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Oscillations in Modified Combinants of Multiplicity Distributions from Yukawa-like Branching

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Oscillations in modified combinants (C j s) have been of interest to multiparticle production mechanisms since the 1990s. Recently, there has been a discussion on how such oscillations can be reproduced by compounding a binomial distribution with a negative binomial distribution. In this work, we explore a stochastic branching model based on a simple interaction term $A\varphi * \varphi$ for partons and propose a hadronization scheme to arrive at the final multiplicity distribution. We study the effects that compounding our model with a binomial distribution has on C j s and explore its physical implications.

Preferred track

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