



Contribution ID: 185

Type: **Sectional**

Performance of the Pixel Luminosity Telescope for Luminosity Measurement at CMS during Run2

Thursday, 3 October 2019 12:00 (15 minutes)

The Pixel Luminosity Telescope (PLT) is a dedicated system for luminosity measurement at the CMS experiment using silicon pixel sensors arranged into “telescopes”, each consisting of three planes. It was installed in CMS at the beginning of 2015 and has been providing online and offline luminosity measurements throughout Run 2 of the LHC (2015-2018). The online bunch-by-bunch luminosity measurement reads out at the full bunch crossing rate of 40 MHz, using the “fast-or” capability of the pixel readout chip to identify events where a hit is registered in all three sensors in a telescope, corresponding primarily to tracks originating from the interaction point. In addition, the full pixel information is read out at a lower rate, allowing for studies with full track reconstruction. In this talk, we will present the results and techniques used during Run 2, including commissioning, luminosity calibration using Van der Meer scans, and measurement and correction of stability and linearity effects using data from emittance scans.

Primary author: Mr ROMEO, Francesco (Vanderbilt University)

Presenter: Mr ROMEO, Francesco (Vanderbilt University)

Session Classification: Triggering, Data Acquisition, Control Systems

Track Classification: Triggering, Data Acquisition, Control Systems