

A comparative study of small x Monte Carlos with and without QCD coherence effects

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We compare two Monte Carlo implementations of resummation schemes for the description of parton evolution at small values of Bjorken x. One of them is based on the BFKL evolution equation and generates fully differential parton distributions in momentum space making use of reggeized gluons. The other one is based on the CCFM partonic kernel where QCD coherence effects are introduced. It has been argued that both approaches agree with each other in the $x \rightarrow 0$ limit. We show that this is not the case for azimuthal angle dependent quantities since at high energies the BFKL approach is dominated by its zero conformal spin component while the CCFM gluon Green function receives contributions from all conformal spins even at very small x.

Summary

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