

Performance of the CMS Level-1 Trigger during Run 2

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The CMS Level-1 (L1) Trigger system was upgraded in 2016 in order to cope with the three fold increase in peak luminosity of Run 2 compared to Run 1. The upgraded trigger features advanced clustering, calibration, and particle identification techniques. More sophisticated algorithms, for example involving the invariant mass of pairs of L1 candidates, were also implemented. The upgrades reduced the trigger rate from background processes and increased the efficiency for a variety of physics signals. This poster highlights a number improvements that the upgraded L1 Trigger provided during the Run 2 program at CMS.

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