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P1-9: Status of GE2/1 for the Phase-2 Upgrade of the CMS Muon System

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The Large Hadron Collider (LHC) Phase-2 upgrade increases the instantaneous luminosity to 5 x 10ˆ34 cm-2 s-1 and this very high luminosity will present a major challenge to the most forward regions of the CMS detector. To confront the high background rates, the CMS experiment plans to upgrade the forward muon system by installing three new detectors based on triple-GEM technology to maintain trigger capabilities. The GE2/1 station consists of 288 triple-GEM modules arranged in two layers of 18 chambers in both end-caps, covering the forward pseudorapidity range 1.6 < |eta| < 2.4 region to improve both muon triggering and reconstruction. It will be installed during YETS 2024 and 2025. We present the status of the GE2/1 project, including the progress of production and the performance based on the the results of QC tests performed on the assembled GE2/1 detectors.

Primary author: KIM, Seulgi (University of Seoul, Department of Physics (KR))

Presenter: KIM, Seulgi (University of Seoul, Department of Physics (KR))

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