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## Next-to SV resummed Drell-Yan cross section beyond leading-logarithm

We present the resummed predictions for inclusive cross-section for Drell-Yan (DY) production up to next-to-next-to-leading logarithmic (NNLL) accuracy taking into account both soft virtual (SV) and next-to SV (NSV) threshold logarithms. We restrict ourselves to resummed contributions only from quark anti-quark initiated channels. The resummation is performed in Mellin-N space. We derive the N-dependent coefficients and the N-independent constants to the desired accuracy for our study. The resummed results are matched through the minimal prescription procedure with the fixed order results. We find that the resummation, taking into account the NSV terms, appreciably increases the cross-section while decreasing the sensitivity to the renormalization scale. We observe that, at 13 TeV LHC energies, the SV+NSV resummation at NLL (NNLL) gives about 8% (2%) corrections respectively to the NLO (NNLO) results for the considered Q range: 150-3500 GeV. In addition, the absence of quark gluon-initiated contributions to NSV part in the resummed terms leaves large factorization scale dependence indicating their importance at NSV level. We also study the numerical impact of N-independent constants and explore the ambiguity involved in exponentiating them. Finally, we present our predictions for the neutral Drell-Yan process at various center of mass of energies.

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