

Parton Reggeization Approach: prompt-J/psi pair production at LHC and developments towards NLO

Tuesday, November 26, 2019 12:00 PM (20 minutes)

We present Parton Reggeization Approach –the gauge-invariant scheme of kT factorization based on Lipatov's gauge-invariant EFT for Multi-Regge processes in QCD.

After review of LO formalism, our recent [1] calculation of inclusive differential distributions of pairs of prompt J/psi produced in pp-collisions at the LHC in the framework of LO PRA and NRQCD-factorization formalism will be presented. To improve description of data in the region of large invariant mass (large rapidity separation) of the pair we also study the effects of BFKL resummation on top of our fixed-order prediction. In the second part of the talk, new developments towards NLO calculations in PRA will be presented, including techniques of loop calculations including rapidity divergences and several scales of virtuality [2].

[1] Phys. Rev. Lett. 123, 162002 (2019)

[2] Nucl.Phys. B946, 114715 (2019)

Primary author: NEFEDOV, Maxim (II Institute for theoretical Physics, Uni. Hamburg; Samara National Research University)

Presenter: NEFEDOV, Maxim (II Institute for theoretical Physics, Uni. Hamburg; Samara National Research University)

Session Classification: Tuesday 2