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## Forward jets and energy flow in hadron-hadron collisions

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At the Large Hadron Collider (LHC) it will become possible for the first time to investigate experimentally the forward region in hadron-hadron collisions via high- $p_T$  processes. In the LHC forward kinematics QCD logarithmic corrections in the hard transverse momentum and in the large rapidity interval may both be quantitatively significant. The theoretical framework to resum consistently both kinds of logarithmic corrections to higher orders in QCD perturbation theory is based on QCD high-energy factorization. We present predictions in this framework for forward jet production, focusing on correlations between one forward and one central jet. Next we compute energy flow observables in the rapidity region between the jets and in the outside region. We finally analyze the role of parton-showering effects in the forward region arising from large-angle multi-gluon radiation, and discuss the potential impact of such studies on the modeling of multi-parton interactions.

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