

Study of the Performance of RPC System Installed at the CMS Experiment

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Abstract. The CMS (Compact Muon Solenoid) experiment is a general purpose detector, located at the CERN Large Hadron Collider (LHC). It has a muon spectrometer equipped with a redundant system composed of three different detector technologies – Resistive Plate Chambers (RPCs) and Drift Tubes (DTs) in the barrel and RPC and Cathode Strip Chambers (CSCs) in the endcap region. All three are used for muon reconstruction and triggering. The RPC detector system consists of a total of 1056 double-gap chambers, covering the pseudo-rapidity region up to $|\eta| \leq 1.6$. Here are presented the Resistive Plate Chambers performance results for the period of 2015 and 2016 with pp collisions at 13 TeV. The stability of the RPC performance is reported in terms of efficiency, cluster size and noise distributions.

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