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Stability of the Gains of the STAR Endcap Calorimeter from 2006 to 2011¹ KAYLA KUTZ, Valparaiso University, STAR COLLABORATION — The Solenoid Tracker at RHIC (STAR) experiment, based at Brookhaven National Laboratory's Relativistic Heavy Ion Collider (RHIC), uses polarized-proton collisions to investigate sea quark and gluon contributions to the known proton spin. The STAR detector's Endcap Electromagnetic Calorimeter (EEMC) measures the energy of particles produced by those collisions using a lead-scintillator sampling calorimeter, consisting of several layers that include pre-shower, shower maximum, tower, and post-shower detectors. In these detectors, the energy gains, which convert a measured pulse into an energy deposition, have been determined using data taken from the years, 2006, 2009 and 2011. Changes in the gains over time may result from known high voltage changes or deterioration of the detector, such as from radiation damage. A comparison of the gains from the three years will be presented.

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