

Minutes of WP-meeting 240

Attendance:

DESY: Ralf Diener, Ulrich Einhaus, Oleksiy Fedorchuk, Leif Jönsson, Claus Kleinwort, Paul Malek, Felix Müller, Dimitra Tsionou

Fuzebox: Alain Bellerive, Paul Colas, Keisuke Fujii, Jochen Kaminski, Amir Shirazi, Ron Settles, Akira Sugiyama, Jan Timmermans, Maxim Titov

General News:

Maxim announced that there will be a resubmission of the Randalf proposal. This is a proposal of an exchange program between Europe and Japan. The last time it got high scores, but not high enough to be funded. One of the comments of the reviewers was, that WP2 (detectors) was too wide. It was therefore determined to split the workpackage in 2 workpackages with the title 'technology and industrialization' and 'system integration and test beams'. LCTPC should now provide 2 short paragraphs describing the interests of the TPC community. Jochen will prepare and link them to today's indico page. Also, letters of support from industry are important. Akira will therefore contact the company producing the gating-GEMs and ask, if they will supply such a letter. Suggestions about further companies are welcome.

PCMAG/LP setup, test beam:

Ralf: PCMAG/TRACI/test beam area:

- The test excitation of PCMAG was successful and first users (Belle 2) are preparing for the test beam. The test beam will be available until December, but the schedule is filling up. The DESY test beam has been delayed.

News from the groups:

Akira reported on a face-to-face meeting of Japanese group leader earlier this month. They discussed the next steps of TPC R&D in Japan. As boundary condition they assumed a MEXT decision with a green light for the ILC at the end of 2017 and a LOI/technology decision in about 2-3 years. Since two proposals for money were not successful the only funds they can rely on are the KEK/IPNS funds of about 5M Yen. With these funds no PostDocs can be hired. Therefore, the primary goal is to build a demonstrator module with 2 Asian GEMs and a gating GEM and make a test beam campaign at DESY with this module. In this test beam the performance of such a combination and the field distortion, in particular at the module boundaries shall be studied. Two LP module size GEM gates are already available, though the assembly of one of them is probably not good enough for a module test. Field shapers between the gate and the top amplification GEM are under discussion, but probably not possible because of the limited number of HV feed-throughs available. Ideally the test beam would take place in September or October this year, but it is not clear, if they can manage to finish the module in time. A new method ('fit-in') of mounting the amplification GEMs has been considered, but first tests were not successful and can not be repeated because of limited resources.

In addition, the Japanese want to understand, if their module concept is still valid. Because of the limited finances and man power this is only possible with simulations.

Also, new GEMs are considered instead of LCP-GEMs. Candidates are Glass GEMs (300 μm thick, reach gains of 30,000, but need 1.4 kV for gain 1,000), Teflon GEMs (experience often discharges), ceramic GEMs (100 μm thick, 100 μm holes, single GEMs reach a gain of 10^4 , but R&D has just

started) and resistive GEMs (coated with C, but gains are not high enough).

Finally, the Japanese want to continue the cooling tests with the sALTRO-16. But it is not clear, how they could proceed here.

Ralf mentioned that the submission of the publication was delayed by understanding DESY license guidelines. Uploading to arXiv was delayed by the requirement of having a b/w proof-version. So, references to colored lines had to be removed.

Leif gave an update of the chip carrier status of WPmtg239. The area where connectivity was lost improved by resoldering, but not all connections could be recovered. Leif and others from Lund met with the company and discussed the next steps. The company agreed to unsolder the chip carrier from the adapter board to allow further test by hand. Then the carrier board will be soldered on the adapter board again, this time using solder paste.

Paul mentioned that they will start with the IBF measurements of the gating GEM at Saclay soon. Last week there were the French LC days at Paris. There were many scientists from French institutes, but also a number of foreign guests and speakers: Juan Fuster presented the Randalf program, Ties talked about ILD and several Japanese colleagues reported on the political situation in Japan. The Europeans made it clear, that the silent way of Japanese politics is not good for the rest of the world, since fundings are delayed by pointing out the undefined political state of the project.

Keisuke summarized his view on the political state of the ILC. He said that things are moving slowly, but they are moving. Japanese delegates including officials from MEXT are visiting their US counterparts.

The last Washington visit happened on Feb.11 and 12. In particular there are discussions between MEXT and the DOE on setting up a common task force. Negotiations between politicians are more advanced than between the administrations. The hope is, that negotiations with the US will also trigger positive effects on other regions (e.g. Europe). In March there was a general meeting of the federation of diet members supporting ILC, which was also featured in the ILC newslines. MEXT is currently studying the aspects of human resources and is having a close look at LHC experiences: How sufficient construction workers were hired and where they went after the completion. The subcommittee will produce a report on the human resources by the end of summer.

The LCC physics working group is also preparing two documents: one for the general public and one on the prospects of finding new particles. There is a strong need of a solid scientific case to convince people from other fields of research to agree on spending the money on a HEP project. So far, any decisions are planned for the original end of LHC run 2 at the end of 2017. This could be delayed until the new end of LHC run 2 in 2018, but if the 750 GeV particle will prove to be real, it could change to an earlier date.

AOB:

The next workpackage meeting will take place on April 14th.