

Minutes of WP-meeting 390

Attendance:

Zoom: Paul Colas, Ralf Diener, Serguei Ganjour, Jochen Kaminski, Shinya Narita, Oliver Schäfer, Ron Settles, Jan Timmermans, Maxim Titov, Mingrui Zhao

General News:

Ron has prepared an abstract for the LCWS. It was discussed and Maxim will submit it both to LCWS and in a slightly modified form to the TIPP conference.

Maxim discussed the DRD1 formation process. Currently, the MoU is drafted and it will be 'light-weighted' similar to the RD51 MoU, 'Light-weighted' means that there will be no financial aspects mentioned in the MoU, but only scientific ones. This is not favored by ECFA, but many institutes have stated, that they could not sign the MoU, if it was not light-weighted. As a substitute work packages are discussed for the strategic R&D as detailed in the ECFA Detector R&D roadmap. These could then come with financial obligations and could be signed by the funding agencies instead of institutes themselves. There will be 5 to 6 workpackages detailed and attached to the first proposal this year. Piotr Gasik, the TPC contact for working group 2 (applications) and Maxim have suggested to make one workpackage dealing with TPCs. Many aspects relevant for future TPCs could be addressed in this workpackage. An example of the topics are ion backflow. This workpackage could be a good opportunity for LCTPC to expand and attract new interested people as we did for example with the EIC. We should therefore take part in the process and form the workpackage in our interest. Many of our open topics are also strategic topics of the European roadmap. For this to work, it is also of high importance to include other regions beyond Europe. In the case of LCTPC, it would be important that Japanese institute would join.

Maxim was asked about the meaning of recent emails about detector R&D collaborations. He explained that there are two different processes ongoing. The first one is an attempt to structure proto-collaborations for the FCC and start with detector R&D for the experiments. For gaseous detectors Markus Hohlmann is the contact person. The second process was started during the last P5/Snowmass process, when it was called for consolidating the community to increase the fraction of money spent by DOE to go into generic R&D rather than projects only. The CPAD structure was therefore charged to start unifying the community, but DOE is in discussion with CERN about the DRD collaborations. It seems, that DOE would accept the DRD review process, so that the US and the European efforts could be unified into one collaboration.

Jochen is co-authoring the chapter of the DRD1 proposal on electronics and asked about any comments from the community, which would be very welcome. The current rough picture is, that we will continue to develop the SRS, with a new FEC, and that we will try to find a ASIC better suited for TPCs. Marco Bregant from Sao Paulo is trying to make an improved version of the SAMPAs chip, which need less power and lower voltages. A first submission in a multi-user run will soon be done.

News from the groups:

Paul reported on the preparation of the T2K near detectors. The production of the field cages is progressing very well, two field cages have been finished, which corresponds to half of the total number. The initial problems with the low conductivity of the insulator could be traced to an anti-static

spray, which is not used anymore. The resistance of the base material is now well above one TΩ as expected. All detectors will be installed at the end of this summer in Japan.

Paul also reported on the DLC studies: The last batch received from Japan was faulty as the resistivity was too high. In addition, the export of DLC from Japan to Europe becomes more difficult now and is loaded with a lot of paperwork, because the export is restricted. It is necessary that some supplier in Europe can be identified. Rui has a machine to produce DLC layers now, but the areas which he can cover are not large enough and only sufficient for R&D-detectors.

Finally Paul also mentioned, that the old French-Japanese lab is going to stop after 10-15 years and there should be a new proposal for a successor project. Currently cooling, charge spreading and ion backflow suppression are main candidates for R&D.

Jochen said that the preparations for the EIC test beam at the beginning of June have started. Peter is solving some problems with the readout system, but major problems seem to be solved. Discussions on the detector have started.

AOB:

The next workpackage meeting will take place on April 13th.