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Resummation of super-leading logarithms in top-antitop production

Thursday 11 September 2025 15:07 (22 minutes)

It is well known that jet cross sections at hadron colliders receive double-logarithmic corrections, also referred to as super-leading logarithms. These corrections arise from two Glauber gluon interactions between the colliding partons. For processes involving massive final states, such as top-antitop production, additional sources of double logarithms emerge due to non-trivial singularities associated with the massive particles. We outline the procedure for determining the relevant color structures, resumming these new double logarithms, and study their magnitude relative to the usual super-leading logarithms from Glauber exchange.

Track

6: Heavy Quarks (including top and flavour physics)

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Session Classification: Heavy Quarks (including top and flavour physics)