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One-loop renormalization of quark TMD in the light-cone gauge: Collins-Soper-Sterman evolution

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We calculate the one-loop corrections to the quark TMD in the light-cone gauge using the background field formalism, with the Mandelstam-Leibbrandt (ML) prescription for the extra singularity present in the light-cone gauge propagator. We use the pure rapidity regulator for rapidity divergences. The Collins-Soper-Sterman (CSS) evolution equations are obtained from the one loop renormalization of the quark TMD.

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