

## Minutes of WP-meeting 417

### Attendance:

Zoom: Paul Colas, Jochen Kaminski, Peter Kluit, Shinya Narita, Kohei Oikawa, Huirong Qi, Oliver Schäfer, Ron Settles, Aiko Shoji, Jan Timmermans, Peter Voerman, Mingrui Zhao

### General News:

Jan mentioned, that there have been recently some meetings where the prospects of the proposed accelerators have been evaluated and discussed very differently. For example during an FCC meeting in Germany the funding agency was not optimistic about the money available for the FCC and suggested to consider also other accelerator projects. (<https://indico.desy.de/event/44074/timetable/> → BMBF's current view to FC @ CERN).

During the EU-ILC meeting Tatsuya Nakada reported, that things are going well.

There was a longer discussion on the acceleration gradients that can be achieved currently. It seems gradients in excess of 40 MeV/m have been reported recently and the maximally physical limit of niobium and niobium/tin cavities was discussed.

The LCWS will take place on July 8.-11. About 200 people will attend. Also Oliver will go there and present the construction of the second field cage. He will write proceedings to have a documentation on the field cage. Also Paul will go and report on the construction and commissioning of the T2K-TPC, Huirong will report on the work at IHEP. Shinya will also attend.

Huirong reported, that the director of IHEP Yifang Wang has announced some big funding from funding agencies for the next 2-3 years. An amount of  $10^7$  renminbi will be spent on each of the two projects: the CEPC through IHEP and the charm/tau-factory through USTC. In both cases the money is not for accelerator developments, but for physics studies and detector R&D. This money is to prepare the next 5-year plan, which will be decided on in 2025.

Yifang Wang and Huirong will both be in Bordeaux next week to discuss the CEPC.

### News from the groups:

Peter Voerman, a Master student of Peter Kluit, has studied the effect of tracks passing over the edge of detectors at an angle. Some charge is lost asymmetrically and the track reconstruction is biased towards the side with more charge. In case of the pixelTPC, this effect can result in a deviation of several pixels of the fitted track with respect to the true track. Peter has developed a method, which allows to take this effect into account and the final track deviates only a fraction of a pixel from the true track. The algorithm introduces an additional term  $f_{\text{bias}}(x)$  in the  $\chi^2$  optimization. It was shown, that only three iterations are necessary to get the correct result, even if the true track is not given (real events vs MC). Effects on larger scales, where many crossings will take place, and the momentum resolutions still have to be studied.

Paul said that the T2K TPC is working well and all modules work. Currently the gains are calibrated.

Oliver mentioned that there was an open day at DESY last Saturday. The test beam crew had a demonstration at the the north gate and among other things the UNIMOG TPC of Rostock was exhibited. It was detecting cosmic rays and many people were impressed (in total 13600 persons came

to DESY). Among them, was Leon Verreijt, the high school student who built the wire chamber and won the Beam Line 4 Schools event last years. He said that he is now also participating in the school project competition. He has won the school internal competition and the Netherland competition and has now qualified for the European level.

AOB:

The next workpackage meeting will take place on June 27<sup>th</sup>.