

Determination of Baryon LCDAs from Lattice QCD

The lattice QCD computation of parton distributions within the framework of large momentum effective theory (LaMET) constitutes a first-principles approach to studying hadron structures. Building upon preceding studies, we have developed and partly implemented lattice methodologies for calculating the leading twist LCDAs of light baryons under the LaMET formalism over the past few years. In this talk, we will introduce our series of works on the ab initio determination of baryon LCDAs and present preliminary numerical results for the leading-twist LCDAs of light baryons (Lambda and proton). We will also report some techniques developed recently to address the more complicated baryonic systems comparing to the mesons, including special operator selections, the hybrid renormalization scheme, and Fourier inversion strategies.

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