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Measurements of electron from heavy flavor decays in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR experiment SHENGHUI ZHANG, USTC/UIC, STAR COLLABORATION — Heavy quarks are predominantly produced at early stages of high-energy heavy-ion collisions due to their large masses. Studies of interactions between heavy quarks and the Quark-Gluon Plasma (QGP) can provide new insights into the properties of the QGP. In particular, the energy loss of charm quarks in the medium is expected to be smaller than that of bottom quarks due to different masses. Since heavy quarks are not directly measurable experimentally, electrons from semi-leptonic decays of heavy flavor hadrons, also known as non-photonic electrons (NPE), can serve as a proxy to the parent partons and provide access to heavy quark energy loss in the medium. In this talk, we will present the latest measurements of the nuclear modification factor (RAA) for NPE production in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV from the STAR experiment. We will also discuss the first results on separation of contributions from open charm and bottom hadron decays to NPE production via the impact parameter method utilizing the Heavy Flavor Tracker.

Shenghui Zhang
USTC/UIC

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