

Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Repulsively Interacting Two-Component Fermi Gases: a Quantum Monte Carlo Study SEBASTIANO PILATI, Institut für Theoretische Physik, ETH Zurich, GIANLUCA BERTAINA, STEFANO GIORGINI, Dipartimento di Fisica, Università di Trento and CNR-INFN BEC Center, MATTHIAS TROYER, Institut für Theoretische Physik, ETH Zurich — We study the ground-state properties of a two-component Fermi gas with repulsive inter-species interactions using quantum Monte Carlo techniques. We calculate the equation of state as a function of the interaction parameter and of the population imbalance. We determine the critical interaction strength where the two components separate forming polarized domains and a ferromagnetic state appears.

Sebastiano Pilati
Institut für Theoretische Physik, ETH Zurich

Date submitted: 21 Jan 2010

Electronic form version 1.4