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Low-mass Drell-Yan production at the LHC; and treatment of the infrared region in pQCD

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Summary

Predictions of low-mass Drell-Yan production at the LHC are known to depend sensitively on the choice of factorization and renormalization scales. The sensitivity can be greatly reduced by fixing the factorization scale of the LO contribution using the known NLO matrix element. So LHC experiments can make direct measurements of PDFs for very low x. A spin-off of this study highlights some problems of the treatment of the infrared region in perturbative QCD.

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