Assessing the Performance of the STAR Forward Calorimeter System

Noah Mitchell

Abilene Christian University, Abilene, Texas

For the STAR Collaboration

The STAR experiment studies phenomena like nuclear matter and nucleon structure through the collisions of heavy ions and spin-polarized protons. To further these objectives, the STAR forward upgrade was commissioned and started taking its first data in 2021. One of the goals of our 2021 run has been testing the Forward Calorimeter System (FCS), which includes electromagnetic and hadronic calorimeter systems. This system is equipped with an LED system for monitoring purposes. One aspect of the testing has been looking at the pedestal (PED) and LED pulse height data to ensure the systems are working properly. This presentation will provide examples of ratio plots of PED RMS, as well as the LED, over the course of several runs to ensure the long term stability of the systems.