

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Running coupling and pomeron loop effects on inclusive and diffractive DIS cross sections MARIA BEATRIZ GAY DUCATI¹, Universidade Federal do Rio Grande do Sul, EMMANUEL DE OLIVEIRA, Universidade de São Paulo, JOÃO THIAGO DE SANTANA AMARAL, Universidade Federal de Pelotas — Within the framework of a (1+1)–dimensional model which mimics high energy QCD, we study the behavior of the cross sections for inclusive and diffractive deep inelastic scattering cross sections. We analyze the cases of both fixed and running coupling within the mean field approximation, in which the evolution of the scattering amplitude is described by the Balitsky-Kovchegov equation, and also through the pomeron loop equations, which include in the evolution the gluon number fluctuations. In the diffractive case, similarly to the inclusive one, the suppression of the diffusive scaling, as a consequence of the inclusion of the running of the coupling, is observed.

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Date submitted: 11 Jan 2013

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