XX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Testing NRQCD factorization with J/psi yield and polarization at NLO

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We study the polarization observables of J/ψ hadroproduction at NLO in NRQCD, including the ${}^{3}P_{J}^{[8]}$ channel. Exploiting the color-octet long-distance matrix elements previously extracted through a global fit to unpolarized J/ψ production data, we provide theoretical predictions in the helicity and Collins-Soper frames and compare them with data from CDF and ALICE. The notorious CDF J/ψ polarization anomaly familiar from leading-order analyses persists at the quantum level, while the situation looks promising for the LHC.

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