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Intrinsic soft function in the Coulomb-gauge approach

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At large hadron momentum, quasi-transverse-momentum-dependent distributions (quasi-TMDs) defined from Coulomb-gauge correlators can be expanded and perturbatively matched to the light-cone TMDs up to the subtraction of an intrinsic soft function. In this talk, I will discuss the derivation of the operator definition of this soft function, as well as the method to extract it from a meson form factor on the lattice. The results obtained from our recent lattice calculation at next-to-leading order shows reasonably good agreement with perturbation theory at short transverse separations and a slower-than-Gaussian decay in the non-perturbative region.

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