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Calibrating the STAR Endcap Calorimeter for 2012 Data and Optimizing Tower Gains for 2009 Data[1] ERIK LANGHOLZ, Valparaiso University, STAR COLLABORATION[2] — The Solenoidal Tracker at RHIC (STAR), based at Brookhaven National Laboratory, uses polarized $p + p$ collisions to investigate sea quark and gluon contributions to the proton spin. The STAR detector's Endcap Electromagnetic Calorimeter (EEMC) is of particular interest in these experiments because it covers a kinematic region of the detector 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 in the collisions using a spatially segmented lead-scintillator sampling calorimeter. Each segment, or tower, is energy-calibrated using minimum ionizing particles. Scintillator light is converted to an electric pulse whose height is proportional to the energy deposited in the tower. A gain factor that converts the pulse height to energy deposited in GeV is determined separately for each tower. An independent energy calibration method was used to fine tune the tower gains and attempt to address other potential sources of systematic uncertainty, such as pseudorapidity-dependence in the reconstructed π^0 been started. Results from the 2009 and 2012 calibrations will be presented.

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