

Physics and Experiment Board Meeting

November 2, 2011 (1400 GMT)

Minutes (prepared by J. Brau)

Present: Jim Brau, Karsten Buesser, Catherine Clerc, John Jaros, Wolfgang Lohmann, Akiya Miyamoto, Michael Peskin, Yasuhiro Sugimoto, Sakue Yamada.

Excused: Ties Behnke, Marcel Demarteau, Juan Fuster, Andy White, Hitoshi Yamamoto.

Interim Report

Management met with the communicators in Granada on Wednesday to discuss the interim report. Editing should be finished in about one week.

The proposed title is:

International Linear Collider Physics and Detectors

2011 Status Report

This title was agreed to.

The editors will be listed at the front of the interim report. They are the four members of RD management and the ILC communicators. At the back of the report there will be a list of the contributing authors to the various chapters of the report. There will also be lists of the authors of two validated LOIs at the back of the report.

It was decided to acknowledge the funding agencies at the back of the report.

Various cover designs have been considered. The PEB favored a cover with isometric images of each detector, with an event display on the back.

Sakue proposed a DBD schedule:

End of February, 2012 - outline with written summaries of each chapter (no more than 10 pages). IDAG would comment on these outlines at the ACFA workshop in March or April 2012.

End of September, 2012 - a complete draft of the report of 100-150 pages. IDAG will read and comment at the LCWS at UTA in October

Future Meetings - PAC

The PAC will meet in Prague November 14-15. Each detector group will send a representative to give a report, Phil Burrows for SiD and Jan Timmermans for ILD.

Future Meetings - ILCSC

The ILCSC will meet in Oxford Thursday, February 2.

Future Meetings – ACFA Workshop

The 2012 ACFA Workshop will be held April 23-26 in Gyeongju, Korea.

ILC Newslines

The plan for the next two Research Director's reports in the ILC Newslines includes a report on physics by Michael Peskin in November and a report by Juan Fuster as European regional contact in December.

In the future Sakue encourages each of the conveners of Common Task Groups to think about good topics for a column. Marcel already wrote a column on the detector R&D spin-offs. The push-pull plans might be a good topic for a future Newslines.

ILD - Yasuhiro

ILD is making steady progress. It has decided not to use correction coils for the solenoid. The group is eager for a decision on the 1 TeV beam parameters.

SiD - John

SiD is preparing for a December 14-16 workshop at SLAC. The group is working on the evaluation of calorimeter depth, using the 1 TeV benchmark processes. At the December workshop all of the R&D supported under the Oregon university grant will be reviewed. Final decisions should be made in December and full data production will begin. Sakue has been invited to make a presentation at the workshop, and he will call in from Japan.

MDI – Karsten

The workshop at DESY last week reviewed the baseline of the ILC for the TDR. In addition to the main topic of review of machine issues, the workshop included MDI and physics related machine topics. The workshop was well attended and extremely interesting. There were participants from both ILD and SiD. Many decisions were taken, including the choice of a two-stage bunch compressor, which provides more flexibility in going to shorter bunch lengths. One stage restricted the bunch length to 250 microns. Modifications to the positron source and space in the lattice for instrumentation (upstream and downstream of the IP) were other decisions. A report of the workshop conclusions will be released later this week.

The MDI Common Task Group is working on the definition of experimental areas, including the design and dimensions of the underground hall and associated buildings (including service, access shafts, etc.) The group met last week and made good progress

on the basic design of the underground hall. A dedicated meeting is planned at SLAC on the two days prior to the SiD workshop. Both concepts and CFS people will participate to finalize design of the underground hall

Engineering Tools – Catherine

The Engineering Tools CTG is waiting for SiD to nominate a contact person for EDMS. DESY has an engineering person to support EDMS who will help both ILD and SiD. A point of contact for both groups is needed.

Sakue suggested asking Marco Oriunno to serve as deputy convener. It was agreed and Sakue will invite Marco.

Possible future tasks for the group were discussed.

Detector R&D - Wolfgang

Distribution of the spin-off document is important. It is expensive to print, particularly since translations are required. Therefore, a printing is not planned.

The CTG is working on a survey of test beam issues. The group is looking at how it can support the DBD, and how to preserve the proven structures for R&D in the post-2012 era.

Software – Akiya

The Software CTG has nothing to report, except that it is eagerly awaiting the choice of 1 TeV beam parameters for DBD simulations.

Physics - Michael

The Physics CTG is waiting for new results at LHC. It looks forward to results presented at the Hadron Collider Conference the week of Nov 14 in Paris, as well as the later results presented next year in Moriond.

Guidi is organizing a workshop on new simulation analyses for ILC at DESY in February.

1 TeV - Jim

Sakue reminded the PEB that the point of the 1 TeV simulations was to check the performance of the 500 GeV detector designs at 1 TeV with minimal or no changes. The SB2009 Working Group is coordinating studies and discussions with the GDE. A design with high luminosity and acceptable pair distributions is the goal. This week a new parameter set has been provided by Kaoru Yokoya and it is now being studied. Small

differences have been since between CAIN and Guinea Pig - CAIN predicts a smaller cone size.

Costing Working Group - Sakue

The Common Costing Working Group will meet next Wednesday.

DBD - Sakue

The format of the DBD will be two volumes. One volume will give the physics case and a second volume will describe both detectors. In order for both detectors to fit in a reasonably sized volume, each detector contribution must be limited to 150 pages. An introduction will be needed to provide an integrating framework for the two detectors. The GDE plans to use the same format for the TDR that was used for the interim report. Sakue proposes the same for the DBD – use the format of the interim report. The detector and physics groups prefer that latex be used, and Sakue will discuss this with the communicators. A latex template needs to be prepared. Sakue plans to set up a working group soon to discuss such issues.

Next meeting

Sakue will send a request for availability to set a time for the next meeting.