Particle Physics Challenges



Contribution ID: 54 Type: **not specified**

Resummation at next-to-leading power

Wednesday 26 September 2018 18:45 (15 minutes)

In the last few years, the resummation of large logarithmic contributions up to next-to-next-to-next-to-leading logarithm has been performed for a number of observables within Soft Collinear Effective Theory (SCET). This formalism has been successful at improving theoretical predictions for several important observables in collider physics. One of the first examples is threshold resummation in Drell-Yan production and more recently N-jettiness. In this talk, the framework for threshold resummation in Drell-Yan production at subleading power within the position space SCET formalism will be demonstrated. I will present the general factorisation formula and explain the contributing ingredients focusing on the power suppressed effects and new features which enter the factorisation at next-to-leading power. I will also discuss the resummation of power suppressed logarithms.

Primary authors: Dr BROGGIO, Alessandro (TUM); Dr WANG, Jian (TUM); Dr VERNAZZA, Leonardo (NIKHEF); Prof. BENEKE, Martin (TUM); Dr GARNY, Mathias (TUM); Dr SZAFRON, Robert (Technical University of Munich); Mr JASKIEWICZ, Sebastian (Technische Universität München)

Presenter: Mr JASKIEWICZ, Sebastian (Technische Universität München)

Session Classification: Parallel Session: Pheno 3

Track Classification: Particle Phenomenology