Contribution ID: **251** Type: **Parallel session talk**

ATLAS New Small Wheel Performance Studies with LHC Run3 data

Saturday 20 July 2024 14:48 (18 minutes)

The most important ATLAS upgrade for LHC run-3 has been in the Muon Spectrometer, where the replacement of the two forward inner stations with the New Small Wheels (NSW) introduced two novel detector technologies: the small strip Thin Gap Chambers (sTGC) and the resistive strips Micromegas (MM). The integration of the two NSW in the ATLAS endcaps marks the culmination of an extensive construction, testing, and installation program. The NSW actively contributes to the muon spectrometer trigger and tracking, during the concurrent finalization of the commissioning phase of this innovative system and the optimization of its performances. This presentation will offer an overview of the strategies employed for simulation and reconstruction integration and optimization, followed by a detailed report on the performance studies of the NSW system during its initial operation with LHC Run3 data.

Alternate track

I read the instructions above

Yes

Primary authors: ZHU, Junjie (University of Michigan (US)); SCHOLER, Patrick (Carleton University (CA))

Presenter: SCHOLER, Patrick (Carleton University (CA))

Session Classification: Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors

Track Classification: 12. Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors