

# 10th Edition of the Large Hadron Collider Physics Conference



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## The Muon Trigger of the ATLAS experiment: performance and improvements for Run 3

*Tuesday, 17 May 2022 19:00 (1 hour)*

Events with muons in the final state are fundamental for detecting a large variety of physics processes in the ATLAS Experiment, including both high precision Standard Model measurements and new physics searches. For this purpose, the ATLAS Muon Trigger has been designed and developed into two levels: a hardware based system (Level-1) and a software based reconstruction (High Level Trigger). They have been optimized to keep the trigger rate as low as possible while maintaining a high efficiency, despite the increased particle rates and pile-up conditions at the LHC. An overview of the muon triggering strategies will be provided, showing the performance in Run 2 data of both Level 1 and High Level Trigger. The most recent improvements implemented for Run 3 will also be presented.

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**Session Classification:** Poster Session I

**Track Classification:** Performance and Tools