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Transverse Single Spin Asymmetries in Heavy Flavor production in Polarized p+p Collisions at RHIC HAN LIU[1], Los Alamos National Laboratory, PHENIX COLLABORATION — The measurement of transverse single spin asymmetries (A_N) at high energies gives us an opportunity to probe the quark and gluon structure of transversely polarized nucleons. At RHIC energy, heavy flavor production is dominated by gluon-gluon fusion, so the Collins effect has minimum impact on A_N as the gluon's transversity is zero. The measurement of A_N in heavy flavor production is uniquely sensitive to the gluon Sivers distribution which is related to the orbital angular momentum of gluons inside the polarized protons, thus allowing the first ever probe of the gluon's angular momentum contribution to the proton's spin. The PHENIX experiment has collected 2.7 pb^{-1} data in transversely polarized p+p collisions at $\sqrt{s}$=200GeV in 2006 run. Results for J/ψ and open heavy flavor A_N at forward rapidity will be presented.

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