



Nuclear Theory

# Quantum Monte Carlo calculations of spectroscopic overlaps in $A \leq 7$ nuclei

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We present Green's function Monte Carlo calculations of spectroscopic overlaps for  $A \leq 7$  nuclei. The realistic Argonne v18 two-nucleon and Illinois-7 three-nucleon interactions are used to generate the nuclear states. The overlap matrix elements are extrapolated from mixed estimates between variational Monte Carlo and Green's function Monte Carlo wave functions. The overlap functions are used to obtain spectroscopic factors and asymptotic normalization coefficients, and they can serve as an input for low-energy reaction calculations.

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