

ROCKSTAR: Towards a Roadmap of the Crucial measurements of Key observables in Strangeness reactions for neutron sTARs equation of state

Contribution ID: 2

Type: **not specified**

Status of hyperon forces in Lattice QCD

Thursday 12 October 2023 10:30 (30 minutes)

The instability of hyperons against the weak interaction hinders the experimental extraction of baryon-baryon low-energy observables in the strange sector. In this energy regime, a reliable numerical procedure to obtain information of nuclear physics quantities is lattice QCD, a high-demanding numerical approach to solve the complex dynamics of strongly-interacting systems directly from the degrees of freedom of the Standard Model, quarks and gluons. In this talk, I will present the results obtained by the NPLQCD collaboration, constraining the coefficients from the relevant effective field theories of two non-relativistic baryons, as well as the results from a variational calculation using a large set of interpolating operators, for the NN and H -dibaryon channels, at $m_\pi \sim 800$ MeV.

Primary author: ILLA, Marc (IQuS, UW)

Presenter: ILLA, Marc (IQuS, UW)

Session Classification: Session VI