

Recent measurements on open heavy flavor at STAR

Heavy flavor quarks (c , b) are produced dominantly by the interactions of the initial incoming partons, and thus experience the entire evolution of the hot and dense medium created in high-energy nuclear collisions. Therefore, charm and bottom quarks are considered as an excellent probe to study the properties of the Quark-Gluon Plasma (QGP). In this talk, we will report recent STAR measurements of open charm hadron production through full invariant mass reconstruction (D^0 , D^\pm , D_s^+ , Λ_c^+) and open bottom hadron production through their displaced decay daughters ($b \rightarrow D^0$, e) in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. The measurements of D^0 , D^\pm , $b \rightarrow D^0$, $c/b \rightarrow e$ nuclear modification factors, D_s^+/D^0 , Λ_c^+/D^0 ratios, and D^0 , $c/b \rightarrow e$ directed, elliptic flow will be discussed in context of heavy flavor quark energy loss, transport in the QGP and final hadronization.

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