Tracker Meeting Minutes

Time: 2024/5/31 10:00 – 11:50

Place: Room 228 of the multidisciplinary building and online

Participants: Wang Meng, Dong Mingyi, Li Yiming, Li Gang, Wei Wei, Wu Linghui, Zhan Li, Deng Zhi, Hengyu, Huang Shunjia, Liu Kun, Shi Xin, Xu Zijun, Yan Xiongbo, Zhang Junsong, Liu Bo, Fu Chengdong, Fan Yunyun, Fu Jinyu, Zhao Guang, Qi Huirong, Zhang Jian, Chang Yue, Geng Qinglin, Li Mengzhao, Liang Zhijun, She Xin, Zhao Mei, Zhao Yubin

Minutes: Mingyi Dong

* Simulation and design of Si tracker
  + Qinglin: For the same entrance angle, Compared to the tracks passing through the barrel and end cap, Pt resolution is better for the tracks passing only through the end cap; For end cap tracker, adding an additional layer close to the outer layer can improve Pt resolution.
  + Yiming: preliminary geometry design of barrel and end cap Si tracker should match the vertex detector geometry. One solution is increasing the length of barrel tracker.
  + Wang Meng: Should keep the solid angle coverage of barrel tracker unchanged (cosθ=0.85), and optimize the endcap design. Shixin should consider the layout of the third and fouth endcap layer with Si strip sensors.
* Huirong and Junsong: Result of FEA with loads of outer tracker: maximum deformation of 0.25mm with 100kg loads of the outer tracker. Material of barrel part has a small change; Consideration and preparation for the test beam; Update of TPC parameters in CEPCSW software package.
* Zhao Guang: PID packages for TPC and DC are almost ready in CEPCSW.
* Fan Yunyun: The thickness of outer tracker electronics has been optimized; have a preliminary design of the endcap layout. Zhao Mei: The layout design should consider the sensor design.
* Discussion on TDR manuscript preparation
  + Wangmen: Have a whole consideration and have an outline. Prepare table content firstly.
  + Mingyi: Firstly, prepare materials of each sub detector separately, and then consider combining them together based on the pre TDR outline.
  + Ligang: Start with a rough version and gradually optimize it..
  + Huirong: Suggestion about physics requirement, cooling
  + Yunyun: Suggestion about electronics