

Minutes of WP-meeting 165

Attendance:

DESY: Philippe Gros, Felix Müller, Astrid Münnich, Volker Prah, Christoph Rosemann, Klaus Zenker
Webex: David Attie, Paul Colas, Leif Jönsson, Jochen Kaminski, Dan Peterson, Ron Settles, Jan Timmermans, Wenxin Wang

PCMAG/LP setup, test beam:

Felix/Astrid: PCMAG/test beam area/LP:

- No new, because of the test beam.

Test beam schedule:

- There are no official statements yet, but it seems that the first half of 2013 is completely booked.

News from the groups:

Philippe reported on the Japanese test beam, that finished yesterday: The man power situation was good, and almost all members of the Japanese LCTPC group had the opportunity to come to DESY. During the test beam the new GEM-design with four sectors and 1 mm space between the sectors (because of discharge problems between the sectors during the previous test beam) were to be tested. Initial tests in a box showed no problems, but when the three modules were mounted in the LP, discharges occurred. The GEM voltage was lowered and no trips occurred anymore. However, high noise was recorded every time, the HV was switched on. Finally, the problem could be solved by adding thick copper grounding lines between the TPC and the HV distribution boxes. Then also, the GEM voltage could be increase again. This lead to an improvement in the spatial resolution and also lowered the influence of single pad measurements on tracks with very short drift distance.

The exact pad positions were remeasured at the production company and with this information, new GEAR files were produced improving the spatial resolution significantly and reducing the track distortion at the boarder of modules to less than 400 μm . There are, however, track distortions at every edge of GEM sector.

During the test beam, one GEM sector was shortened. The reason for this is not clear and has to be investigated by dismantling the module.

A lot of data including a theta scan were taken, which will be carefully analyzed now.

Astrid reported shortly on a simulation study by Klaus Zenker. He as simulated the E-distortions and the $E \times B$ -effects at the edge of the modules. The effect of the additional magnetic field leads to track distortions up to 400 μm in the first 1-2 pad rows. Other effects like a slope in the 'earthworm' plot (scatter plot of the residuals versus pad row) rows can not be seen and is likely because of geometry errors. A full report on the study will be given in January.

AOB:

David was accepted by the program committee of the VCI to give a talk.

Some delays occurred in the preparation of mailing the distribution box of the optical fibers to Saclay. Since the lab closes over Christmas, the mailing procedure should be delayed until January, to make sure that it can be received.

Paul reminded everyone that there will be an analysis meeting on Tuesday January 8th.

The next workpackage meeting will take place on January 10th.