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Type: Poster

PHENIX Measurements of Bottom and Charm Quark Production at Mid Rapidity in p+p Collisions at $\sqrt{s} = 200$ GeV

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Heavy quarks are important probes of the properties of the Quark Gluon Plasma (QGP) produced in heavy ion collisions. At RHIC energies charm and bottom quarks are valuable as they are produced primarily in the initial collision, and not through the thermalization of the QGP. PHENIX has previously published, and shown, the invariant yields of bottom and charm quarks in Au-Au collisions at $\sqrt{s} = 200$ GeV. In order to study QGP effects a similar analysis has now been done in p+p at $\sqrt{s} = 200$ GeV, extracting a p+p baseline for the full range of 1-8 GeV in electron transverse momentum. The analysis uses Bayesian unfolding techniques applied to both an inclusive heavy flavor invariant differential cross-section and measured distance of closest approach for electron candidates to extract bottom and charm hadron invariant yields. This poster will present recent PHENIX results of bottom and charm hadrons obtained from the 2015 p+p dataset, as well as details of the analysis procedure.

Content type

Experiment

Collaboration

PHENIX

Centralised submission by Collaboration

Presenter name already specified

Presenter: ROSATI, Marzia (Iowa State University (US))

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