

Transverse spin physics at COMPASS

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The study of transverse spin effects is part of the scientific program of COMPASS, a fixed target experiment at the CERN SPS. COMPASS investigates the transversity PDF in semi-inclusive DIS, using a longitudinally polarized muon beam of 160 GeV/c impinging on transversely polarized nucleons.

From 2002 to 2004, a ^6LiD target has been used; in these data transversity has been measured using different quark polarimeters: azimuthal distribution of single hadrons, azimuthal dependence of the plane containing hadron pairs, and measurement of transverse polarization of baryons (λ hyperons).

All the asymmetries have been found to be small, and compatible with zero, a result that has been interpreted as cancellation between the u and d-quark contribution in the deuteron.

Complementary information on transverse spin effects will be obtained analyzing the data taken by COMPASS in 2007 using a NH_3 target.

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