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The high p_T non-photonic electron measurements in $Au+Au$ collisions at $\sqrt{s} = 200$ GeV at RHIC/STAR WENQIN XU[1], University of California Los Angeles, STAR COLLABORATION — Due to their large masses, heavy flavor quarks (charm and bottom) are believed to be unique probes to the strongly-coupled QCD matter created in high energy $Au+Au$ collisions at the Relativistic Heavy Ion Collider (RHIC). When heavy flavor quarks travel through the QCD medium, they are expected to lose less energy than light flavor quarks due to the dead-cone effect, if the dominant energy loss process is gluon radiation. However, the production of non-photonic electrons (NPE) from the semi-leptonic decay of charm and bottom hadrons are suppressed at high p_T in Au+Au relative to p+p and the NPE-hadron azimuthal correlations shows a broadening on the away side. These results suggest some significant contributions from other processes to heavy flavor quark energy loss. Which then calls for a high precision measurements of NPE production in both Au+Au and p+p collisions. We will present the status of the NPE studies at midrapidity from a high statistics and low photon conversion background data set corresponding to $Au + Au$ collisions at $\sqrt{s} = 200$ GeV collected at RHIC in Run 2010.

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