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

Thursday, July 20, 2023 4:20 PM (20 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 longLHC 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.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

ATLAS

Is the speaker for that presentation defined?

Yes

Details

Sonia Kabana

Internet talk

No

Author: KABANA, Sonia (Instituto De Alta Investigación, Universidad de Tarapacá (CL))

Co-author: ATLAS COLLABORATION, on behalf of the

Presenter: KABANA, Sonia (Instituto De Alta Investigación, Universidad de Tarapacá (CL))

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