

Abstract Submitted
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Full configuration interaction calculations of light nuclei¹ PIETER MARIS, JAMES VARY, ANDREY SHIROKOV², Department of Physics and Astronomy, Iowa State University, Ames, IA 50011 — We perform full configuration interaction (FCI) calculations for light nuclei with a realistic NN interaction, JISP16. We obtain ground state energies and their uncertainties through an exponential extrapolation that we demonstrate is reliable in testcases up to $A=4$ where fully converged results are obtained. For heavier nuclei, up through Carbon-12, we obtain ground state energies converged to a few percent. In addition to the energies, we also calculate selected observables such as rms radii and quadrupole moments.

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