

Performance and calibration of the ATLAS Tile Calorimeter

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The Tile Calorimeter (TileCal) is a central hadronic calorimeter of the ATLAS experiment at the LHC. The TileCal plays an important role in the reconstruction of jets, hadronically decaying tau leptons, missing transverse energy and provides information to the dedicated calorimeter trigger. This sampling calorimeter is composed by the plastic scintillating tiles and steel absorbers. The scintillating light is read-out by the wavelength shifting fibres coupled to the photomultiplier tubes. The dedicated calibration systems are used to monitor and calibrate each stage of the signal production from scintillation light to the signal reconstruction. The linearity, stability in time and the precision of the calibration systems will be discussed. Moreover, the energy scale and timing of the TileCal are validated using isolated muons and jets from the p-p collisions. The performance of the detector using LHC Run 3 will be shown.

Alternate track

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