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Next-to-leading power factorization in threshold DY production

Thursday 12 September 2019 10:00 (25 minutes)

Soft Collinear Effective Theory (SCET) formalism has been successfully applied to a number of important observables in collider physics improving the accuracy of fixed-order predictions via the leading power resummation of large logarithmic contributions which appear in certain regions of phase space. Recently, a renewed interest in subleading power corrections has arisen in the theoretical community. In this talk, I will discuss the framework for the threshold resummation of the Drell-Yan process and Higgs production via gluon fusion at next-to-leading power using SCET. I will prove the general factorisation formula and explain the new objects that emerge beyond leading power: collinear jet functions and generalized soft functions. The ingredients necessary to perform leading logarithmic resummation at next-to-leading power will be shown and I will present selected fixed order results.

Authors: BENEKE, Martin (Technische Universitaet Muenchen (DE)); Mr JASKIEWICZ, Sebastian (Technical University of Munich); VERNAZZA, Leonardo (Nikhef and University of Amsterdam); BROGGIO, Alessandro

Presenter: Mr JASKIEWICZ, Sebastian (Technical University of Munich)

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