

Status of the ATLAS Tile Calorimeter

Tuesday 26 August 2025 11:20 (20 minutes)

The Tile Calorimeter (TileCal) is a sampling hadronic calorimeter covering the central region of the ATLAS experiment, with steel as absorber and plastic scintillators as active medium. The scintillators are read-out by the wavelength shifting fibers coupled to the photomultiplier tubes (PMTs). The analogue signals from the PMTs are amplified, shaped, digitised by sampling the signal every 25 ns and stored on detector until a trigger decision is received. The TileCal front-end electronics reads out the signals produced by about 10000 channels measuring energies ranging from about 30MeV to about 2 TeV. Each stage of the signal production from scintillation light to the signal reconstruction is monitored and calibrated. A summary of recent performance results and its High Luminosity LHC upgrade project will be presented.

Authors: SPEAKER, ATLAS; KERSEVAN, Borut Paul (Jozef Stefan Institute (SI))

Presenter: SPEAKER, ATLAS

Session Classification: Parallel