

Abstract Submitted
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Transverse single spin asymmetries of single electrons from open heavy flavor decay in transversely polarized p+p collisions SEISHI DAIRAKU, Kyoto University, THE PHENIX COLLABORATION — The measurements of transverse single spin asymmetries (A_N) give us a good opportunity to advance our understanding of hadron structure. A number of mechanisms based on QCD for explaining A_N have been proposed, and measurements in different processes have played complementary and important roles in attempts to understand A_N . Using the PHENIX Detector at the Relativistic Heavy Ion Collider (RHIC), we study open heavy flavour production with single electrons in transversely polarized p+p collisions. At RHIC energy, heavy flavor production is dominated by gluon fusion process, so there is no chance to observe any large transverse single spin asymmetry of single electrons from open heavy flavor decay which may be explained in terms of the Collins effect because the gluon's transversity is zero. Therefore, the measurement of transverse single spin asymmetries of single electrons from heavy flavor decay at RHIC serve as a clean probe of the gluon Sivers effect. In 2006, the PHENIX experiment has collected 2.7 pb^{-1} integrated luminosity in transversely polarized p+p collisions at $\sqrt{s}=200\text{GeV}$. Present status of the analysis of A_N of single electrons from heavy flavor decay at mid-rapidity will be presented.

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