

A MIP-based Energy Calibration of the STAR Endcap Electromagnetic Calorimeter

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One of the main goals of the STAR Spin Collaboration is to understand the intrinsic angular momentum of the proton. An integral part of this experiment is the Endcap Electromagnetic Calorimeter (EEMC). The EEMC is used in detecting particles produced from hard proton-proton collisions that end up in the forward direction or 'end' of the experimental apparatus. In order to use properly the data collected, the energy and position measurements in the EEMC need to be well-known. To accomplish this, an energy calibration of the EEMC was performed using minimum ionizing particles (MIPs). The important property of MIPs utilized was that they will deposit a new amount of energy into a material. Knowing the composition of the EEMC, the expected amount of energy is also known. The MIPs then deposit this energy, which is measured and compared to the expected energy. A calibration constant is then calculated from this comparison. A description of this method and the current status of the energy calibration will be presented with results.

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