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LED Monitoring System of the Phenix Muon Piston Calorimeter
STEVEN MOTSCHWILLER, Muhlenberg College, PHENIX COLLABORATION
— The Muon Piston Calorimeter in the PHENIX experiment at RHIC has a monitoring system consisting of LEDs and PIN diodes to calibrate out the time dependent changes to the detector. The LEDs track the temperature and radiation-damage changes to the response of the MPC, while the absolute calibration can be done using π^0 decays. To execute this, LEDs flash light through the PbWO4 crystal to the Avalanche Photo Diodes The MPC is made up of 416 independent electromagnetic calorimeter towers. By using the LEDs we can correct for changes in the gains of each tower in the MPC, on a run by run basis. Because the LED value only gives a relative measurement of the gain over time, this method of calibration can only be used in conjunction with absolute calibrations provided by π^0 decays or by minimum ionizing peaks . This work will be used to make a final measurement on Transverse energy at $\sqrt{s_{NN}} = 200$ GV in Au+Au collisions.

Steven Motschwiller
Muhlenberg College

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