Contribution ID: **278** Type: **Parallel**

CMS RPC System status and performance in Run3

The Compact Muon Solenoid (CMS) Experiment is a multi-purpose detector, located at the Large Hadron Collider (LHC) in CERN. It is equipped with several sub-detector systems to reconstruct high-energy collision particles. Resistive Plate Chambers (RPC), known for their fast response and good timing resolution, are used as one of the sub-detectors for muon detection within the CMS Muon System. RPCs detect ionizing particles through gas avalanches between resistive plates, producing signals on readout strips. During 2024, the CMS Experiment recorded over 112 fb^{-1} of proton-proton collision data, bringing the total for Run 3 (2022–present) to more than 180 fb^{-1}. To secure good data quality throughout this period, the performance and stability of the RPC System are continuously monitored, and the latest results will be presented.

Secondary track

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Session Classification: T11

Track Classification: T11 - Detectors