

## Minutes of WP-meeting 290

### Attendance:

DESY: Ulrich Einhaus, Leif Jönsson, Oliver Schäfer

Vidyo: Keisuke Fujii, Qi Huirong, Jochen Kaminski, Uwe Krämer, Kees Ligtenberg, Shinya Narita, Ron Settles, Aiko Shoji, Akira Sugiyama, Keita Yumino

### General News:

Jochen is preparing a doodle poll regarding the LCTPC Collaboration Meeting. It was pointed out that the LCWS is on 24<sup>th</sup> and 25<sup>th</sup> of October, so the dates of 17./18.10., 31.10/1.11., 13./14.11. and 13.14.12. will be suggested. The invitation to the poll will come soon. The poll will be open until the next WPmtg.

Keisuke reported on the ILC project in Japan. The final report on the ILC250 of MEXT had been sent to the Science Council of Japan (SCJ). The discussion has started on 10.8 with a joint meeting of the upper committee and the subcommittees. Three people (among them Keisuke) were invited for presentations on physics, machine and international HEP community discussions. Also, the three chairs of the MEXT subcommittees gave a presentation. The meeting lasted the whole day (10:00-17:00). The scientific significance of the ILC250 was accepted. A lot of questions were asked, but many of them regarding for example tunneling, environmental impact and radiation, could not be answered, because in this meeting no particular site was to be discussed. On 20.8. the subcommittee had a meeting, where site specific details (Kitakami Site) could be assumed and many questions could be answered. The upper committee met again on 21.8. and asked harsh questions to the remaining MEXT subcommittee. The subcommittee met again on the 23.8. for discussions on the the economic ripple effects, environmental issues and the remaining technological issues (radiation safety of beam dump, ground water etc.) The next upper committee meeting will be on 29.8. From this list it is obvious, that the SCJ takes the deadline of of the European Strategy Discussion Input very seriously and it is expected, that a statement will be given by the LCWS.

### PCMAG/LP setup, test beam:

Oliver: PCMAG/TRACI/test beam area:

- A bachelor student had a detailed look into the positioning problems of the movable stage. The problem is, that the stage controller loses its encodings when it is switched off. As a result the absolute position is lost. One issue is that the stage controller of one axis is operated out of its range. However the other one is not. The bachelor student could give possible solutions for both encoders, which will be tested soon.
- The movement in the  $\theta$  angle works up to 45° in principle, but it seems that the engine is encountering an increasing resistance. The source of this is under investigation.

### News from the groups:

Uwe mentioned, that a single sensor with a KPix readout ASIC has been tested in the test beam last week. The data is being analyzed and shows very interesting features. The mounting tools for bonding more readout ASICs on the sensors is still under production, but the expected date of finishing the project is still the end of this year.

Leif reported that Ulf has tested all 55 SALTRO-chips of the second pre-series. 83% of the chips passed the test without faults. For 6 chips there seem to be some bonding problems, while 3 chips seem to be faulty. This is a significant improvement compared to the first pre-series, where only 59% showed no faults. Besides, one very prominent fault of the first pre-series was an oscillating ADC, which was

not observed in the second pre-series. While the different success rate of the two pre-series is puzzling, it can be explained by a learning procedure. Leif has written to the company asking for a statement regarding the remaining bonding problems. If the answer is satisfactory, Leif will ask for a quote. An expected success rate of more than 70 % would be sufficient for reaching the goal of 10,000 channels.

Uli said that recent tests with the newly bonded boards showed similar bit shifts on all three boards. Though all boards had worked properly at DESY before and important features (current, etc.) are still correct, the matrix written to the ASIC and the read out shows bit shifts.

Kees reported that a paper on the Timpix3-based testbeam performed at ELSA last year had been submitted to and accepted by NIM. The arXiv version has the number 1808.04565.

AOB:

The next workpackage meeting will take place on September 6<sup>th</sup>.