Contribution ID: **356** Type: **Poster**

Measurements of charm and bottom production via semi-leptonic decays in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV by the STAR experiment

Heavy flavor quarks are suggested as excellent probes to study the strongly interacting Quark-Gluon Plasma (QGP) discovered in high-energy heavy-ion collisions. Due to their large masses, charm and bottom quarks are produced dominantly during initial hard partonic scatterings, and thus experience the entire evolution of the QGP. Measurements of heavy flavor production have advanced our understanding of the properties of the QGP.
\par The Heavy Flavor Tracker (HFT), installed at the STAR experiment since 2014, provides excellent resolution to measure the Distance of Closest Approach (DCA) between reconstructed vertices and tracks. It enables the separation of Non-Photonic Electron (NPE) produced from D- and B-meson decays. In this poster, we will show the fraction of B-meson decay contribution to inclusive NPE in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV as a function of transverse momentum. The result will be compared with both model calculations and the result from the PHENIX experiment.

Preferred Track

Open Heavy Flavors

Collaboration

STAR

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Session Classification: Poster Session