

Abstract Submitted
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Cold fermions at unitarity: variations on a theme ALEXANDROS GEZERLIS, AUREL BULGAC, University of Washington, J. CARLSON, Los Alamos National Laboratory — Quantum Monte Carlo calculations for superfluid two-species homogeneous fermionic systems at unitarity already have a history of at least half a decade. In this talk, we will describe newer zero-temperature Diffusion Monte Carlo results for the equation of state and the pairing gap, as well as for other properties such as the excitation spectrum and distribution functions. Our physical systems of interest will be, on the one hand, a heavy-light system with a mass ratio corresponding to a ${}^6\text{Li}$ - ${}^{40}\text{K}$ mixture, and, on the other, a three-species gas of ${}^6\text{Li}$.

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