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Zero modes and Matching for the twist-3 PDFs

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Quasi-PDF approach, proposed by Ji in 2013, has made it possible to directly extract light-cone PDFs from lattice QCD. This approach relies on the extraction of matrix elements of space-like operators for fast-moving hadrons. Quasi-PDFs can be related to the light-cone PDFs through a perturbatively calculable matching coefficient. We explore the formalism of matching, for the very first time, for the twist-3 PDFs $g_T(x)$, $e(x)$ and $h_L(x)$. In this talk, we address the non-trivialities involved in the extraction of the matching coefficient due to the presence of the zero-mode contributions.

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