Symmetric and anti-symmetric LS hyperon potentials from lattice QCD[1] NORIYOSHI ISHII, KEIKO MURANO, Research Center for Nuclear Physics, Osaka University, HIDEKATSU NEMURA, Center for Computatioal Sciences, University of Tsukuba, KENJI SASAKI, Center for Computational Sciences, University of Tsukuba, TAKASHI INOUE, Collage of Bioresource Science, Nihon University, HAL QCD COLLABORATION — We present recent results of odd-parity hyperon-hyperon potentials from lattice QCD. By using HAL QCD method, we generate hyperon-hyperon potentials from Nambu-Bethe-Salpeter (NBS) wave functions generated by lattice QCD simulation in the flavor SU(3) limit. Potentials in the irreducible flavor SU(3) representations are combined to make a Lambda-N potential which has a strong symmetric LS potential and a weak anti-symmetric LS potential. We discuss a possible cancellation between symmetric and anti-symmetric LS (Lambda-N) potentials after the coupled Sigma-N sector is integrated out.

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