

Minutes of WP-meeting 204

Attendance:

Fuzebox: Andrii Chaus, Serguei Ganjour, Leif Jönsson, Jochen Kaminski, Takeshi Matsuda, Rashid Mehdiyev, Martin Rogowski, Amir Shirazi, Ron Settles, Jan Timmermans

General News:

Serguei, Jochen, Takeshi and Jan reported their impression from the ILD meeting. The setting was very nice and the people are welcoming the ILC very much. There were posters and banners everywhere supporting the ILC. During the meeting however, no clear statement of the political status was given. The largest impact on the TPC has the ILD optimization which has started and is in full swing now. The reduction of the radius and the length has been only mentioned so far, but no clear statement on its likeliness were given. A slight preference not to give too much of the performance for lower cost at this point of the project were mentioned, but it is looked at how much the performance loss would be. It was also several times mentioned that in case of funding cuts it was likely to have only one detector instead of two. In particular in this context, but also as a general criticism of ILD the use of a TPC as a main tracker was mentioned. While there is still a broad support of the TPC in the ILD community, external observers like in the 'critics view' of M. Demarteau the TPC performance was mentioned several times. In particular the limited space point and 2-hit resolution compared to a silicon tracker, the ion feedback problem and integration over many bunch crossings have been mentioned. The need for SET and SIT to compensate a TPC 'weaknesses' has been criticized as too complex. Besides, it was claimed that the strong points of the TPC (continuous tracking, particle ID by dE/dx , high detection efficiency for low momenta and high robustness) have not been demonstrated to have any effect on the physics performance. In contrast to a silicon tracker which is limited by technology only, the TPC has fundamental limits (e.g. diffusion) which can not be overcome with time.

In the WP meeting these arguments were dismissed, but it was clear that we have to demonstrate unambiguously that we have the alleged shortcomings solved and that the advantages of a TPC have a significant impact on the physics. Therefore, it is of high importance to have several people work on physics simulations and analysis to demonstrate the positive effects of dE/dx and of the continuous tracking and efficiency. We have to demonstrate also to ILD outsiders better the importance of a TPC. Maybe we should write a document collecting all pros and cons of a TPC including references and numbers.

News from the groups:

Takeshi reported, that there will be another test of the electron transparency of the GEM gate at the end of September. The new data is needed for the IEEE conference at the beginning of November. The current status of the tests and the analysis will be presented in one of the next WP meetings.

AOB:

The next workpackage meeting will take place on September 25th.