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Summing threshold logs in a parton shower. (English) Zbl 1390.81364
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Summary: When parton distributions are falling steeply as the momentum fractions of the partons increases, there are effects that occur at each order in α_s that combine to affect hard scattering cross sections and need to be summed. We show how to accomplish this in a leading approximation in the context of a parton shower Monte Carlo event generator.

MSC:

81T15 Perturbative methods of renormalization applied to problems in quantum field theory

Keywords:

perturbative QCD; resummation

Software:

FastJet; HERWIG 5.1; Herwig++; SHERPA

Full Text: [DOI](#)

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