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The MPC-EX Upgrade to the PHENIX Forward Spectrometers

ARBIN TIMILSINA — The PHENIX detector has been one of the primary experimental tools at the Relativistic Heavy Ion Collider (RHIC). The MPC-EX upgrade to PHENIX will complement the existing Muon Piston Calorimeter (MPC) for measurements of inclusive direct photon and hadron production at forward rapidities. The MPC-EX will make possible a study of gluon distributions in cold nuclear matter via direct photon and neutral pion measurements, and direct measurements of spin-dependent fragmentation in polarized proton-proton collisions. The detector will cover pseudorapidity from 3.8 to 3.1 and consists of a novel Si+W preshower device with pad and strip readout. In this presentation I will discuss the design of the MPC-EX detector and the latest simulation results.

Arbin Timilsina

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