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**Transverse Single Spin Asymmetries in  $J/\psi$  Production in Proton-Proton Collisions** OLEG EYSER, Brookhaven National Laboratory, PHENIX COLLABORATION — The PHENIX collaboration previously reported the first measurements of transverse single spin asymmetries in  $J/\psi$  production in proton-proton collisions at center-of-mass energies of 200 GeV at the Relativistic Heavy Ion Collider [Phys. Rev. D 86, 099904(E), 2012]. The measurement was in part performed in the rapidity range of  $1.2 < |\eta| < 2.2$  for transverse momenta up to 6 GeV/ $c$ .  $J/\psi$  production at such energies is dominated by processes involving gluons inside the proton, and the observed transverse single spin asymmetries of the  $J/\psi$  can therefore provide access to the dynamics of the initial-state gluons. We will present the latest and complementary results from the recent 2012 data set and discuss their possible implications for the underlying physics processes.

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