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Diffractive deep inelastic scattering at NLO in the dipole picture: the $q\bar{q}g$ contribution

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We calculate [1] the contribution from the $q\bar{q}g$ state production to the diffractive cross sections in deep inelastic scattering [2,3] at high energy. The obtained cross section is finite by itself and a part of the full next-to-leading order result for the diffractive structure functions. We perform the calculation in exact kinematics in the eikonal limit, and show that the previously known high-Q^2 [2] and large-M_X^2 [4] results for the structure functions can be extracted from our results in the appropriate limits. We furthermore discuss the steps required to obtain the full next-to-leading order results for the structure functions in the Color Glass Condensate formalism, and ongoing application of these results to phenomenology.

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Submitted on behalf of a Collaboration?

No

Participate in poster competition?

No

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