

Physics and Experiment Board Meeting

June 29 (2100 GMT), 2010

Minutes (prepared by J. Brau)

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

Excused: Marcel Demarteau.

General News - Sakue

The CLIC-ILC Joint Working Group met on June 14. Lucie reported the areas of cooperation, which are mainly software related. Areas where more cooperation is possible were discussed, such as more software and simulations, push-pull, and pulse powering of electronics.

Sakue requests that the SiD and ILD groups send him lists of cooperation from the ILC perspective.

Upcoming Meetings

The ILCSC will meet in Paris during ICHEP in July, and will hear from Sakue, as well as Francois representing the WWS.

The ILC PAC will meet in Eugene, Oregon, USA, November 11-12.

Reports - Sakue

An interim report has been requested by ILCSC, to be delivered around the end of the year. The GDE will prepare a report to present the ILC status to a wider audience. Some of our interim report might be included in the GDE report. These plans are now beginning to be discussed.

The MDI and detector requests for engineering have been prepared.

ILD – Ties and Yasuhiro

A software integration meeting will be held next week at DESY. The DBD needs will be discussed.

ILD is eager to receive more details regarding the DBD guidelines. Who is the intended audience? How detailed and how long should it be? What distinguishes the DBD from the LOI?

Sakue responded that the DBD should be detailed enough to convince colleagues. It doesn't have to be too long, but both DBDs should be about the same length. If needed, 200 page documents would be acceptable, but not much longer. The ambiguities of the LOIs should be reduced based on recent progress, showing at least one set of technologies is feasible.

SiD - John

A major effort has been devoted to reviewing linear collider detector R&D for DOE and NSF. The agencies asked SiD to take a leadership role in deciding on priorities for R&D. An SiD Workshop was held at Argonne, June 3-5, and all of the SiD R&D was reviewed in detail. There was a large contribution by and interaction with CLIC colleagues at the Argonne workshop. The workshop enabled a start on reorganization for the DBD.

SiD is updating its work plan. A workshop later in the year is planned.

A remaining critical issue is what resources will be available over the next two years to carry out the DBD work.

MDI – Karsten

A manpower request document has been prepared for MDI engineering, working jointly with Andrei Seryi. 13.2 FTEs of additional engineering are requested over two years. Discussion of this document revealed a difference of opinion in the PE Board regarding the level of need for the 13.2 FTEs, with worry expressed that the most critical needs could be in jeopardy by the length of the list of requests.

A parallel request for non-push-pull detector engineering needs totals 11.8 FTEs.

Engineering Tools – Catherine

Catherine met with ILC EDMS experts two weeks ago, and discussed ILD applications. SiD will be discussed with Marco in the future. CLIC machine people are using a CERN based system, so it is not likely to get them to join this common effort.

Detector R&D

No report.

Software – Akiya

Generator samples are being prepared by a three person group (Tim Barlow, Michael Berggren, and Akiya).

Discussions with CLIC colleagues on generator sample productions are underway.

Physics - Michael

Benchmark documents have been distributed, and the Physics CTG is waiting for response. Sakue replied that he wants to organize a subgroup to discuss benchmarks, including membership from software, physics, and detector leaders.

It is important to determine what simulations are going to be needed.

John expressed a wish for overlap with CLIC benchmarks, and reactions that test very high energy performance of the detectors.

Sakue asked Michael to make a presentation to the PAC in November in Oregon, emphasizing the impact of early LHC data on prospects for the ILC. Michael agreed to this request, and reported this topic will be discussed at the Geneva Linear Collider Workshop.

Joint Working Group with CLIC - Sakue

Sakue recalled that the Joint Working Group with CLIC was suggested by ILCSC, as a parallel interaction to that on the machine side with the GDE. The mandate is very general, but specifically to survey the cooperating activities. Sakue requests that the detector representatives engage with the group, and report the areas in which cooperation is happening.

SB2009 WG - Jim

There has been periodic contact with Andrei regarding new machine design resulting from reaction to SB2009. Andrei and GDE colleagues are scrutinizing the new design concepts. We anticipate a new set of parameters from Andrei and Brian soon. Low energy luminosity is expected to be much more acceptable. A telecom two weeks ago for the SB2009 WG discussed plans for studies once the parameters become available. The Beijing studies will be repeated and extended. This will include Higgs mass and cross section, stau mass and cross section, scenarios study, and a new Higgs branching ratios study. A broader set of stau mass parameters may be investigated, as well as a Higgs spin analysis at 350 GeV. Phenomenologists (JoAnne Hewett, Yasuhiro Okada, and Georg Weiglein) have joined the working group.