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Title: Time calibration, monitoring and performance of the ATLAS Tile Calorimeter in Run 2

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The Tile Calorimeter (TileCal) is the central hadronic calorimeter of the ATLAS experiment at the LHC. It is made of steel plates acting as absorber and scintillating tiles as active medium. The TileCal response is calibrated to 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 initial time calibration using so-called splash events and subsequent fine-tuning with collision data are presented. The monitoring of the time calibration with laser system and physics collision data is discussed as well as the corrections for sudden changes performed still before the recorded data are processed for physics analyses. Finally, the cell time resolution as measured with jet events in Run 2 is presented.

Collaboration

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