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The next-to-leading order Higgs impact factor in the infinite top-mass limit

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We present a full NLO result for the forward Higgs boson impact factor, obtained in the infinite top-mass limit. We discuss problems associated with a high-energy computation in the presence of the Higgs-gluons effective vertex.

This impact factor is a key ingredient to describe the inclusive hadroproduction of a forward Higgs in the limit of small Bjorken x , as well to study inclusive forward emissions of a Higgs boson in association with a backward identified object.

Lastly, a possible extension of this calculation to the case of Higgs impact factor via gluon fusion in the central-rapidity region, is also discussed.

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