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Azimuthal angular correlations between non-photonic electrons and charged hadrons from $p+p$ collisions at $\sqrt{s_{NN}}$ = 200 GeV in RHIC-STAR SHINGO SAKAI, Univ. of California, Los Angeles, STAR COLLABORATION — Heavy quarks, charm and bottom, are believed to be produced mostly via initial gluon fusion in nuclear collisions at RHIC. Heavy quark propagation through the hot and dense medium created in heavy ion collisions probes the properties of the medium. Recently a large suppression of non-photonic electrons up to a p_T of 10 GeV/c from central Au+Au collisions has been reported by STAR and PHENIX. Since both charm and bottom quarks contribute to non-photonic electron yields through semi-leptonic decays and their relative contributions are expected to be p_T dependent, it is important to experimentally determine the charm and bottom quark contributions separately. We will present azimuthal angular correlations between non-photonic electrons and charged hadrons from $p+p$ collisions at $\sqrt{s_{NN}}$ = 200 GeV in RHIC-STAR. The azimuthal angular correlations can be useful to estimate the relative D and B contributions, since the near-side correlation function width will be larger in the semi-leptonic decay of a B meson compared to a D meson, due to the larger mass of the b quark. The shapes of the correlation function at each p_T are fit with PYTHIA calculations and the relative contribution of B meson decay to the non-photonic electron yields has been extracted as a function of electron pT up to 9 GeV/c. Implications on bottom quark energy loss in the hot and dense medium will also be discussed.

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