

Flavor dependence of Lambda polarized fragmentation functions

Saturday, 26 April 2025 09:20 (20 minutes)

Sparked by measurements of the transverse polarization of Λ by Belle, much efforts are devoted to the study of the polarized Λ TMD fragmentation function (TMDFF) $D_{1T,q}^{\perp\Lambda}$. Several questions, such as the isospin symmetry and gluonic contributions, remain unsolved due to limited range of experimental data. Inspired by the upcoming measurements of Λ transverse polarization in pp/pA/AA collisions, we develop a framework of global analysis of $D_{1T,q}^{\perp\Lambda}$ at NLO precision, with stringent controls over the uncertainties caused by the approximations in CS evolution. We perform a proof-of-principle calculations with the framework and refine our previous parametrizations on $D_{1T,q}^{\perp\Lambda}$.

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Session Classification: 分会场三