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Variational study of NN systems and the H dibaryon

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I will present updated results from the NPLQCD collaboration including a variational study of NN systems at $m_\pi \sim 800\text{MeV}$ on two lattice volumes, using a set of interpolating operators that includes non-local products of plane-wave baryons as well as operators spanning the full Hilbert space of local six-quark operators. I will also show a first glance at the results of the same analysis at $m_\pi \sim 170\text{MeV}$. In addition, I will discuss an analysis of the isospin singlet, strangeness -2 sector relevant for the H -dibaryon at $m_\pi \sim 800\text{MeV}$ on two volumes.

Topical area

Structure of Hadrons and Nuclei

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