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Measurement of the Invariant Yield of Electrons from the Semileptonic Decay of Heavy Flavor Mesons in p+p Collisions at sqrt_{s} = 200 GeV in the PHENIX Experiment

Heavy charm and bottom quarks are excellent probes to study the mechanisms by which colored objects lose energy in the QGP. In particular, given their different masses, the differential suppression of charm and bottom can provide important constraints on models describing energy loss mechanisms. The PHENIX experiment has previously used the micro-vertexing capabilities of its silicon vertex detector (VTX) to infer the yield of charm and bottom quarks in Au+Au collisions from measurements of both the invariant yield of heavy flavor electrons and the distance of closest approach to the collision vertex of heavy flavor electrons. This poster will describe the current effort toward the measurement of the invariant yields in the 2015 p+p collision dataset. The invariant yield is a necessary input for the separation of charm and bottom meson yields in p+p, which will provide a precise baseline for the charm and bottom meson yields in heavy ion collisions.

Preferred Track

Open Heavy Flavors

Collaboration

PHENIX

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