Abstract Submitted
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Shower shape analysis with a Silicon-Tungsten pre-shower detector[1] NICOLE APADULA, Iowa State University, PHENIX COLLABORATION — A limitation of electromagnetic calorimeters is the position resolution due to the finite size of a shower. In order to improve the position resolution, a Si/W preshower detector was developed as an extension to the existing PHENIX Muon Piston Calorimeter (MPC) at pseudorapidity 3.1-3.8. The MPC-EX uses a dual sensitivity readout card developed to allow sensitivity to MIPs while still capturing the EM shower. The MIP response of the detector was tested with a cosmic ray setup. The MIP peak was found to be 50 channels over pedestal in the high sensitivity channels and consistent from module to module. Electromagnetic showers were measured with a dedicated electron beam at the SLAC test beam facility. The profile (width) and energy were studied as a function of depth. Results from the SLAC test beam will be presented in addition to the cosmic ray test data.

[1]PHENIX collaboration

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