

Single-Track π_0 Reconstruction with the MPC-EX at PHENIX

An algorithm has been developed for reconstructing high- p_T π_0 s at large pseudorapidities using the MPC and MPC-EX systems at PHENIX. The Muon Piston Calorimeter Extension Upgrade (MPC-EX) to PHENIX is a preshower detector located in front of the MPC, an electromagnetic calorimeter, placed at large pseudorapidity ($3.1 < \eta < 3.8$). The MPC-EX consists of alternating tungsten plates and micropattern silicon sensors. At momenta above $p \sim 20$ GeV/c, the opening angle of the π_0 decay photons becomes too small to resolve with the MPC alone. By using the MPC-EX preshower, the the decay photons of π_0 s of up to $p \sim 100$ GeV/c can be resolved. π_0 s are recognized and reconstructed by analyzing the shower shape in the MPC-EX.

Preferred Track

Electromagnetic Probes

Collaboration

PHENIX

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