

Extracting Meson Distribution Amplitudes from Nonlocal Euclidean Correlations at Next-to-Next-to-Leading Order

Light-cone distribution amplitudes (DAs) describe the longitudinal momentum structure of quarks inside mesons and play a central role in exclusive QCD processes and precision flavor physics. As intrinsically non-perturbative quantities, their reliable determination from first principles has long been a major challenge. In this talk, I will review recent progress in extracting light meson DAs from lattice QCD within the LaMET framework. I will present the first complete NNLO matching kernel and discuss its numerical impact in reducing perturbative uncertainties and improving the precision of lattice determinations.

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