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RPC system in the CMS Level-1 Muon Trigger

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The CMS experiment implements a two-level triggering system composed of Level-1, instrumented by custom-design hardware boards, and a software High Level Trigger. To cope with the more challenging luminosity conditions, a new Level-1 architecture has been deployed during run II. This new architecture exploits in a better way the redundancy and complementarity of the three muon subsystems: Cathode Strip Chambers (CSC), Drift Tubes (DT) and Resistive Plate Chambers (RPC). In this talk, the role of each subsystem in Level-1 muon trigger will be described, with highlight on the contribution from the RPC system. Challenges brought by the HL-LHC environment and new possibilities coming from detector and trigger upgrades will also be discussed.

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