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Single electron measurement from heavy flavor decays in d+Auand Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV FUKUTARO KAJIHARA, Center for Nuclear Study (CNS), Graduate School of Science, University of Tokyo, PHENIX COLLABORATION — The heavy quark measurement has an important role in the investigation of extremely hot and dense matter created in relativistic heavy ion collisions. The heavy quark production may be affected by final state interactions such as their energy loss in the dense medium. On the other hand, the energy loss is predicted to be smaller than that of light quarks with high transverse momentum due to their heavy mass. The measurement of heavy quarks may indicate the flavor dependence of energy loss. For precise heavy quark measurements, the evaluation of conventional cold nuclear effects is essential. In the relativistic p+p and p+A collisions, we can study those effects since high energy density matter is not formed. Measured inclusive electrons can be categorized into two groups. The first group consists of "photonic" electrons mainly from  $\pi^0$  and  $\eta$  Dalitz decays and photon conversion. The second is termed "non-photonic" electrons. The semi-leptonic decays of charm and beauty are the dominant sources of the second group. We present the non-photonic electron measurement in the d+Au and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV by the RHIC-PHENIX experiment.

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