

Minutes: CEPC Reference Detector TDR Meeting in Jan 7, 2025

Attendances: Jinyu Fu, Linghui Wu, Miao He, Yong Liu, Yifang, Zhijun, Yiming, Sen Qian, Shengsen Sun, Quan Ji, Huirong Qi, Fei Li, Haoyu Shi, Qi Yan, Wei Wei, Manqi Ruan, Jianchun, Jingzhou Zhao, Boping Chen, Mingshui

Remote connection: XiaoLong Wang, Fangyi Guo, Feipeng NING, Haijun Yang, Hengne Li, Huaishen L, Huaqiao Zhang, Jingbo Ye, Jingzhou ZHAO, Mei Zhao (IHEP), suen.hou, Tao Lin (IHEP), Yan Xiongbo, Yunyun Fan, Zhang Ying, zhaoling, Zheng Wang, Tianchi Zhao,

General:

Jianchun:

1. timeline of TDR review:
 - March, online review
 - May 5-8, review during EU workshop (TBD)
 - release TDR on June 30
2. Editorial team assignment
3. overleaf service improved

Yifang:

1. Please promptly create a list and finalize all undecided parameters, metrics, and plans before the Spring Festival, including background, ECAL crystal size, HCAL glass size, structure.
2. **Talks in next CEPC DAY**
 - a. MDI: mechanics design and collimator
 - b. ECAL: crystal size and performance
 - c. Electronics: The overall power, total power consumption, as well as spatial arrangement. Additionally, R&D of core key chip.
 - d. Mechanics structure: schematic diagram of the mechanical structure, including endcaps, central barrel, connections to the core key chip, and any changes

Key points in sub-system talks:

- Silicon:
 - Qi: a unified name for Z mode?
 - Jianchun/Yifang: suggest to keep low lumi Z and High lumi Z, and well explained in first chapter
 - Status of AC-LGAD chips
 - Mei: chips has been arrived at IHEP, making testing board for it

- Yifang: consider the possibility of changing inner tracker to AC-LGAD for low energy PID. Mingshui coordinate people for simulation
 - Jianchun: AC-LGAD should has a separate meeting
- Electronics:
 - Yifang: suggest to use capacitor 200 for NDL chip