

Operations and Performance Summary of CMS Muon System for LHC Run 3

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The CMS experiment at the LHC has started data taking in Run 3 at a pp collision energy of 13.6 TeV. A highly performing muon system has been crucial to achieve many of the physics results obtained by CMS. This is achieved by the highly efficient muon spectrometer. The legacy CMS muon detector system consists of Drift Tube chambers in the barrel and Cathode Strip Chambers in the endcap regions, plus Resistive Plate Chambers in both, barrel and endcap. During the LS2 period, Gas Electron Multiplier chambers were added to enhance the redundancy of the system while maintaining the precision of muon momentum resolution at the L1 trigger. The CMS muon system has been running smoothly in the first 2 years of Run 3 with negligible contribution to the downtime/luminosity loss while showing the same excellent detector performance as in Run 2. This talk reports the operation summary and performance study of the CMS muon system carried out using the first dataset collected at 13.6 TeV.

Alternate track

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Authors: CMS; PUGLIESE, Gabriella (Universita e INFN, Bari (IT))

Presenter: PUGLIESE, Gabriella (Universita e INFN, Bari (IT))

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