



Contribution ID: 12

Type: **Poster**

B-tagging at High Level Trigger in CMS

Tuesday, 2 September 2014 08:00 (1 hour)

The CMS experiment has been designed with a 2-level trigger system. The Level 1 Trigger is implemented on custom-designed electronics. The High Level Trigger (HLT) is a streamlined version of the CMS offline reconstruction software running on a computer farm. Using b-tagging at trigger level will play a crucial role during the Run II data taking to ensure the Top quark, beyond the Standard Model and Higgs boson physics programme of the experiment. It will help to significantly reduce the trigger output rate which will increase due to the higher instantaneous luminosity and higher cross sections at 13 TeV. B-tagging algorithms based on the identification of tracks displaced from the primary proton-proton collision or on the reconstruction of secondary vertices have been successfully used during Run I. We will present their design and performance with an emphasis on the dedicated aspects of track and primary vertex reconstruction, as well as the improvements foreseen to meet the challenges of the Run II data taking (high track multiplicity, out-of-time pile-up)

Primary author: CHABERT, Eric (Institut Pluridisciplinaire Hubert Curien (FR))

Presenter: CHABERT, Eric (Institut Pluridisciplinaire Hubert Curien (FR))

Session Classification: Poster session

Track Classification: Data Analysis - Algorithms and Tools