



Contribution ID: 24

Type: **Lightning talks**

Anomaly Detection and Stability Measurements with the CMS Pixel Luminosity Telescope

Data from the pixel luminosity telescope (PLT) for CMS needs to be cleaned thoroughly before being submitted for final integrated luminosity calculations for Run 3 data. Cleaning this data by hand is quite labor intensive, however very important to do so. In this talk I will discuss the anomaly detection algorithm I crafted to flag a variety of “anomalies” in the data - data points that need to be removed due to various errors in the detector. The algorithm is based on an unsupervised learning package but doesn’t utilize machine learning; as such, it doesn’t require training and can be implemented almost immediately on other luminosity based detectors (with additional tuning of the model). The talk will discuss future endeavors with utilizing the model and plans to implement it in real time.

Primary author: REAM, Katie (University of Michigan)

Presenter: REAM, Katie (University of Michigan)

Session Classification: Lightning Round Talks