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Finite-size and confinement effects in spin-polarized trapped Fermi gases[1] MARK KU, Department of Physics and Astronomy, University of British Columbia/TRIUMF, JENS BRAUN, ACHIM SCHWENK, TRIUMF — We calculate the energy of a single fermion interacting resonantly with a Fermi sea of different-species fermions in anisotropic traps, and show that finite particle numbers and the trap geometry impact the phase structure and the critical polarization. Our findings contribute to understanding some experimental discrepancies in spin-polarized Fermi gases as finite-size and confinement effects.

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