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Type: Oral presentation

Performances of the Small-strip Thin Gap Chambers in the New Small Wheels of ATLAS

Thursday 12 October 2023 12:05 (25 minutes)

The instantaneous luminosity of the Large Hadron Collider at CERN will be increased by about a factor of five with respect to the design value by undergoing an extensive upgrade program over the coming decade. The largest phase-1 upgrade project for the ATLAS Muon System was the replacement of the first station in the forward regions with the New Small Wheels (NSWs) which took place during the long-LHC shutdown in 2019-2021.

The two Small Wheels are called A and C and cover a positive and negative pseudorapidity acceptance in the range $|\eta| = 1.3$ to 2.7. Both Small Wheels have been successfully installed in ATLAS in 2021 and took data from p+p collisions at 13.6 TeV in 2022.

Along with resistive strips Micromegas, the NSW's is equipped with eight layers of small-strip thin gap chambers (sTGC). The new system is designed to assure high tracking efficiency, reduction of fake trigger rates and precision measurement of muon tracks. In this presentation we will discuss the performances of the sTGC detectors from data taken with the first LHC beam in 2022 and 2023.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

ATLAS <https://atlas.cern>

Is the speaker for that presentation defined?

No

Details

The final speaker will be defined later by the Collaboration

Internet talk

Maybe

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Session Classification: Parallel Session 4

Track Classification: High Energy Particle Physics