



Contribution ID: 186

Type: **Talk**

## Triggers (CMS)

*Wednesday 7 September 2022 12:40 (20 minutes)*

CMS selects interesting events using a two-tiered trigger system. The first level (L1), composed of custom hardware processors, uses information from the calorimeters and muon detectors to select events at a rate of around 100 kHz within a fixed latency of about  $4\mu\text{s}$ . The second level, the high-level trigger (HLT), consists of a farm of processors running a version of the full event reconstruction software optimized for fast processing and reduces the event rate to around 1 kHz before data storage. The CMS trigger is a very dynamically evolving system due to the targeted physics studies, increasing luminosity and addition of new strategies. Recent additions to the HLT, scouting and parking, use event processing knowledge learnt over the past years to reduce the data size and store it for processing on accessible CPUs during the LHC shutdown, respectively. This talk will present the performance of the trigger in the previous years, the first results and upcoming developments for Run 3, as well as plans for HL-LHC.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

Compact Muon Solenoid, P5 CERN

### Is the speaker for that presentation defined?

Yes

### Details

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### Internet talk

No

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