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Latest Hermes results on azimuthal single- and double-spin asymmetries in semi-inclusive deep-inelastic scattering by transversely polarized protons

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Azimuthal single- and double-spin asymmetries measured at Hermes in semi-inclusive leptoproduction of pions, charged kaons, protons, and antiprotons from a transversely polarized hydrogen target are presented. The results of a re-analysis of the previously published Collins and Sivers asymmetries, extended to include protons and antiprotons as well as an extraction in a multi-dimensional binning and enlarged phase space, is reported along with the corresponding results for the remaining single- and double-spin asymmetries associated to the semi-inclusive deep-inelastic scattering process with a transversely polarized target. Among those results, significant non-vanishing $\cos(\ - _s)$ modulations provide evidence for a sizable worm-gear distribution g_{1T}. Most of the other modulations are found to be consistent with zero with the notable exception of large $\sin(\ _s)$ modulations for charged pions and positively charged kaons.

In-person participation

No

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