

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

Saturday 20 July 2024 14:30 (15 minutes)

COMPASS is the longest-running experiment at CERN, having performed a series of data takings from 2002 to 2022, spanning a record-breaking 20 years.

One of the objectives of the experiment's broad physics program was to perform semi-inclusive measurements of target spin-dependent asymmetries in (di-)hadron production in DIS using 160 GeV muons and polarized targets.

These measurements provide access to the spin structure of the nucleon, which is described in terms of transverse momentum-dependent parton distribution functions. The most recent measurements were performed in 2022 using a transversely polarized deuteron target.

These measurements play a crucial role in constraining the transversity and Sivers functions of the d quark.

The talk will present the recent COMPASS results from the 2022 run.

Alternate track

I read the instructions above

Yes

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