Abstract Submitted
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Pion-induced Drell-Yan process with polarized protons[1] SAMAN BASTAMI, Department of Physics, University of Connecticut, LEONARD GAMBERG, Division of Science, Penn State Berks, BAKUR PARSAMYAN, Dipartimento di Fisica, Universit degli Studi di Torino, BARBARA PASQUINI, Dipartimento di Fisica, Universit degli Studi di Pavia, ALEXEI PROKUDIN, Division of Science, Penn State Berks, PETER SCHWEITZER, Department of Physics, University of Connecticut — Our calculations for all leading twist structure functions describing the pion induced Drell-Yan process will be presented. In this work the light-front constituent quark model, the spectator model, and available extractions from the experimental data are used as input for the non-perturbative transverse momentum dependent parton distribution functions (TMDs). These TMDs are evolved to the scale of COMPASS Drell-Yan measurements by implementing the TMD evolution at Next-to Leading Logarithmic precision for the first time for all asymmetries. Our results show compatibility with the first experimental information, help to interpret the data from ongoing experiments, and will allow to quantitatively assess the models in future when more precise data will become available.

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