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Fitting the Discrete BFKL Pomeron to HERA DIS Data at Low- x

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The modification of the BFKL formalism which leads to a discrete spectrum of Regge poles relies on the imposition of specific phases for the oscillatory behaviour at some small gluon transverse momentum. We show that the resulting unintegrated gluon density is very sensitive to the choice of such phases and demonstrate that by taking a particular ansatz for these phases it is possible to fit the high-quality HERA data for structure functions but only for $x < 0.001$.

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