

Research Director's Report

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New moves for the physics and detector activity

A joint international linear collider workshop, LCWS10 and ILC10, held in Beijing last month, initiated various new moves for the physics and detector activity of ILC. While we often make phone-conferences, such a meeting is valuable so that everybody can get together easily to talk. The programme was rather heavily packed and some people had to run from one meeting to another. Nevertheless the meeting allowed many useful discussions. We could clarify several issues and agree how to proceed.

The International Detector Advisory Group (IDAG) began its new activity after the validation of the Letters of Intent (LOIs) last summer. Now it monitors the progress of the detector groups towards their goals and also the activities of the common task groups. This time the Machine Detector Interface (MDI) group met IDAG to present its status. The group's activity became clearer through

the validation and the resulting progress and prospect were reported in detail and were checked. Also discussions were made on the new benchmark reactions, which were proposed by the physics common task group last November, including the representatives of the detector groups and the software common task group. Prior to these interviews and discussions, the detector management talked and confirmed with IDAG about what the goal of the detector activity would be in the new phase and how the monitoring would be made. Through the meeting a number of suggestions were given and we took note of them for further consideration. Some were pointed out by the chair already in Beijing in the closing plenary presentation. I hope a final recommendation will be given to me in due time.

The interview with IDAG triggered an important move for the detector groups. When the groups made the planning last October towards the *Baseline Design Report* goal in 2012, they had to assume that necessary resources would be available (read also my December column). But we all knew that there could be a gap between the available and required resources including human resources. Foreseeing the discussion with IDAG, and responding to my request that they bring to IDAG critical issues for discussion, the SiD detector group raised their concern that this discrepancy will limit the work which can be accomplished by 2012. There is no doubt that everybody will strive to secure resources. On the other hand, there is no guarantee that all the requests will be funded in the future, particularly when there are other projects that require additional resources as well. In Beijing, the representatives of the two detector groups and the management met on the first day to consider how to solve this difficulty. ILD concurred with SiD's concern, noting that resources were limited also for them and the future funding is not clear. The two groups agreed some of the shortage may be overcome by joint effort between them. Also there may be additional resources found through the help of the International Linear Collider Steering Committee (ILCSC). Taking these into consideration, the following consensus was reached and we will soon work on the details:

1. We will maintain the present timeline to complete detailed baseline design report by the end of 2012.
2. We will keep the list of nine goals, which frame the work plan to 2012.
3. We will review each of the nine items, and prioritise the work within each item to ensure the critical elements of the work plan are completed by 2012 with the resources that are available.

The nine items were described in my report in August. Some of them will be kept untouched like the feasibility confirmation of the critical components. But there are also items which require much engineering work or simulation and may have to be relaxed. However, we must keep the absolute minimum level so that MDI parameters can be fixed or there should be



IDAG chair Michael Davier during his concluding talk.

enough simulation to make the physics case of the proposal convincing. These necessitate certain engineering work for the integration of the detector components. We look forward very much to ILCSC's initiative for strengthened support for this work.

At Beijing, a joint session on SB2009 changes to the ILC machine baseline was very important for the detector community. There the current result of the SB2009 working groups was reported. After the session everybody looked to agree that both the cost reduction and physics performance are important and the key is to find a good balance of the two requirements. The joint discussion made a good start of quantitative evaluation. By the end of the workshop we saw a hope that further studies and discussions were likely to reach a good optimum solution, for instance through the workshops which will be organised by the Global Design Effort on each topic for intensive consideration.

Right after the workshop, the first meeting of the joint working group of the ILC-CLIC cooperation on general detector issues was made face to face. It was informal in the sense that not all the members were available in Beijing and the meeting was short. However, the discussion in a relaxed atmosphere proved the cooperation was going pretty well already. We intend to start regular meeting soon to strengthen the cooperation further.

-- *Sakue Yamada*