

# Analytical and numerical approaches to (N)LL resummation

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While large logarithms arising from the IR structure of QCD can be resummed to higher logarithmic accuracy for specific observables, numerical calculations based on parton showers are formally correct to LL only. However, they incorporate additional effects like local momentum conservation, which are beyond this formal accuracy. As a first step towards a quantitative study of these effects, a final state parton shower is constructed which implements the exact NLL result for certain observables. It is then used to obtain a detailed comparison of the numerical size of approximations made in analytic NLL calculations.

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