

Quantum Monte Carlo calculations of properties of nuclei

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Many progresses have been made in developing nuclear Hamiltonians within the framework of chiral effective field theory. In particular, the develop of chiral interactions that are fully local opened the way of implementing these Hamiltonians in Quantum Monte Carlo calculations. The advantage of using Quantum Monte Carlo methods is that they are not limited to use soft interactions, and calculations dedicated to explore the role of cutoffs can be done.

I will devote this talk to discuss several results for nuclei up to $A=16$, and addressing several questions regarding the prediction power of these Hamiltonians, and issues related to regulators and cutoffs. I will show nuclear properties including energies, radii, and magnetic moments.

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