14th MCnet Meeting



Contribution ID: 2

Type: not specified

A framework for second-order parton showers

Friday, 25 November 2016 09:30 (15 minutes)

A framework is presented for including second-order perturbative corrections to the radiation patterns of parton showers. The formalism allows to combine $O(\alpha_s^2)$ -corrected iterated 2 \rightarrow 3 kernels for "ordered" gluon emissions with tree-level 2 \rightarrow 4 kernels for "unordered" ones. The combined Sudakov evolution kernel is thus accurate to $O(\alpha_s^2)$. As a first step towards a full-fledged implementation of these ideas, we develop an explicit implementation of 2 \rightarrow 4 shower branchings in this letter.

Primary author: LI, Haitao (Monash)Presenter: LI, Haitao (Monash)Session Classification: Student and Postdoc Talks