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The CMS RPC system readiness for LHC Run 3 data taking

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During Run 3, the LHC is preparing to deliver instantaneous luminosity in the range from $5 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$ to $7 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$. To ensure stable data taking, providing redundant information for robust muon triggering, reconstruction and identification, the CMS RPC collaboration has used the opportunity given by the LHC long shutdown 2 (LS2), to perform a series of maintenance and preparation activities for the new data taking period, as well as future upgrades (Phase II upgrade). The activities included power, gas and online systems maintenance, as well as installation of gas pipes and kilometers of service cables for future chambers in preparation for Phase II. Thorough detector commissioning with dedicated cosmic data taking periods was performed. The overall performance during the LS2 commissioning period, as well as all activities in preparation for future data taking will be presented.

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