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Finite N_c corrections to NLO BK evolution

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In the Color Glass Condensate effective theory framework, the evolution of high energy scattering amplitudes with collision energy is given by the Balitsky-Kovchegov (BK) equation. It is usually derived from the JIMWLK hierarchy in the large- N_c limit. The next-to-leading order evolution equation for the 2-point correlator, related to the total deep inelastic scattering cross section, involves 6-point correlators of Wilson lines. We present a fully analytic calculation of these correlators in the finite N_c case, using the Gaussian Truncation approximation. We use these results to find the relative importance of finite N_c corrections to the next-to-leading order evolution equation. We show numerically that the finite N_c corrections are negligible, as expected.

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