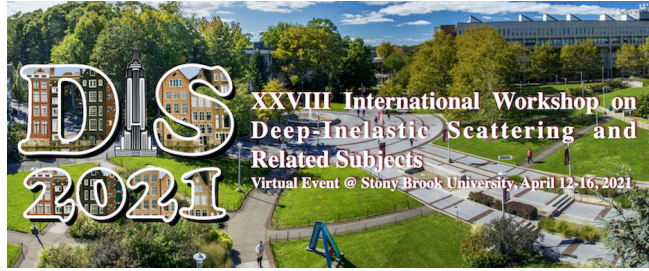


# XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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## Transverse spin asymmetries for inclusive $\rho^0$ production in SIDIS at COMPASS

*Thursday, 15 April 2021 12:51 (18 minutes)*

Studying the partonic and spin structure of the nucleon via Semi-Inclusive measurements of DIS (SIDIS) is one of the most important objectives of the COMPASS experiment (CERN, SPS). Nucleon spin (in)dependent azimuthal asymmetries accessible in single-hadron and hadron-pair production in SIDIS encode information on both the partonic structure of the nucleon and the fragmentation process. Production of vector mesons in SIDIS is a particularly interesting channel to study the polarized fragmentation and related phenomena. In this talk preliminary COMPASS results for the first ever measurement of inclusive  $\rho^0$  transverse-spin asymmetries will be shown for the first time.

The analysis is based on the data-set collected by COMPASS in 2010 using a 160 GeV/c  $\mu^+$  beam and a transversely polarized  $NH_3$  target.

The asymmetries are extracted as function of Bjorken- $x$ , total transverse momentum of the hadron pair and the energy fraction carried by the pair.

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