

Large- N_c methods for baryons

Thursday, 6 June 2024 08:30 (30 minutes)

Considering QCD in the limit of the number of colors N_c being large provides important constraints on the interactions between baryons. These constraints are particularly valuable when the available data is too limited to accurately determine the interactions. In particular, while symmetry-preserving nucleon-nucleon interactions are constrained from a large amount of scattering data, interactions that violate symmetries, e.g., parity and time reversal invariance, and operators contributing to neutrinoless double beta decay are not well known. In the absence of sufficient data, the constraints provided by the large- N_c expansion may prove useful in guiding both experiment and theory in prioritizing where to focus efforts to gain a better understanding of the baryon-baryon interactions. I will describe recent applications with a focus on nucleon-nucleon interactions and combining large- N_c with other effective field theory methods.

Primary author: SCHINDLER, Matthias (University of South Carolina)

Presenter: SCHINDLER, Matthias (University of South Carolina)

Session Classification: Session 6