Abstract Submitted
for the DNP19 Meeting of
The American Physical Society

Investigating Nucleon Structure and Hadronization with Hadrons in Jets at STAR[1] JAMES DRACHENBERG, Abilene Christian University, STAR COLLABORATION — The STAR collaboration at RHIC provides insight into the spin structure of the nucleon through collisions of longitudinally and transversely polarized beams of protons. Spin-dependent azimuthal distributions of hadrons within jets from transversely polarized proton collisions provide access to the transversity distribution function at a range of x complementary to semi-inclusive deep inelastic scattering (SIDIS) experiments but at a much higher range of Q^2. Asymmetries from STAR data collected in 2011 at $\sqrt{s} = 500$ GeV and in 2012 at 200 GeV give the first experimental hints that the universality of this "Collins mechanism" may extend to proton-proton collisions, as it does in SIDIS and e^+e^-. The STAR data also provide unique insight to the in-jet transverse momentum dependence of the Collins asymmetry, crucial for a deeper understanding of the Collins fragmentation function. The final 2011 and preliminary 2012 STAR hadron-in-jet data will be presented and discussed in context with recent global transversity analyses and model calculations.

[1]Supported under US Department of Energy Grant DE–FG02–03ER41243

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Date submitted: 24 Jun 2019 Electronic form version 1.4