

Abstract Submitted
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Heavy-quark mass treatment for deep inelastic scattering at N3LO level KEPING XIE, Southern Methodist University, BOWEN WANG, Jefferson Lab, PAVEL NADOLSKY, Southern Methodist University — We apply Intermediate-mass (IM) scheme to the inclusive massive quarks production through neutral current deep inelastic scattering (DIS) at 3-loop level (N3LO). In IM scheme, we treat the heavy-quark with realistic heavy-flavor quark kinematics combining with zero-mass (ZM) hard cross section formalism. The result presented here can be extended to the general-mass (GM) factorization scheme calculations when the N3LO mass-dependent DIS matrix elements come out. This generic implementation can be used in the predictions for Higgs, and W and Z cross sections measured at the LHC.

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