Contribution ID: **564** Type: **Parallel Talk**

Nuclear modification factor of charm and bottom quark yields in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the PHENIX Experiment

Tuesday, May 15, 2018 4:00 PM (20 minutes)

Experimental results at RHIC and at the LHC show the same strong suppression for light and heavy quark probes at high p_T, and a possible quark mass dependence at low p_T. More high precision measurements of separated charm and bottom are needed to quantify the dependence of medium energy loss on the quark mass.

The PHENIX Experiment measures electrons from heavy flavor decays using displaced vertex distributions at mid-rapidity $|y|$ <0.35. The nuclear modification of charm and bottom decays in the semi-electronic channel is obtained for $1 < p_T < 8$ GeV/c from the new 2015 p+p reference data and a much-improved analysis of the 2014 high statistics Au+Au data. PHENIX is also able to measure $B \rightarrow$J/ψ decays in the rapidity range $1.2 < |y| < 2.2$ for $p_T > 0$.

This presentation will report on the nuclear modification factor of separated charm and bottom yields at mid-rapidity along with the status of the forward rapidity $B \rightarrow$J/ψ analysis using the large statistics obtained during the 2014 Au+Au run.

Content type

Experiment

Collaboration

PHENIX

Centralised submission by Collaboration

Presenter name already specified

Primary author: DAVID, Gabor (Brookhaven National Laboratory)

Presenter: HACHIYA, Takashi (RIKEN)

Session Classification: Open heavy flavour

Track Classification: Open heavy flavour