

Abstract Submitted
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ATLAS NSW sTGC muon detector electronic integration and commissioning XINMENG YE, University of Michigan, ATLAS NSW STGC ELECTRONIC INTEGRATION TEAM — The most challenging ATLAS Phase I upgrade project during Long Shutdown 2 (2019-2021) is the New Small-Wheel (NSW) for Muon Spectrometer upgrade. The main purpose of the NSW upgrade is to improve the performance of muon triggering and precision tracking for HL-LHC runs. The NSW detector system is composed of 16 layers of MicroMegas and small-strip Thin Gap Chambers (sTGC) detectors with 2.4 million readout channels and a total surface area of more than $2,500 m^2$. This presentation focuses on the electronic integration and commissioning of sTGC detectors at CERN, including a summary of the progress achieved, the problems encountered during electronic testing and the various solutions discovered.

Xinmeng Ye
University of Michigan

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