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Performance and operations of the ATLAS detector (including preparation towards Run-3)

Monday 23 November 2020 15:45 (15 minutes)

While the LHC completed its second run in 2018, analyses of the 140 fb^{-1} data recorded by the ATLAS experiment during that period are in full swing. In order to provide the best possible sensitivity to Standard Model and new physics, the collaboration is reprocessing the full Run-2 dataset with improved calibrations as well as simulations in all relevant areas.

The four ATLAS-Sweden groups are deeply involved in this refinement of detector calibrations and performance. Critical efforts, among others described in this presentation, concern the calibration of the calorimeter' s energy scale and the transition radiation tracker, as well as the identification of heavy flavor jets. Additionally, the groups play leading roles in the development of tools for the experiment, for example to optimise data quality monitoring or to provide an online luminosity measurement. Finally, the groups contribute significantly to a successful start of Run-3 of the LHC, namely in areas such as the development of the new data quality monitoring framework, the improvement of pile-up suppression tools, and the commissioning of the triggers for Run-3.

Abstract Track

LHC

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