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Iso-vector transversity quark distributions from lattice QCD

Tuesday, 11 September 2018 15:20 (25 minutes)

Using the quark quasi-distribution approach, we present the first direct calculation of the transversity parton distribution function within the nucleon from lattice QCD. The calculation is performed using simulations with the light quark mass fixed to its physical. We employ non-perturbative renormalization to subtract the linear and log divergences present in the bare matrix elements, and a
matching formula to extract the light-cone PDFs from the quasi PDFs. Final results are presented in the MS scheme at a scale of $\sqrt{2}$ GeV.

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