

Deep Inelastic Scattering 2025



Contribution ID: 54

Type: **not specified**

The ATLAS Trigger System

Wednesday 26 March 2025 14:00 (22 minutes)

The ATLAS experiment in the LHC Run 3 uses a two-level trigger system to select events of interest to reduce the 40 MHz bunch crossing rate to a recorded rate of up to 3 kHz of fully-built physics events. The trigger system is composed of a hardware based Level-1 trigger and a software based High Level Trigger. The selection of events by the High Level Trigger is based on a wide variety of reconstructed objects, including leptons, photons, jets, b-jets, missing transverse energy, and B-hadrons in order to cover the full range of the ATLAS physics programme. We will present an overview of improvements in the reconstruction, calibration, and performance of the different trigger objects, as well as computational performance of the High Level Trigger system.

Author: RIMOLDI, Marco (CERN)

Presenter: RIMOLDI, Marco (CERN)

Session Classification: WG6: Future Experiments

Track Classification: Future Experiments