

Polarized TMD FFs

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In this talk I will review our recent efforts to understand the polarized Transverse-Momentum-Dependent fragmentation functions (TMD FFs). Recent BELLE results on $\Lambda/\bar{\Lambda}$ polarization in e^+e^- -annihilations stimulate a series of progress from several groups to understand the polarized TMD FF D_{1T}^\perp . Based on the fundamental isospin symmetry of QCD, we propose a new parametrization and apply it into e^+e^- -annihilation, semi-inclusive DIS and also hadron/nucleus collisions. The isospin symmetry and further flavor structures of D_{1T}^\perp is thoroughly investigated, and several predictions for observables in current and future facilities are presented. We further study the weak decay contributions to the parity-violating TMD FFs, which cause several non-negligible effects.

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