

Contribution submission to the conference Göttingen 2025

Simulation of a cosmic muon test stand for the the CMS HG-CAL upgrade — ●MOHAMMED ADNAN ALI, ANDREAS HINZMANN, and FREYA BLEKMAN — DESY, Notkestr. 85, 22607 Hamburg

The CMS High Granularity Calorimeter (HGCAL) upgrade requires thorough quality control during the production of its components. A cosmic muon test stand for fully assembled boards equipped with scintillator tiles, SiPMs and read-out-electronics is setup to verify that all detector components operate as expected. In this talk we present a GEANT4-based simulation in CMSSW of this test stand allowing to study energy deposition patterns, reconstructed angle accuracy, and minimum ionizing particle light yields to help the design of the test stand and for comparison to the collected data.

Part: T
Type: Vortrag;Talk
Topic: 3.03 (Det.) Calorimeters
Keywords: CMS; HGCAL; Cosmic muon test stand; Simulation; Quality Control
Email: md.ali@studium.uni-hamburg.de