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Study of Cross-Talk Effects in Test Beam Studies of a High-Granularity Calorimeter (HGCAL) Prototype at CERN

This study investigates the cross-talk effects in the CMS High Granularity Calorimeter (HGCAL) using testbeam data and its comparison with GEANT4 simulation. The Study uses pion beam data on a two-module readout system with no absorbers. Cross-talk effects are studied using two different methods. Various noise mitigation methods have been applied. HGCROC chip-level charge injection is also studied for cross-talk.

Field of contribution

Experiment

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Track Classification: Future experiments and detector development