

Physics and Experiment Board Meeting

September 15 (1400 GMT), 2010

Minutes (prepared by J. Brau)

Present via Webex: Ties Behnke, Jim Brau, Karsten Buesser, Catherine Clerc, Marcel Demarteau, John Jaros, Akiya Miyamoto, Michael Peskin, Francois Richard, Yasuhiro Sugimoto, Andy White, Sakue Yamada, Hitoshi Yamamoto.

General News - Sakue

At the ILCSC meeting in Paris during ICHEP, the ICFA Chair (A. Suzuki), representing the siting sub-group, presented a plan for ILC organization post-2012, which involved a multi-lab web.

The first Baseline Assessment Workshop (BAW1) was held at KEK, September 7-10. The redesign areas of single tunnel and accelerator gradient were discussed. About twelve detector people attended, including all four of the detector management team. An intense and stimulating discussion on RF overhead occurred.

The 2nd Baseline Assessment Workshop (BAW2) will be held at SLAC, January 18-21, 2011. The positron source and the reduced power design will be the topics of the workshop. It is hoped that there will be a strong turn-out of the detector community.

The new benchmarks task force has been initiated to specify benchmarks for the DBD.

Upcoming Meetings

The IDAG will meet in Geneva, during the ECFA Linear Collider Workshop, on October 20-21. They will interview the Detector R&D Common Task Group, and most of the CTG members are expected to be there. Representatives of the detector groups are also requested to be in attendance for that interview. There will also be an interview with the Software CTG, but Norman will not be able to participate.

The ILC PAC will meet at the University of Oregon, Eugene, USA, on November 11-12. The present agenda includes talks by the Research Director, ILD, and SiD on November 11, and talks on SB2009, MDI, CLIC cooperation and Physics on November 12.

SiD - Andy

SiD is planning for a workshop in Oregon, November 15-17. The meeting is centered on organizing the DBD. Each area of work will be reviewed, and section editors will outline plans.

Norman is working on SLIC Pandora. There is a working version for analog calorimetry, and will be a digital calorimetry version.

There is good interaction developing with the CLIC group, and CERN people will come to the Oregon workshop. SiD people are taking responsibilities as editors for CLIC chapters.

The meter-cubed RPC system is going into the beam at Fermilab.

ILD - Yasuhiro

The simulation effort is working on the definition of the baseline detector for the DBD. Improvements to the reconstruction software should be incorporated over the coming months. For the DBD, ILD plans to identify the baseline technologies which have passed review. For example, they hope to have two hadron calorimeter technologies. Only those technologies that have shown to work by Spring 2012 will be included in the DBD. ILD thinks it is too early to decide between the working technologies.

MDI – Karsten

The MDI CTG has been working on the manpower request and the push-pull design. The goal is to make a decision on a common detector motion system by the March ALCPG Workshop in Oregon. The CTG is working on a process for making a decision. The critical technical tasks have been identified. The main issues related to the vibrations that would accompany a platform, and how each of the detectors would need to be modified for either motion system.

The MDI group is also engaged in planning for the ECFA Workshop in October. Since MDI is divided into two working groups, one on detectors and one on the machine, this is a complicated exercise.

Engineering Tools – Catherine

The work of the Engineering Tools CTG continues to be limited. The group will meet to try to find a common EDMS structure for both systems. Manpower is needed to support the structure.

Detector R&D – Marcel

The Detector R&D CTG is preparing for its interview with the IDAG during the ECFA Linear Collider Workshop in October. The group meets nearly every week, trying to gather a broad view of all the work under way. The highlights in various areas will be reported. The group is looking at the needs and plans of the R&D collaborations, and their available resources. There are contractions appearing in resources. The needs of the future will be presented to the IDAG.

One concern is the anticipated absence of test beams at Fermilab and CERN in 2012. If the proposal to extend the TeVatron run is approved, it may be possible to have test beams at Fermilab in 2012.

Software – Akiya

At the ILD Workshop at DESY a joint software working group meeting discussed common tools for geometry, data formatting, and data production. LCIO improvements (new format) are under discussion. Work with the new ILC beam parameters is progressing.

Physics - Michael

The Physics CTG will meet again before the Geneva Linear Collider Workshop. The LHC has reached the pb-1 level, boding well for the future of energy frontier physics. At the Geneva workshop there will be a panel discussion to discuss the linear colliders from the perspective of the possible LHC results.

SB2009 - Jim

The new machine parameter list was received from the GDE on August 30. The SB2009 Working Group met on September 14 to discuss these parameters, and plans for new studies. The studies prepared last winter will be updated, and many updates will be reported during the Geneva Linear Collider Work. Studies with these new machine parameters will also be conducted for other physics topics such as Higgs branching ratios.

Joint Working Group with CLIC

The last meeting of the joint working group was held about one month ago. Minutes are expected, but have not yet been received. The set of areas of on-going cooperation were discussed. Topics which might benefit from joint workshops were discussed. These included software, powering, and push-pull. The possible future cooperation on costing was also discussed, particularly since the CLIC detectors are adaptations of the ILC detector concepts.

The CLIC colleagues are pleased with the level of cooperation at the grass roots level.

Discussion of other topics - Sakue

The IDAG has recommended that a common costing method be established for the two detectors, and therefore we are considering how to achieve this. Sakue proposes to set up a working group consisting of two people from each detector group, as well as few additional members such as experienced accelerator experts and members with a CLIC connection. The two detector groups are asked to propose two members each.

The ILCSC has asked for an interim report. The details of this report are being considered, and input from the detector groups and common task working groups will be requested. The GDE will produce an annual report of about 100 pages, emphasizing technical advances. The next ILCSC meeting is in February.

Next meeting

The next meeting will be on October 5 at 1400 GMT.