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New measurement of transverse spin effects in hadron production from muon-deuteron semi-inclusive DIS at COMPASS

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One of the main objectives of extensive physics program of COMPASS experiment has been to conduct measurements of target-spin asymmetries in semi-inclusive (di-)hadron production in Deep Inelastic Scattering of high-energy muons off polarized targets. In 2022, the latest semi-inclusive DIS measurements were performed using a transversely polarized deuteron target and a 160 GeV/c muon beam. These new measurements complement existing data obtained with transversely polarized proton targets, playing a key role in constraining the d-quark transversity and Sivers functions.

This talk will present initial results based on approximately two-thirds of the newly collected 2022 data.

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