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Performance and quality control of the first CMS GE2/1 muon production chambers

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The Large Hadron Collider (LHC) will soon be upgraded to prepare for the high-luminosity phase. To cope with the increase in background rates and trigger requirements, the CMS muon system is being upgraded by installing additional sets of muon detectors based on Gas Electron Multiplier (GEM) technology. The GE2/1 station will consist of 72 GEM chambers, comprising 288 modules, covering the pseudorapidity range between 1.62 and 2.43. The GE2/1 chambers are being produced at this moment and the first chambers were installed at the beginning of this year.

This talk will focus on the quality control of these first GE2/1 chambers, with a dedicated focus on the results obtained with the cosmic test stand. Also the performance of the first two production chambers installed in the CMS experiment will be discussed.

Author: WARDEN, Abigail Catherine (University of Wisconsin Madison (US))

Presenter: WARDEN, Abigail Catherine (University of Wisconsin Madison (US))

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