

## **Physics and Experiment Board Meeting**

March 2 (2200 GMT), 2010

Minutes (prepared by J. Brau)

**Present via Webex:** Ties Behnke, Karsten Buesser, Marcel Demarteau, John Jaros, Akiya Miyamoto, Francois Richard, Yasuhiro Sugimoto, Sakue Yamada, Hitoshi Yamamoto, Harry Weerts, Jim Brau.

**Absent:** Catherine Clerc, Michael Peskin.

### **ILCSC Meeting at Brookhaven**

The ILCSC met on February 25 at Brookhaven. Jean-Eudes Augustin gave a reported on the November 2-3 PAC meeting in Pohang. Barry reported on GDE activities, including recent technical progress and the SB2009 proposal. The AAP report was not yet ready to share with the ILCSC. The GDE is working on a governance plan, and will produce a proposal at the end of 2012.

Sakue reported on our recent work, including the work plans of ILD and SiD, IDAG activities, Common Task Groups, SB2009 WG study, and CLIC-ILC cooperation. In response to Sakue's plea for engineering support, Rolf offered to work with other lab directors to find engineers if he was provided with a list of the specific needs. Sakue asks that ILD and SiD provide him with this information, including the duration needed, ASAP so he can pass it on to Rolf.

Jim reported for the WWS. Sakue asked him to include in his report the status of the SB2009 Physics Working Group, which he convenes.

The ILCSC discussed how to proceed after 2012.

Jon Bagger (ILCSC chair) expressed concern about communication between the machine and detector groups. Sakue responded that regarding SB2009, which requires frequent communication, our WG and GDE's physics question group are responding timely.

### **IDAG**

The IDAG will meet again at the Beijing LCWS for the first time since they validated detectors last summer. The IDAG will interview leaders of ILD and SiD in separate meetings, and the MDI group as well as physics group members to discuss benchmarks. The leaders of ILD and SiD will be invited to participate in the interviews with the MDI group and the physics group.

At the following IDAG meeting in Geneva in October, the IDAG will interview another common task group, such as the detector R&D group.

Michel will join the PEB meeting in Beijing.

### **SB2009 Working Group – Jim**

The SB2009 Working Group has made progress on studies to quantify the impact of SB2009 on physics reach. These include  $e^+e^- \rightarrow \mu^+ \mu^- h$ , at 250 and 350 GeV, measuring the mass and cross section, stau detection in the presence of increased forward beamstrahlung backgrounds, threshold Higgs production to establish the spin of the Higgs, and the Snowmass scenarios study (<http://arxiv.org/pdf/hep-ex/0211002v1>). These will be discussed with the GDE Executive Committee before Beijing, and will be presented in Beijing in a joint plenary session.

### **ILD - Ties**

ILD has been working on their schedule and planning, and recently sent an update to Sakue. Internal discussions have been aimed at understanding constraints. ILD will study physics at 1 TeV. Discussions with the R&D collaborations are synchronizing the planning. There is eagerness to obtain semi-official 1 TeV beam parameters from the GDE. Sakue has asked Barry about this.

### **SiD - John**

SiD submitted its work plan last year. The work plan was detailed, showing resources needed and those missing (which were substantial). A somewhat refined plan will be available for LCWS. SiD has recently been reviewing the status of R&D in preparation for LCWS.

DOE & NSF support for SiD related R&D in US universities will be reviewed this week. Jim, Andy, and Marcel will be presenting progress for the projects.

SiD is planning for its parallel meeting at LCWS, and the next SiD meeting June 3-5 at Argonne.

There has been some continued interaction with CLIC, and two key member of the SiD team (Harry Weerts and Marcel Stanitzki) are serving as major editors for the CDR.

The support at the labs is under pressure to reduce. Competing projects are given higher priority.

### **Common Task Working Groups – Sakue**

The ILCSC appreciated the level of collaboration between ILD and SiD and the common task working groups.

### **MDI – Karsten**

The MDI working group recently participated in a telecon to discuss preparation for the Beijing LCWS parallel sessions. There will be five MDI sessions. One session will address studies of the SB2009 working group. One session will be joint with the tracking group. There will be updated on MDI aspects from ILD and SiD. An update will be presented by Andrei Seryi on BDS. Some studies have been done recently on backgrounds, vibrations, detector stability, and support mechanisms.

### **Engineering Tools – Catherine**

Catherine reports by email that it is going slower than originally hoped.

### **Detector R&D – Marcel**

The working group has not been able to make progress recently on the draft document on ILD detector R&D. The Beijing LCWS meeting will be used to make progress. CALICE plans a workshop next week in Arlington, Texas. The working group will look into trying to fold information from the ILD and SiD work plans into the report. Marcel has the SiD work plan, and Ties will send him a copy of the ILD work plan.

### **Software – Akiya**

Software progress includes work on SB2009 and developing plans for benchmark production. A draft of the plan has been prepared and is under discussion. ILD and SiD will need to work together to produce samples.

### **Next meeting**

The next meeting will be face-to-face on March 28 at lunch time during the Beijing LCWS.