

## Implementation and Test of the First-Level Global Muon Trigger of the CMS Experiment

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In CMS, three independent first-level muon trigger systems identify muon candidate tracks. The Global Muon Trigger (GMT) receives up to 16 candidate tracks and combines them using algorithms exploiting the complementarity of the muon systems. The GMT also correlates the muon candidate tracks with calorimeter regions in order to determine muon isolation or confirmation by the calorimeter. The top four muon candidates are forwarded to the Global Trigger. The GMT algorithms are implemented in ten Xilinx Virtex-II FPGAs on a single 9U-VME board. The development of the VME board and its firmware as well as the results of system and integration tests are presented.

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