

## **Loops in Dense Fields: Precision QCD in the Color Glass Condensate**

The Color Glass Condensate (CGC) describes QCD at very high energies, where gluons inside hadrons form a dense state that can be treated as a strong classical color field. In this regime, loop calculations differ significantly from the familiar perturbative expansion around the vacuum: quantum fluctuations propagate through a background field, Wilson lines become the relevant degrees of freedom, and large logarithms of energy must be resummed.

In this talk I will give a brief overview of how loop corrections are computed in the presence of such dense fields. After introducing the basic framework, I will discuss the structure of nonlinear rapidity evolution equations, as well as recent progress at next-to-leading order for selected observables.

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