Recent Developments in Transverse Spin Physics at RHIC
JAMES DRACHENBERG, Lamar University

For decades, an enduring conundrum has been the origin of large azimuthal asymmetries in the production of hadrons from interactions involving a single beam of transversely spin-polarized protons. While the origins remain a mystery, theoretical and experimental engagement of this challenge has unlocked tantalizing opportunities for new insight into nucleon structure and more expansive formulations of pQCD, e.g. including transverse-momentum dependent parton densities (TMDs). The RHIC experiments continue this exploration through measurements of observables sensitive to the transversity, Sivers, and Collins functions in high-energy polarized-proton collisions. Recent breakthroughs may illuminate further longstanding questions: Do hadronic interactions paint the same picture as those seen in semi-inclusive deep-inelastic scattering? How do TMDs evolve with changing kinematics? Beyond existing probes, future measurements will enable even wider frontiers in understanding pQCD and nucleon structure.