

Abstract Submitted
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Transverse single-spin asymmetries for direct photon and neutral pion production in midrapidity at PHENIX NICOLE LEWIS, Univ of Michigan - Ann Arbor, PHENIX COLLABORATION — Large transverse single spin asymmetries for hadron production in proton-proton collisions were some of the first indicators of significant nonperturbative spin-momentum correlations in the proton. They have been found to persist up to collision energies of 510 GeV, yet their origin remains poorly understood. Measurements of different final-state particles in a wide variety of collision systems over a range of kinematics can help to identify and separate contributions from the proton versus hadronization, and from different parton flavors. Depending on the rapidity pion production can provide access to both initial- and final-state effects for a mix of parton flavors, while direct photons depend only on initial-state effects and are particularly sensitive to gluon dynamics in RHIC kinematics. The status of transverse single spin measurements for neutral pions and direct photons performed for p+p, p+Al, and p+Au collisions at PHENIX will be presented.

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