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ALICE FoCal

Thursday, 7 July 2022 15:30 (20 minutes)

The addition of a Forward Calorimeter (FoCal) to the ALICE experiment is proposed for LHC Run 4 to provide unique constraints on the low-x gluon structure of protons and nuclei via forward measurements of direct photons. A new high-resolution electromagnetic Si-W calorimeter using both Si-pad and Si-pixel layers is being developed to discriminate single photons from pairs of photons originating from π^0 decays. A conventional sampling hadron calorimeter is foreseen for jet measurements and the isolation of direct photons. In this presentation, we will report on results from test beam campaigns in 2019 and 2021 at DESY and CERN with Si-pad and pixel modules, a first prototype for the hadronic calorimeter, and a full-pixel calorimetry prototype based on ALPIDE sensors.

In-person participation

Yes

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Session Classification: Detectors for Future Facilities, R&D, novel techniques

Track Classification: Operation, Performance and Upgrade (Incl. HL-LHC) of Present Detectors