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Influence of quark-gluon string interactions on particle correlations in p+p collisions

In this work we study the early stages of p+p collisions in the framework of the color string model and their influence on observables sensitive to initial state such as forward–backward rapidity correlations. We explore an entire dynamics of strings by taking into account their movement in longitudinal direction due to momenta of strings endpoints [1], in transverse direction due to string-string attractive interaction through the sigma meson exchange [2]. At some moment in time overlapping strings fuse [3] leading to modification of their fragmentation properties while separated ones are decayed independently. We investigate interplay between these core and corona components [4] on correlation coefficients $b_{N_F - N_B}$ [5].

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