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Results for Heavy Flavor and Quarkonium production in high multiplicity p+p and p+A collisions in the CGC framework

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Heavy quark pair production in minimum bias p+p and p+A collisions has been studied extensively in the CGC framework and compared successfully to both the RHIC and LHC data on J/ψ production [1, 2], $\psi(2S)$ production [3] and D -meson production [4]. We first present an update in this framework based on comparisons to the latest LHC and RHIC data on p+p and light-heavy ion collisions. We will then present novel results [5] on extensions of these studies of Heavy Flavor and Quarkonia to rare events; this work, in completion, demonstrates that this framework captures the systematics of both Heavy-Flavor and Quarkonium production as a function of N_{charge} at both RHIC and the LHC. Finally, we will discuss the importance of Sudakov resummations in this framework to describe Υ production [6, 7].

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