

Collection of web tools for ATLAS Tile Calorimeter data quality tasks

Wednesday, 29 July 2020 13:33 (3 minutes)

The ATLAS Tile Calorimeter (TileCal), as a substantial part of the hadronic calorimeter system of the ATLAS detector, records energy deposits and jointly with other calorimeters reconstructs hadrons, jets, tau-particles and missing transverse energy. It also assists in muon identification. The TileCal is the hadronic sampling calorimeter, which is constructed out of alternating iron absorber layers and active scintillating tiles and covers region $|\eta| < 1.7$. Its operation is closely monitored by several systems, which were independently developed to meet distinct collaboration requirements. Any problem or indication of a problem is reported and immediately investigated, which resulted in data quality (DQ) efficiency close to 100% in the last several years. Although the TileCal tools are maintained and still being developed, the underlying technologies on which they were developed, especially web related tools, are becoming gradually outdated.

The goal of the Tile-in-One (TiO) web platform is to integrate all the different TileCal DQ tools, independently developed over long period of time by different groups and individuals into one cohesive system without any non-necessary overlap in functionality. It is implemented as a collection of relatively small independent web applications designed for one specific task, which are accessed through the main TiO server, which handles the authentication. Every application is isolated in its own virtual machine and is called plugin. Currently, the platform operates with around 13 plugins in various stages of development and focuses not only on reimplementation of the old tools but also creation of new ones. The implementation details of the Tile-in-One web platform and also a selection of plugins will be presented.

I read the instructions

Secondary track (number)

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Session Classification: Operation, Performance and Upgrade of Present Detectors - Posters

Track Classification: 12. Operation, Performance and Upgrade of Present Detectors