

Associated production of a top pair and a Higgs/W/Z boson at the LHC to NNLL accuracy

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I am going to present some recent results on the resummation of soft gluon emission corrections to the production of a top-antitop pair in association with a Higgs/W/Z boson at the Large Hadron Collider. First I will introduce and describe the derivation of the soft-gluon resummation formula for these processes. Based on this formula, we developed a dedicated parton-level Monte Carlo program. This tool has been used to calculate the total cross section along with differential distributions in order to study the phenomenological impact of the resummation to next-to-next-to-leading logarithmic (NNLL) accuracy. We found that these corrections increase the total cross section and the differential distributions with respect to NLO calculations of the same observables.

Primary author: BROGGIO, Alessandro (Technische Universitaet Muenchen)

Presenter: BROGGIO, Alessandro (Technische Universitaet Muenchen)

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