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QCD Pomeron with nonzero conformal spin from AdS/CFT Quantum Spectral Curve

Using the methods of the recently proposed Quantum Spectral Curve (QSC) originating from integrability of N=4 Super-Yang-Mills theory we analytically continue the scaling dimensions of twist-2 operators with nonzero conformal spin and reproduce the so-called pomeron eigenvalue of the Balitsky-Fadin-Kuraev-Lipatov (BFKL) equation. Furthermore, we recovered the Faddeev-Korchemsky Baxter equation for Lipatov's spin chain and also found its generalization for the next-to-leading order in the BFKL scaling. Our results provide a non-trivial test of QSC describing the exact spectrum in planar N=4 SYM at infinitely many loops for a highly nontrivial non-BPS quantity and also opens a way for a systematic expansion in the BFKL regime.