

The ATLAS Muon Trigger

Thursday 5 July 2018 17:30 (12 minutes)

Events containing muons in the final state are an important signature for many analyses being carried out at the Large Hadron Collider (LHC), including both standard model measurements and searches for new physics. To be able to study such events, it is required to have an efficient and well-understood muon trigger. The ATLAS muon trigger consists of a hardware based system (Level 1), as well as a software based reconstruction (High Level Trigger). Due to high luminosity and pile up conditions in Run 2, several improvements have been implemented to keep the trigger rate low while still maintaining a high efficiency. Some examples of recent improvements include requiring coincidence hits between different layers of the muon spectrometer, improvements for handling overlapping muons, and optimised muon isolation. We will present an overview of how we trigger on muons, recent improvements, and the performance of the muon trigger in Run-2 data.

Primary author: HELD, Alexander (CERN)

Presenter: HELD, Alexander (CERN)

Session Classification: Detector: R&D for Present and Future Facilities

Track Classification: Detector: R&D for Present and Future Facilities