

Physics and Experiment Board Meeting

December 22, 2009 1400 GMT

Minutes (prepared by J. Brau)

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

Absent: Ties Behnke, Karsten Buesser, Harry Weerts.

Meetings (Sakue)

FALC – Mumbai – January 17-18

Sakue will report for the first time to the FALC in January. He will acknowledge on-going support, explain the reason for the LOIs, describe the current status, and make a pitch for additional support for the R&D from the labs and funding agencies. This is critical in order to execute the work plans of the detector groups.

ILCSC – Brookhaven – February 25

In the Research Director's report to ILCSC, Sakue will report on detector activities including the plans of the two detector groups. He will also explain why more support is needed, and urge the members of the ILCSC to help in securing it.

SB2009 Common Task Working Group (Jim)

Barry set up a Physics Questions Committee (chaired by Brian Foster and Andrei Seryi) to answer the questions we posed regarding the specific details of SB2009. They have provided a response and the working group is carrying out the simulations.

Takashi has checked the effect of the traveling focus on backgrounds by switching it on in Guinea-Pig. He finds no increase in pairs per beam particle, and the beam pipe and vertex layouts remain compatible with the distribution of pairs. So the main effect will be a doubling of the number of background pairs.

The Physics Common Task WG has written a short note with suggestions, including 4-5 topics to investigate the impact of beam conditions.

The Accelerator Advisory Panel will meet at Oxford on January 5-6, and review SB2009.

ILD (Yasuhiro)

ILD is preparing to contribute to the SB2009 WG study. They have nominated people for the ILC-CLIC WG and the additions to the Engineering Tools Common Task WG. ILD is preparing for the meeting in Paris, January 29-30.

SiD (John)

SiD has held some informal discussions on SB2009. The work plan is under review to improve and complete the input data and update the output. Norman and others have created an SiD version of Pandora in the LCSIM framework.

MDI Common Task Working Group

No report.

Engineering Tools Common Task Working Group (Catherine)

There will be a meeting on EDMS at the January ILD meeting. SiD has proposed one new member for the WG, and ILD two new members.

Detector R&D Common Task Working Group (Marcel)

The Detector R&D Common Task Working Group has finished a draft of their report. It tries to explain the need for additional resources, noting that current support is marginal. It argues that all support has to be maintained at least at the current level, while some areas urgently need a boost. They plan to complete the report by Christmas. Then Sakue will distribute the report to the PE Board. Some topics are not included currently, such as engineering work on vibrations and movement of platforms. Integration engineering is included at the sub-detector level, but not for whole detectors. Sakue indicated it may be useful to set up a new working group to address the integration engineering.

Software Tools Common Task Working Group (Akiya)

There is an issue with production of samples of events for the study of benchmark processes. Specifically, it is not as easy now for Tim Barklow to secure resources to produce them, as he did for the LOIs.

The Physics Common Task WG has proposed a list of benchmark processes for 1 TeV, and now CLIC has organized an independent definition of 1 TeV benchmarks. This may

be an area for discussion by the CLIC-ILC WG. Different beam parameter prevents using the same simulations, but agreement on the processes could be helpful.

Tony Johnson has made progress addressing LCIO issues. There will be another meeting of LCIO experts in early January.

Physics Common Task Working Group (Michael)

The Physics CTG has two new documents: 1 TeV benchmarks and a short report on SB2009. The 1 TeV benchmarks report presents a list of specific processes that might be used to gauge detector performance. The SB2009 report notes that there are some definite luminosity goals for the precision Higgs studies, and addresses the appropriate energies and equivalent luminosities.

The CTG also plans to produce reports on other physics areas that LHC might discover, and how that will impact the ILC plan.

Michael suggested it might be useful to set up a liaison from the ILC physics group to the Muon Collider, which is being spearheaded by Fermilab.

Next meeting

The next meeting will be on Tuesday, February 2 at 1400 GMT.