Minutes: Taskforce Meeting on CERNTestbeam Data (Feb. 2, 2023)

Time: 11:00 AM → 12:10 PM

indico page (https://indico.ihep.ac.cn/event/18762/)

Participants

- IHEP: Baohua, Dejing, Hengyu, Peng, Yuzhi, Xin, Yong
- SJTU: Haijun, Siyuan, Zhen, Zixun, Jiyuan
- Tokyo: Wataru, Ryonosuke, Tatsuki

(Chair and minutes: Yong)

Talks and discussions

- News: Yong
    - A short document for the 2023 CERN beamtest application was prepared by CALICE TB and sent to some referees of SPS Committee
    - One referee sent feedback and stressed the importance to present results from previous tests
- Talk: data conversion (Yuzhi)
    - Issues: LCIO Compatibility & Abnormal RawCalorimeterHit
        - Oberservations
            - Output of RawdataToLCIO can not be read with CEPC software.
            - Only a few hits in each event, inconsistent with output ROOT file.
        - Possible reason: LCIO versioning in CEPCsoft and Francois' decoder?
        - Action items: crosscheck by Yuzhi and Francois
    - Calib ROOT to slcio: works well for ECAL data
    - Discussion: #hits increases in the last 2 layers
- Talk: ECAL Temperature (Tatsuki)
    - Oberservations
        - Many channels have several (widely spread) temperature "curves" in one run

        - Temperature sensors also have many “curves”
    - Discussions
        - Temperature sensors: calibrations done? precision?
    - Action items: further discussions by Tatsuki and USTC colleagues

- ECAL and AHCAL data preparations: no updates
- Simulation and validation: Baohua
    - MC samples (10-120 GeV) produced, digitisation implemented -> first MC results expected next meeting
- PID studies: two talks
    - Zhen: using ROOT::TMVA BDT
    - Siyuan: using ANN (Artificial Neural Network) with PyTorch
    - Summary: two methods generally show good PID accuracy and consistency with each other
- AOB
    - May need to poll for a new meeting time slot for the coming new semester -> hopefully working better for every team member