



Contribution ID: 332

Type: not specified

Illuminating Nucleon Structure Through Polarized Proton-Proton Collisions at STAR

Wednesday, 5 April 2017 16:00 (20 minutes)

During the past decade, the experiments of the RHIC spin program have provided critical insight into the spin structure of the nucleon, in particular, shedding light on the roles played by gluon and sea-quark helicity. In the forthcoming RHIC run, attention will be devoted to transverse-spin phenomena. Over the last decade, theoretical and experimental engagement of this oft-challenging subject has unlocked tantalizing opportunities for new insight into nucleon structure, e.g. with higher dimensions in partonic momentum space. The STAR experiment continues this exploration through an array of measurements from high-energy polarized-proton collisions. Among these studies are the production of weak bosons, azimuthal distributions of hadrons within jets, dihadron correlations, and particle production at large pseudorapidity. Recent breakthroughs may illuminate further longstanding questions: Do factorization and universality extend to the transverse-momentum-dependent (TMD) picture in proton-proton collisions? How do TMD functions evolve with changing kinematics? Beyond existing probes, future measurements will enable even wider frontiers in understanding QCD and nucleon structure.

Author: Dr DRACHENBERG, James (Lamar University)

Presenter: Dr DRACHENBERG, James (Lamar University)

Session Classification: WG6 Spin and 3D Structure

Track Classification: WG6) Spin and 3D Structure