

Abstract Submitted
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Hyperon-Nucleon Interactions from QCD¹ MARTIN SAVAGE, University of Washington, NPLQCD COLLABORATION — Low-energy neutron-Sigma- interactions determine, in part, the role of the strange quark in dense matter, such as that found in astrophysical environments. The scattering phase shifts for this system are obtained from Lattice QCD calculations, performed at a pion mass of 389 MeV in two large lattice volumes and at one lattice spacing, and are extrapolated to the physical pion mass using effective field theory. The interactions determined from QCD are consistent with those extracted from hyperon-nucleon experimental data within uncertainties.

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