

A study on the solutions of GLR-MQ non-linear evolution equations

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In the high energy regime, the proton structure consists of a very large number of parton that interact with each other according to the theory of strong interactions, Quantum Chromodynamics (QCD). Through QCD, the number of partons in the proton is described by equations of parton evolution that depend on kinematic variables. These equations can be linear, the DGLAP equations, and nonlinear, the equations GLR-MQ. We have studied some analytical solutions of the equations of parton evolution. In order to generate the preliminary results, we used an ansatz for the solution of the parton distributions functions (PDFs). As future work, we will use the Laplace transform method to solve the non-linear equations.

Summary

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