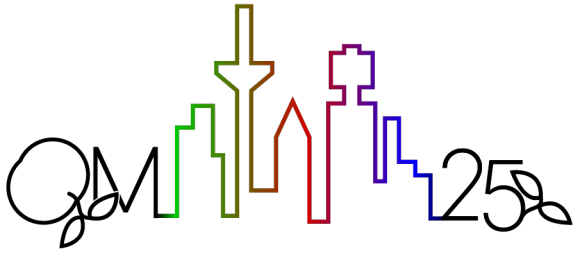

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sPHENIX measurement of neutral meson transverse single spin asymmetry in high-statistics polarized p+p collisions

The sPHENIX experiment is a next-generation collider detector at RHIC designed for rare jet and heavy flavor probes of polarized p+p collisions. The experiment includes a large-acceptance, granular electromagnetic calorimeter (EMCal) and very high-rate data acquisition plus trigger system. In RHIC Run-24, sPHENIX sampled 107/pb of transversely polarized p+p collision data at 200 GeV using an efficient high-p_T photon trigger. This dataset represents a nearly-tenfold increase of the luminosity times acceptance compared to previous EMCal-based datasets for this collision energy. This talk presents measurements of the transverse single spin asymmetry for neutral pions and η mesons in the two-photon decay channel over a significantly extended kinematic range compared to previous measurements at RHIC. For the η meson, the decay photons remain well-separated in the granular EMCal out to very high p_T.

Category

Experiment

Collaboration (if applicable)

sPHENIX Collaboration

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