



Contribution ID: 566

Type: **Poster Presentation**

The CMS Level-1 tau lepton and Vector Boson Fusion triggers for the LHC Run II

The CMS experiment implements a sophisticated two-level triggering system composed of Level-1, instrumented by custom-design hardware boards, and a software High-Level-Trigger. A new Level-1 trigger architecture with improved performance is now being used to maintain the thresholds that were used in LHC Run I for the more challenging luminosity conditions experienced during Run II. The upgrades to the calorimetry trigger will be described along with performance data. The algorithms for the selection of final states with tau leptons, both for precision measurements and for searches of new physics beyond the Standard Model, will be described in detail. The implementation of the first dedicated Vector Boson Fusion trigger algorithm will be presented as well, along with its performance on benchmark physics signals.

Experimental Collaboration

CMS

Primary author: AMENDOLA, Chiara (LLR, Ecole Polytech., IN2P3-CNRS)

Presenter: AMENDOLA, Chiara (LLR, Ecole Polytech., IN2P3-CNRS)

Session Classification: Poster session

Track Classification: Detector R&D and Data Handling