

Polarised Drell-Yan results from COMPASS

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The COMPASS experiment at CERN is one of the leading experiments studying the nucleon spin structure. Until 2012 the Parton Distribution Functions and the Transverse Momentum Dependent Parton Distribution Functions (TMDs) were extensively studied at COMPASS using Semi-Inclusive Deep Inelastic Scattering measurements. In 2015, the Drell-Yan measurements with a negative pion beam interacting with a transversely polarized ammonia target have started and will be continued through 2018. The goal is to access the TMDs of both pions and protons without any prior knowledge about fragmentation functions. Since the Drell-Yan data cover the same kinematic region of the semi-inclusive data, COMPASS has the unique opportunity to test the sign change of the Sivers TMD as predicted by QCD. In this talk the first measurement of spin dependent azimuthal asymmetries in the pion induced Drell-Yan process will be presented. These asymmetries, which are related to the convolution of pion and nucleon TMDs, are extracted from pairs of oppositely charged muons with invariant masses between 4.3 GeV^2 and 8.5 GeV^2

Summary

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