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Quantum Monte Carlo calculations of electron scattering from light nuclei LORENZO ANDREOLI, SAORI PASTORE, Washington University, St. Louis, STEFANO GANDOLFI, JOSEPH CARLSON, Los Alamos National Laboratory — I will present ab initio Quantum Monte Carlo calculations for quasielastic scattering of electrons from light nuclei. Using the Argonne v18 realistic two-nucleon interaction, together with a propagation in imaginary-time, we evaluate the short-time response of nuclei. This method consistently includes two-body physics, in the nucleon-nucleon interaction and the electromagnetic currents. It also allows us to study scattering channels involving nucleons in back-to-back kinematics, of experimental interest and currently tested at, e.g., JLab. I will present results for longitudinal and transverse response functions, as well as response densities.

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