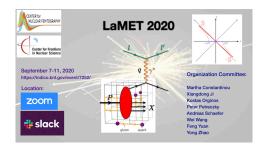
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Matching for the twist-3 PDFs $g_T(x)$, e(x) and $h_L(x)$: success or failure?

Friday 11 September 2020 10:30 (30 minutes)

The perturbative procedure of matching within Large Momentum Effective Theory connects the quasi-parton distributions to the light-cone distributions that enter physical processes. This procedure has demonstrated success in the extraction of the twist-2 PDFs from lattice QCD. We explore the formalism of matching, for the first time, for the twist-3 PDFs $g_T(x)$, e(x) and $h_L(x)$. We make several non-trivial observations, all of which arise from the presence of singular zero-mode contributions in the perturbative results of the light-cone and quasi-PDFs. While matching seems possible for $g_T(x)$, zero-mode contributions could pose a challenge for the matching in the case of e(x) and $h_L(x)$.

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