

# CMS RPC Detector consolidation and preparation for new chambers installation for Phase II upgrade programme

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This poster presents the efforts to boost the performance and the reliability of the Resistive Plate Chambers (RPC) of the muon system of the Compact Muon Solenoid (CMS) experiment. The focus is on both, maintenance of the existing RPC chambers and the installation of the improved RPC detectors (iRPC) for the Phase-2 upgrade. The RPC system consolidation is based on the cooling system upgrade and the gas leak repair, which would allow powering back of leaking chambers. Installation of special mounting brackets, in addition to upgrade of the power system were completed as part of the new iRPC Phase-2 upgrade programme. At the end of 2023, two iRPC chambers were installed and are already under commissioning in the CMS experiment. This poster offers valuable insights into the maintenance procedures of the RPC detector and the activities crucial for the success of the ongoing and Phase-II data taking of CMS for HL-LHC era.

## Alternate track

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Yes

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