

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Spin Transfer to Lambda Hyperons at CLAS12

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Using the self-analyzing decay of the Λ , the longitudinal spin transfer $D_{LL'}$ to the hyperon from a polarized electron beam scattering off an unpolarized proton target can be determined. For Λ s produced in the current fragmentation region, this quantity is proportional to the helicity dependent fragmentation function G_1^Λ and can provide insight into the spin structure of the Λ . Currently, limited experimental data on $D_{LL'}$ cannot discriminate between different models of Λ spin structure. This contribution reports on the measurement of the longitudinal spin transfer using data taken by the CLAS12 spectrometer at Jefferson Lab with a 10.6 GeV polarized electron beam. We also report on status of the ongoing analysis of spin transfer and back-to-back hadron correlations with target fragmentation Λ s.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

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