

# Tracker Meeting Minutes

Time: 2024/5/17 10:00 – 12:15

Participants: WANG Meng(王萌), YAN Qi (严琪), FAN Yunyun (樊云云), FU Chengdong (傅成栋), FU Jinyu (付金煜), LI Gang (李刚), RUAN Manqi(阮曼奇), LI Yiming (李一鸣), LI Zhan (李瞻), LIANG Zhijun (梁志钧), GENG Qinglin (耿青林), QI Huirong (祁辉荣), CHANG Yue (常悦), WANG Meng (王萌), WEI Wei (魏微), ZHAO Guang (赵光), ZHAO Mei (赵梅), ZHANG Jian (张建)

Minutes: Huirong Qi

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- WM:
    - Today, we will focus on the requests on the detector geometry/space between OTK, TPC, barrel and endcap, and the physics requests of the track detectors.
  - WW
    - It's 20mm for the electronics cable space between TPC and OTK. This value should be fixed from WW. Recommendation size of the barrel will be set 50mm LGAD.
  - FYY
    - Power consumption of LGAD electronics is about 250mW/cm<sup>2</sup> (little high!). Yunyun should confirm it after.
  - FJY
    - Shows preliminary CAD drawings of mechanical based layout of the LGAD barrel. The thickness of one layer of the overlapped two layers ladders is within 20 mm.
  - WM:
    - With the estimation including the mechanical based barrel layout, electronics and gap between overlaps, preliminarily decide to set the space in radius direction for the LGAD barrel to 50 mm (R 1800-1850 mm)
  - QHR
    - Power consumption of TPC electronics is 100mW/cm<sup>2</sup>. The width of the endplate should be discussed with WW, FYY and FJY.
  - WM
    - Discussion of the endplate/readout/cooling/LGAD will be setup on 15:00 Sunday this week. QHR will announce to all related persons. Request on the cooling efficiency.
  - GQL
    - Aimed to confirm the TOF detector, some update calculation of the different moment of the particles along  $\theta$  in the track detector by WM . Qinlin shows the update simulation results of PID performance with only TOF, the track performance of the barrel/encap, Pt VS.  $d\theta$  and  $d\theta$  in the different z pitch.

- LYM
  - Some update results were given about the silicon pixel detector as SET including the module design, geometry and cost estimation.
- LZ
  - Some update results were showed about the SET and the hit density.