

Numerical solutions to the Balitsky-Kovchegov evolution equation

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The high energy limit of QCD can be studied using the Deep inelastic scattering (DIS) at small Bjorken- x . Under these circumstances the gluon density rapidly increases. However the increase is eventually tamed by recombination, as the experimental data suggest us, which leads to the effect called parton saturation. To predict the cross-section of DIS we need to determine the cross-section of the dipole scattered off the hadron. Using numerical solution of the so called Balitsky-Kovchegov evolution equation we can obtain the dipole scattering amplitude, which depends on the above mentioned effects, and therefore predict the cross-sections of wide range of processes.

Primary author: BENDO VÁ, Dagmar (CTU FNSPE)

Presenter: BENDO VÁ, Dagmar (CTU FNSPE)

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