

Minutes of WP-meeting 274

Attendance:

DESY: Ulrich Einhaus, Leif Jönsson, Claus Kleinwort, Uwe Krämer, Paul Malek, Oliver Schäfer, Mengqing Wu

Vidyo: Paul Colas, Keisuke Fujii, Qi Huirong, Jochen Kaminski, Tomohisa Ogawa, Ron Settles, Ico Sojia, Akira Sugiyama, Jan Timmermans

General News:

Paul discussed the current status of the Interface Control Document. Several new sections were added. Among others are a section on the gas system, which is based on experience from ALEPH and DELPHI. Huirong added some part on the laser calibration system. Paul will finish a new version by this evening and upload it to this meeting's webpage (additional updates will follow on the page.)

News from the groups:

Leif summarized a presentation he had shown at the AIDA 20202 meeting this morning. Besides a retrospective of the diverse bonding problems, Leif also reported on the current status: A first batch of 34 packaged chips has been delivered to Lund. Tests of the first chip show good results. The chip works as expected and the noise is about 0.6 ADC counts, which corresponds about 300 e⁻. Leif also showed the time development of a signal and the baseline without a signal. There seems to be a small cross talks and some ringing on the baseline after a trigger signal. This has to be studied further and one has to understand how this can be suppressed. After further tests, the soldering of the packages onto the MCM boards will be studied.

Tomohisa gave a rehearsal of his IEEE presentation. The talk is on the gating device. Therefore it started with the motivation for developing a new gating device and explained the working principle of the gating GEM. It also showed results from the first lab measurements and from the 2016 testbeam with the Asian module at DESY with and without the gating device. From these data he showed both the dE/dx measurements as well as the r ϕ -spatial resolution. In both cases the small degradation because of the gating device is within expectations of the 20 % loss of primary electrons and the results still satisfy the ILD requirements.

In Saclay 3 new Micromegas modules are developed. Developments concentrated on the mechanical improvements of the connectors of the AFTER electronics to the pad plane. For this a 2.5 cm thick plate with holes for the connectors has been developed. This plate will be glued on the PCB and it will be used to press the FECs. Besides this connectivity improvement also the HV distribution of the gas amplification stage will be altered. To minimize the field distortions, the MM-mesh will be on ground potential and the resistive layer will be on positive HV. The pads will be on ground again and pick up the induced signal from the resistive foil. A challenge still remains how to contact the resistive foil. Some tests will be done also in collaboration with T2K.

Paul and Serguei will travel to Japan for discussions with Japanese colleagues.

AOB:

The next workpackage meeting will take place on November 2nd.