

# Resummation of double-differential cross sections

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## Abstract content

LHC measurements involve cuts on several observables. Some lead to widely separated energy scales and require resummation. I will present an extension of SCET which enables the resummation of a class of double-differential measurements. Two prototypical applications are 1)  $pp \rightarrow Z + 0$  jets, where the jet veto is imposed through the beam thrust event shape  $T$ , and the transverse momentum  $p_T$  of the  $Z$  boson is measured and 2) the measurement of two angularities on a single jet. For the second application, the resummation on the two phase space boundaries was achieved recently (Larkoski, Moulton, Neill, 2014). I will show how to go beyond this by identifying the factorization formula needed to achieve resummation in the intermediate regime, which involve additional collinear-soft modes. Numerical results for the resummed double-differential cross section will be presented.

## Summary

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