

Abstract Submitted
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Quality Control of the Large-area GEM detectors at Production Sites for the CMS Muon Endcap Upgrade MEHDI RAHMANI, Florida Inst of Tech, CMS COLLABORATION — GEM (Gas Electron Multipliers) detectors will be installed in the high-eta region of the CMS muon system by the year 2019. With precise tracking and fast trigger information, these detectors will significantly improve the CMS muon triggering after the second long shutdown of the LHC. There are six sites, external to CERN, where a total of 160 1-meter long GEM detectors will be produced. We present the detector construction and discuss the critical quality control (QC) procedures implemented for chamber commissioning. Some of the most important QCs discussed are: current leakage tests, gas leak tests, gain measurements, high voltage test and response uniformity test. We discuss the criteria that are used to accept or reject a GEM detector based on the QC results. The production and QC status will be presented as well.

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