

Rethinking running coupling in JIMWLK/BK

Friday 26 May 2023 14:10 (20 minutes)

This talk reexamines the running coupling prescription for the small x evolution equations. Our analysis is based on the NLO JIMWLK, which enabled us to identify potentially large logarithms associated with the running coupling contributions. We show that past analyses performed in the framework of BK and JIMWLK attributed several DGLAP-like logarithms to the running coupling corrections. We discuss the DGLAP-like contribution and its resummation; we also propose a resummed expression for the running coupling. The resulting prescription significantly differs from those put forward by Balitsky, and Kovchegov/Weigert. We comment on the phenomenological implications of our studies.

Author: SKOKOV, Vladimir

Co-authors: KOVNER, Alexander; Prof. LUBLINSKY, Michael

Presenter: SKOKOV, Vladimir

Session Classification: Small-x