Abstract Submitted
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Recent results from nuclear lattice simulations NING LI, Michigan State University — We determine new lattice interactions including two- and three-body interactions up to nex-to-next-to-next-to-leading order (N3LO) in chiral effective field theory. The low-energy constants are fixed by the 2N scattering phase shifts and Triton binding energy. We will present the neutron-proton scattering phase shifts, the binding energies of light- and medium-mass nuclei as well as the density profiles for some selected alpha-like nuclei. The results for the new lattice interactions are much better than those in our previous nuclear lattice simulations.

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