

# Top-down approach to improving the BK equation

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Instabilities in the non-linear evolution equation for gluon distributions in the saturation regime when approaching collinear kinematics were noticed a decade ago. Since then, several ad hoc solutions to the issue have been proposed with some success in improving stability in arbitrary ways. Here, we will discuss a top-down approach which fully encompasses both full collinear kinematics and saturation effects by changing the base assumptions in the effective field theoretical description of gluon saturation. In the spirit of JHEP 07 (2022) 080 and JHEP 10 (2024) 056 where observables were discussed, we will detail the evolution equation for the relevant gluon distributions and the so-called Improved BK limit of this equation.

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