

Abstract Submitted
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Extracting bottom quark production cross section from p+p collisions at RHIC WENQIN XU¹, University of California Los Angeles — The STAR collaboration has measured the non-photonic electron (NPE) production at high transverse momentum (p_T) at middle rapidity in $p + p$ collisions at $\sqrt{s} = 200$ GeV at the Relativistic Heavy Ion Collider (RHIC). The relative contributions of bottom and charm hadrons to NPE have also been obtained through electron hadron azimuthal correlation studies. Combining these two, we are able to determine the high p_T mid-rapidity electron spectra from bottom and charm decays, separately. PYTHIA with different tunes and FONLL calculations have been compared with this measured electron spectrum from bottom decays to extract the $b\bar{b}$ differential cross section after normalization to the measured spectrum. The extrapolation of the total $b\bar{b}$ production cross section in the whole kinematic range and its dependence on spectrum shapes from model calculations will also be discussed.

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