

Probing polarized fragmentation functions in unpolarized collisions

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We briefly report our recent progress on the study of the polarized fragmentation functions of Λ hyperon in unpolarized semi-inclusive deep-inelastic scatterings and electron-positron annihilations at not-so-high energies. In particular, we present a simple but practical method on how to measure the azimuthal-angle-dependent longitudinal polarization and the transverse polarization inside the production plane and bridge these observables to the corresponding structure functions and fragmentation functions at the leading twist. Our work diversifies the high energy reactions that can probe the polarized fragmentation functions.

References

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- (2) K.B. Chen, Z.T. Liang, Y.L. Pan, Y.K. Song, S.Y. Wei. Phys.Lett.B816, 136217. (2021)

Primary author: WEI, Shu-yi (Shandong University)

Presenter: WEI, Shu-yi (Shandong University)

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