

QCD@LHC2022

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Beyond threshold resummation for Drell-Yan and Higgs productions at the LHC

Thursday 1 December 2022 11:20 (30 minutes)

We present a formalism that sums up the soft-virtual (SV) and next-to-SV (NSV) diagonal contributions to inclusive production of colorless particle in hadron colliders to all orders in perturbative QCD. We use the factorization theorem and renormalization group invariance as well as employing the transcendental structure of perturbative results to obtain the resummed result. Using this we predict certain SV and NSV terms to all orders from lower order information. We also present an integral representation for the coefficient functions that is suitable for Mellin N-space resummation. The phenomenological impact of our results on Drell-Yan and Higgs productions at the LHC is discussed.

Declaration

I certify that I have checked that I am authorised to submit the abstract with the listed co-authors with their current affiliations

Change of Speaker

I understand that change of speaker is allowed provided that no participant gives more than one talk. Otherwise, we will ask the speaker to choose between one or the other abstract to be presented.

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