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CMS High Level Trigger Performance for Run 3

Friday, 25 August 2023 09:10 (20 minutes)

The CMS experiment at CERN uses a two-stage trigger system to filter and store events of physics importance: a hardware-based Level 1 (L1) trigger that uses fast electronics (based on FPGA's and ASIC's) to process data in a pipeline fashion at 40 MHz with an output rate of around 100 kHz and a software-based High-Level Trigger (HLT) run on computer farms with an average output rate of around 1.5 kHz. Many novel trigger algorithms, coupled with technological developments such as heterogeneous computing in GPU's were developed to cope with the increased centre of mass energy, instantaneous luminosity and the physics needs of Run3. This talk summarises the performance of the CMS HLT during the first year of Run3.

Collaboration / Activity

CMS

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