PANIC2021 Conference



Contribution ID: 434 Type: Poster

Time calibration and monitoring in the ATLAS Tile Calorimeter

Tuesday 7 September 2021 19:11 (1 minute)

The Tile Calorimeter (TileCal) is the hadronic calorimeter covering the central region of the ATLAS experiment at the LHC. This sampling device uses steel plates as an absorber and scintillating tiles as the active medium and its response is calibrated to the electromagnetic scale by means of several dedicated calibration systems. The accurate time calibration is important for the energy reconstruction, non-collision background removal as well as for specific physics analyses.

The time calibration as performed with collision data is presented. Its monitoring with laser system and collision data is discussed as well and the corrections for various identified problems. Finally, the time resolution as measured with jets in Run 2 is presented.

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Session Classification: Poster Session II

Track Classification: Development of accelerators and detectors