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Latest results on the factorization of single-inclusive e^+e^- annihilation

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The thrust distribution associated with single-inclusive e^+e^- annihilation (SIAthr), sensitive to the transverse momentum of the detected hadron with respect to the thrust axis, represents one of the most challenging and promising case where to extend the TMD factorization beyond the standard processes. At present days, its factorization properties have been studied through two different approaches, based on SCET framework and CSS formalism respectively.
The two approaches show some tension in the results associated with the kinematic region in the bulk of the phase space, while they agree at its boundaries.
Clarifying the origin of such differences is one of the main aims of this talk. In particular, I will point out how the discrepancies are due to non-perturbative effects, so that the perturbative QCD alone leads blindly to a unique answer. The factorization theorem is then presented at NNLL in thrust and transverse momentum, properly addressing the correlation among these (measured) variables and the rapidity divergences regulator.

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