Efficiency Measurements at the CMS High Level Trigger

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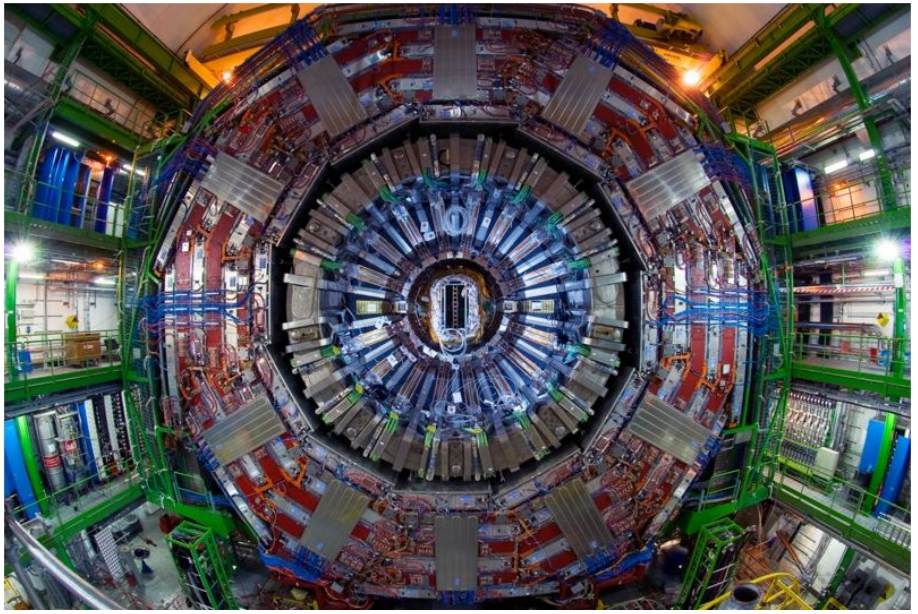
Overview

- CMS Experiment and Goals
- High Level Trigger and Efficiency Measurements
- Future Work

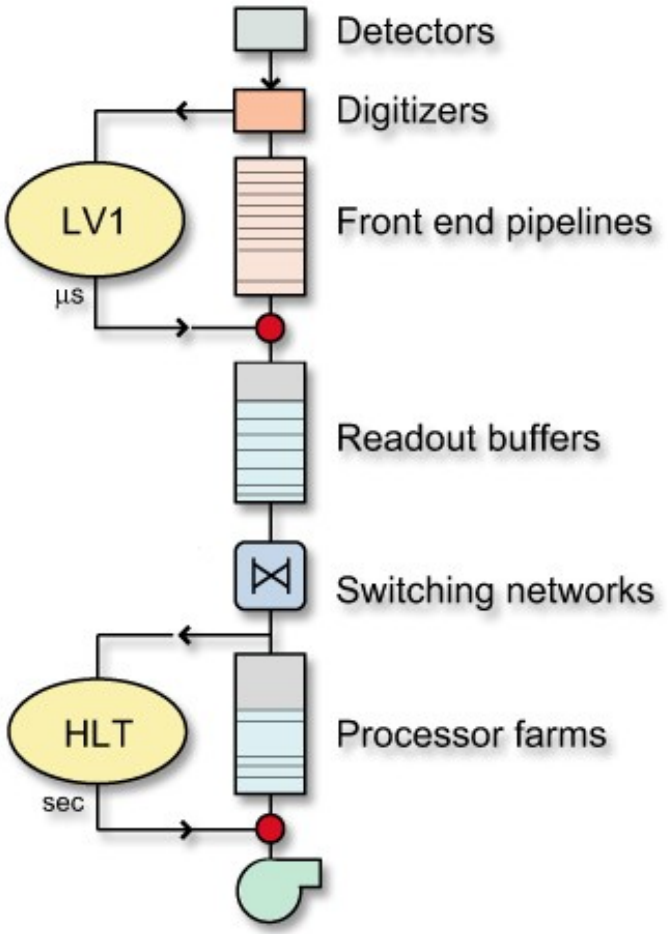
Compact Muon Solenoid (CMS)

- General Purpose Detector

- Search for Higgs Boson, Supersymmetry, Extra Dimensions…



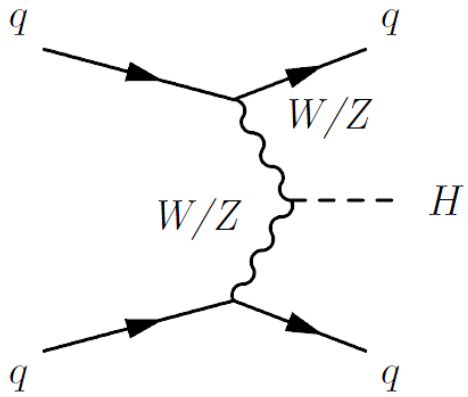
CMS Trigger



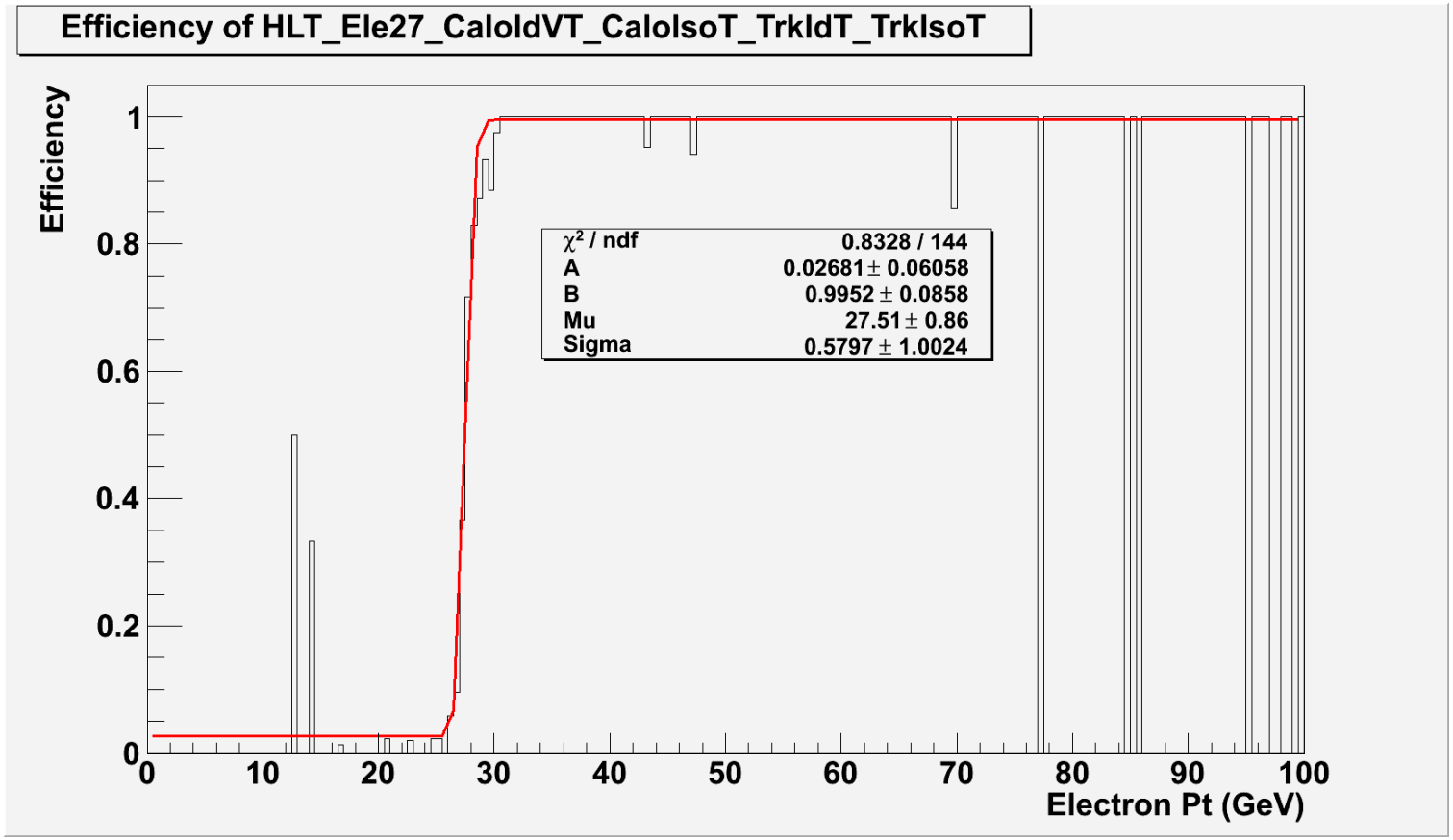
- Level-1 Trigger (L1T) – Hardware – 40 MHz to 100 kHz
- High Level Trigger (HLT) – loose software reconstruction – 100 kHz to ~100 Hz

Trigger Efficiencies

- Measurements for Vector Boson Fusion (VBF) Higgs Analysis
- Efficiency measurements will be used to make the offline selection cuts as loose as possible



Current Work



Denominator – events pass ref. trigger and offline selection

Numerator – events pass denominator and HLT

Future Work

- Analysis of triggers for VBF Higgs analysis
- Analysis of the current offline cuts

Questions?