better motion table control, and plans for updating the DAQ architecture. It is impressive to see what has been done in the recent past with a skeleton staff.

J.J. also presented the status of the MTEST and MCENTER beam areas, including the usage MTEST for Minerva, the scheduling problems with that, and the possibility of using MCENTER as an extension for MTEST. This option was favorably described in the meeting.

Much of the rest of the meeting was dedicated to a discussion of the contents of the annual report, which had been previously distributed to the committee. The reaction to the report was overwhelmingly positive; both CERN and ANL are considering requiring the experiments to submit similar information for their test beam efforts. We congratulate the staff for putting together such a comprehensive document. In the recommendations, some suggestions are made for improving the report further.

Some concern was raised in the committee that no progress had been made on improving operational readiness. The committee supports the development of an electronic sign-off, or other method to ease the administrative procedures for beam clearance. We continue to support more independence for the FTBF staff for routine changes to the experimental configuration. The com-

mittee also looks forward to a discussion with the Operational Safety officers at the next committee meeting.

Another issue that was discussed was the scheduling of high priority, long-term users of the facility. The committee seeks clarification in its role in the scheduling of high priority, long-term users of the facility and transparency in the process used in the lab for their assignment. At present these decisions are taken at the laboratory management level. Should the committee be providing recommendations in the scheduling of such users of the facility?

We welcome that new staff are being hired to the FTBF and look forward to their joining the effort, including deciding future directions for the facility as a whole.

### 3 Recommendations

Below please find a list of recommendations generated by the annual report and the meeting.

- Additional information for the annual report
  - Include in the annual report a table of breakdown by research area (general R&D, LHC, neutrino, ... ). This information was included in presentations but not included in the report.
  - Include a publication list from the previous year, including theses and conference talks based on FTBF work
    - \* Write a standard blurb acknowledging FTBF for easy inclusion into papers and conference talks
  - additional user information
    - \* breakdown per professional category: students, post-docs, staff and faculty
    - \* offsite vs onsite users. Are there users who do not directly participate in the data collection but do participate in the evaluation of the test beam from their home institution, and if yes, are these users counted in the annual report?
  - breakdown of beams used (protons vs secondaries; beam energies)
- develop a standard procedure for approving ‘big users.’ Should the committee be involved in the approval process, or kept in the loop on decisions that have been made with respect to big users.
  - How do big users get approved for additional usage of the facility?
- Provide longer-term plans for Minerva and LArIAT.
- Ask test beam coordinators of LHC experiments about their future usage patterns, with respect to FNAL test beam usage. Contact names for the LHC experiments are given in the Appendix.
- Have a representative from the safety community come to the next FTBF meeting to explain the procedure from their P.O.V.
- Explore with Safety how to give FTBF staff more authority
- Consider having a users’ meeting session during the FNAL users’ meeting.

- A new manager, Mandy Rominsky, has been hired for the FTBF. We look forward to working with Mandy to help her
  - develop a future-oriented vision for the facility - other beamlines, other users, etc (in coordination with Program Planning),
  - continue the program of beam tests to fully characterize the facility, and
  - work on streamlining ORC procedures.

## 4 Summary

The Fermilab Testbeam Committee thanks the staff for putting together the annual report and the useful presentation, and commends them to continue to operate the FTBF successfully in light of tight budget and manpower constraints. We look forward to our next meeting in late summer.

## A Agenda of the meeting

Time	Length	Title	Speaker
8:45 AM	15m	Executive Session	
9:00 AM	35m	Progress on July Recommendations	J.J. Schmidt
9:35 AM	30m	Annual Report: Facility Summary	Aria Soha
10:15 AM	30m	Annual Report: Scientific summary	Erik Ramberg
10:45 AM	30m	Technical Status: Recent changes & plans	Ewa Skup
11:15 AM	25	MTEST: FY15 program	J.J. Schmidt
11:40 AM	20m	MCENTER: FY15 program	J.J. Schmidt
12:00 PM	25m	Model for future usage & metrics	J.J. Schmidt
13:30 PM	1h	Executive Session	

## B Committee Membership

- Carsten Hast, SLAC
- Ron Lipton, FNAL
- Jen Raaf, FNAL
- Mayly Sanchez, Iowa State/ANL
- Guy Savard, ANL
- J.J. Schmidt, FNAL (*ex-officio*)
- Henric Wilkens, CERN
- Peter Wittich, Cornell (chair)

This was a phone meeting; most of the committee attended remotely.

## C Charge for the meeting

The testbeam facilities at Fermilab are a valuable resource for the HEP community. The committee is asked to give advice to the Fermilab Directorate on the operation and development of the

Fermilab Testbeam Facility (FTBF), and on any programmatic choices needed to optimize its use and scientific impact.

In particular, at the present meeting the committee is asked to comment on:

1. The community usage and the scientific impact of the FY14 FTBF program, as documented in the annual FTBF report. Is there additional information that would be useful to include in future annual reports?
2. The plan for the FY15 FTBF program and on progress towards developing a model for present and future usage of the FTBF. Is the model adequate for developing a longer-term vision for the facility? Are appropriate metrics being tracked to inform the model?
3. The progress towards providing the additional information requested by the committee in their July 2014 report, and any updates to the “Preliminary Recommendations” described in that report.

The Directorate will welcome any other comments from the committee about utilization of the facility, the need for programmatic choices, and the need for facility enhancements.

## **D LHC Experiment Test Beam contacts**

- ALICE: Arturo Tauro
- ATLAS: Sotiris Vlachos
- CMS: Dragoslav Lazic
- LHC-b Heinrich Schindle