

Abstract Submitted
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Quantum Monte Carlo calculations of electromagnetic transitions and magnetic radii of light nuclei with two-body χ EFT currents¹ SAORI PASTORE, University of South Carolina, ROCCO SCHIAVILLA, ODU/JLab, ROBERT WIRINGA, STEVEN PIEPER, ANL — We present a number of ab initio Quantum Monte Carlo calculations of electromagnetic observables for $A \leq 10$ nuclei, which account for two-body effects due to the coupling of external photons with pairs of interacting nucleons. We use the realistic Argonne v18 two-nucleon and Illinois-7 three-nucleon potentials to generate the nuclear wave functions, and chiral effective field theory with pions and nucleons to construct the two-body electromagnetic current operators. Emphasis is on recent calculations of magnetic radii of light nuclei.

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Saori Pastore
University of South Carolina

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