

Performance of the RPC L1 Trigger during CRAFT09

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During the months of July-September 2009 CMS has taken data from cosmic particles keeping the magnetic field on. This data taking was called Cosmics Runs At Four Tesla (CRAFT). CRAFT 2009 was a chance to measure the flexibility and the stability of the Level 1(L1) Trigger of RPCs. The Pattern Comparator (PAC) is the RPC L1 Trigger algorithm: during CRAFT it was modified in order to be better suited for cosmic muons. The efficiency of the RPC L1 Trigger was measured in the Barrel region of the CMS detector, and it was possible to make a local map of the trigger efficiency in this region. The efficiency was studied as a function of the transverse momentum of the particles. Also a study of the efficiency for the L1 Trigger logical sectors (towers) was made. Detailed results of the studies are reported.

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