

Minutes of WP-meeting 412

Attendance:

Zoom: Paul Colas, Ulrich Einhaus, Serguei Ganjour, Ritsuya Hosokawa, Jochen Kaminski, Claus Kleinwort, Jurina Nakajima, Huirong Qi, Oliver Schäfer, Ron Settles, Jan Timmermans

General News:

The upcoming collaboration meeting was discussed. It will take place in the CFEL building (99) close to the side entrance of DESY on Lüruper Chaussee. Jochen will send the zoom link and some travel instructions before the meeting.

Paul announced the 3rd ECFA Higgs factory workshop. It will take place from 9th to 11th of October 2024 in the center of Paris (Latin Quarter) close to where the TPC conference took place last year. The first WS was at DESY (<https://indico.desy.de/event/33640/>), the second one in Paestum (<https://agenda.infn.it/event/34841/>).

News from the groups:

Huirong presented, that the TPC was announced as the main tracking detector for the CEPC Physics and Detector TDR in CEPC community. He gave a brief reminder on the CEPC project, which started already in 2013 and is now preparing the TDR for the detector. Currently only 1 detector is foreseen, which has the following requirements for the tracking detectors: p_t threshold $O(100 \text{ MeV})$, coverage $|\cos(\theta)| < 0.99$, $\delta(D_0/Z_0) < 3\mu\text{m}$ @ 20 GeV, $\delta(p_t)/p_t \sim O(0.1\%)$, material budget $X_0 < 10\%$ (barrel), 50% (endcap) as well as excellent PID for Kaon at the Z-pole and $>99\%$ efficiency of 3-prong tau identification. To accommodate the larger coverage, the TPC foreseen deviates slightly from the ILD version: The inner radius is 60cm instead of 33cm. Each half of the TPC should be 2.9m long (ILD 2.35m) summing up to a total of 5.8m (ILD 8.7m). Several versions of the readout pads are being studied now. These include the $1 \times 6 \text{ mm}^2$ pads, $0.5 \times 0.5 \text{ mm}^2$ pads and $0.11 \times 0.11 \text{ mm}^2$ pixels. In addition some new low power electronics is being developed.

AOB:

The next workpackage meeting will take place on March 28th.