Minutes of WP-meeting 285

Attendance:
Vidyo: Yumi Aohi, Paul Colas, Keisuke Fujii, Leif Jönsson, Jochen Kaminski, Tomohisa Ogawa, Ron Settles, Akira Sugiyama, Jan Timmermans

General News:
Paul reminded everyone about the topical analysis workshop tomorrow on the z-resolution. He also mentioned that the session on TPC at the ALCWS has now 5 contributions and is quasi full, but there are no contributions from the DESY.

News from the groups:
Leif gave an update on the development of the SALTRO-based readout electronics. The SALTRO dies were delivered to the company that is going to package them. They measured a few of them and there was a significant spread of several hundred µm in both dimensions. Some of the dies also showed damages like scratches. 34 dies were packaged and delivered to Lund along with 40 empty packages for test mountings on the MCM. The Lund test board which had shown a good performance with a CERN-produced QFP-packaged die. The same results as the CERN tests were obtained using the Lund test board. Some more firmware code has to be developed for the SRU and the detector control and trigger handling have to be developed, but the Lund system is ready for initial tests. For the final application also a new MCM board based on the HDI (high density interconnect) technology is planned, which will contain a smaller and reprogrammable CPLD. During testing of the 34 delivered dies, only 20 worked fine. Of the other 14 chip, 6 showed an oscillating ADC value on one channel, 3 dies had bit problem in one channel, 1 die had a short between ground and power and in two cases the dies did not react at all. Since the aim is to have 10,000 channels of electronics, we need a fraction of 70 % of the 840 dies to work. But of the 34 dies only 60 % of good chips were reached. Therefore, Leif decided to order another sample of 55 dies to be packaged, so the statistics can be increased. The problem is, that the dies were not tested before dicing and we don't know, if the problem of the failing chips is because of the packaging, or if this is a normal yield of the chip production. The next 55 dices are supposed to be delivered at the end of this week or at the beginning of next week. Once these chips are tested and the statistics is know, we will discuss the next steps in a WPmtg.
Paul suggested another Swiss company called Hybrid SA, which he has very good experience with and is also comparably cheap. Jan mentioned, that the yield of Timepix ASICS was usually not better than 70 %. Akira finally noted, that it would probably be enough to have channels for a single module as a demonstrator. For this significantly less than a 70 % yield is enough.

Keisuke reported on the MEXT process. Yesterday and today the two working groups (physics WG and TDR WG) have met / are meeting and they discuss(ed) the final draft of their reports. These drafts are very benevolent and the discussion in the physics WG also ended gracefully. It states that the ILC will have significant scientific impact, which is important for the further progress of the decision process. Once the final drafts are agreed upon and released, they will be sent to the upper committee. It is, however, still not clear, where they will be sent from there. Some options are directly to the cabinet, the Science Council or the ministry of finance.

AOB:
The next workpackage meeting will take place on June 7th.