Abstract Submitted
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Ab Initio No Core Full Configuration Calculations for Lithium Isotopes ROBERT COCKRELL, Iowa State University — Ab Initio No Core Full Configuration methods are employed to obtain nuclear densities for several light nuclei with a realistic NN interaction, JISP16. We calculate binding energies for various states of interest as well as dipole and quadrupole moments and select M1 and E2 transitions. The One Body Density Matrix is used to determine the densities and shapes of the ground state and various excited states of these Lithium isotopes. We discuss the opportunities to use these densities to construct Nuclear Energy Density Functionals.

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