

## Minutes of WP-meeting 309

### Attendance:

DESY: Ralf Diener, Ulrich Einhaus, Oliver Schäfer

Vidyo: Yumi Aoki, Jochen Kaminski, Ron Settles, Aiko Shoji, Akira Sugiyama, Jan Timmermans, Maxim Titov, Keita Yumino

### General News:

Jochen initiated a discussion on the date of the next collaboration meeting. It was felt that it we should neither couple it to the LCWS nor wait for the next regional meeting, which is likely to be in the US. Therefore, it was discussed that early next year would be a good time, as there are not many other meetings compared to November and December.

Paul had reported by email that the first draft of the IDR is available (see link from Ties). The drafting session is during the last week in August. Please, read it until then and send any TPC related comments to Paul and Akira and any other comments to Ties.

Maxim reported that there was a Japanese delegation on July 1<sup>st</sup> and 2<sup>nd</sup> in France and Germany to discuss the ILC with German and French authorities on ministry level. The delegation comprised 15 people including 3 diet members, the KEK DG and members of MEXT. This was the first communication on ministry level and the Japanese informed their European counterparts about the project and the current status. A discussion group was installed, where the further progress will be conveyed. There were also discussions with the US on the level of the state department which went very positive.

In Japan there will be elections of the upper house at the end of July, but this should not influence the process of SCJ. In summary the ILC project has enough momentum and has reached sufficiently high levels of politics.

### PCMAG/LP setup, test beam:

Ralf: PCMAG/TRACI/test beam area:

- The behavior of the moving stage regarding the  $\theta$ -angle is still under study.

Test beam schedule:

- Uwe is taking data with LYCORIS this week and next week. This week he performs some tests outside the magnetic field. Everything seems to be working well except some automatisisation features which are more interesting for next week, when he will move into PCMAG. For this some more sensors are tested to have more inside.

### News from the groups:

Paul had also written, that the Saclay team is studying the charge spreading together with the T2K team. Besides, work is going on a cooling plate prototype in 3D printing.

Jan said that the 8- QUAD project is coming along. The detector with the 32 GridPixes is ready and being tested with a laser. The setup still is not completely functional, as the data concentrator is not ready yet.

Therefore, only one QUAD (=4 GridPixes) can be read out at a time. It was also observed that the resistivity of the protection layer is too high. A resistivity of  $10^{11}$   $\Omega$ cm is aimed for (for high rate (LHC))

applications  $10^9 \Omega\text{cm}$  would be needed) and should be good, but in reality it is probably around  $10^{13} \Omega\text{cm}$ . This leads to charge accumulation on the protection layer and thus to a loss of efficiency because the voltage between grid and chips is reduced by 20-40 V. This was already observed during the last test beam in October 2018. But the GridPixes can be operated at lower rates

Uli showed a plot of his thesis, where he combined the  $dE/dx$  resolution of his pad size simulations with test beam measurements. This plot will also be in the next GridGEM paper. Therefore, everyone should have a look, if the values/extrapolations of his favorite technology is correct. The plot with some detailed description is available on the indico page.

#### AOB:

Ron was contacted, because he had been in an expert group looking into sparking problems at the ALICE-TPC some years ago. As the old readout modules of ALICE are disassembled the reason for the sparks were found: The wires were soldered to the support and cut afterwards. Some of the cutting edges were not properly covered with glue, which lead to the observed sparks. The next workpackage meeting will take place on August 1<sup>st</sup> chaired by Akira.