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Nucleon-hyperon interaction from lattice QCD on physical point

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The nucleon-hyperon interaction is important to understand the system with strange quarks, for example, the inner region of neutron stars. Although experimental study of the interaction is difficult rather than the nucleon-nucleon interaction, which is so-called nuclear force, theoretical study is possible by using the HAL QCD method in the lattice QCD. In the present contribution, we show our current results of the nucleon-hyperon interaction from the 2+1 flavor lattice QCD configuration with physical quark masses generated by the HAL QCD collaboration.

Topical area

Hadronic and Nuclear Spectrum and Interactions

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