

Faddeev calculations for light YY -hypernuclei

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Recently the ΩN (5S_2) and the $\Omega\Omega$ (1S_0) interacting potentials at nearly physical quark masses ($m_\pi \simeq 146$ MeV and $m_k \simeq 525$ MeV) has been calculated in the lattice QCD simulations by the HAL QCD Collaboration. Here, we explored hypothetical multi-strangeness nucleus ${}^6_{\Omega\Omega}He$ in $\Omega\Omega\alpha$ cluster model using the method of hyperspherical harmonics making use of the latest HAL QCD Collaboration ΩN and $\Omega\Omega$ s-wave interactions.

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