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Resummation of High Order Corrections in Higgs Boson Plus Jet Production at the LHC

Monday, 9 May 2016 15:15 (15 minutes)

I will talk about the effect of multiple parton radiation to Higgs boson plus jet production at the LHC, by applying the transverse momentum dependent (TMD) factorization formalism to resum large logarithmic contributions to all orders in the expansion of the strong interaction coupling. I will show that the transverse momentum distribution of the Higgs boson, particularly near the lower cut-off applied on the jet transverse momentum, can only be reliably predicted by the resummation calculation which is free of the so-called Sudakov-shoulder singularity problem, present in fixed-order calculations.

Summary

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