

Abstract Submitted
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Stability of the Gains of the STAR Endcap Calorimeter from 2009 to 2012¹ CHAMINDU AMARASINGHE, Valparaiso University — The Solenoid Tracker at RHIC (STAR) experiment, based at Brookhaven National Laboratory's Relativistic Heavy Ion Collider, uses polarized-proton collisions to investigate sea quark and gluon contributions to the known proton spin. The STAR detector's Endcap Electromagnetic Calorimeter (EEMC) is of particular interest in this experiment because it covers a kinematic region which is sensitive to gluons carrying a low fraction of the proton momentum, where the gluon spin is almost entirely unconstrained. The EEMC is located in the intermediate pseudorapidity range, $1 < \eta < 2$, and measures the electromagnetic energy of particles produced by the collisions using a lead-scintillator sampling calorimeter. The calorimeter consists of several layers that include pre-shower, shower maximum, tower, and post-shower detectors. In these detectors, the energy gains, which convert a measured signal into an energy deposition, have been determined using data taken from the years, 2009, 2011, and 2012. A comparison of the gains from the three years will be presented.

¹For the STAR Collaboration

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