

## Meson-meson scattering at large $N_c$

*Thursday, 4 July 2024 09:00 (30 minutes)*

The large  $N_c$  limit of QCD is a simplification of the theory that preserves most of its non-perturbative features and has been used by many phenomenological approaches to QCD. However, subleading  $N_c$  effects are hard to estimate and can lead to incorrect predictions. In this talk, I will discuss how we are using lattice simulations to study these subleading  $N_c$  effects in the context of mesons-meson scattering in a theory with  $N_f = 4$  degenerate quark flavors. I will first discuss some results on pion-pion scattering near threshold, which we use to constrain the  $N_c$  scaling of low energy constants from chiral perturbation theory. Later, I will present some ongoing work that extends the previous study to higher energies. We focus on some channels expected to contain tetraquark resonances, aiming at constraining the  $N_c$  dependence of these states, around which there has been much controversy.

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