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Finite Nc 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 thy Balitsky-Kovchegov (BK) equation. It is usually derived from the JIMWLK hierarchy in the in the large-Nc 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 Nc case, using the Gaussian Truncation approximation. We use these results to find the relative importance of finite Nc corrections to the next-to-leading order evolution equation. We show numerically that the finite Nc corrections are negligible, as expected.

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