

Abstract Submitted
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Properties of Unitary Fermi Gas from the Epsilon Expansion ANDREI KRYJEVSKI, Washington University in St. Louis — An analytical technique similar to the Epsilon expansion in the theory of critical phenomena has been recently proposed for dilute Fermi gas with two body interaction characterized by infinite scattering length and zero effective range called Unitary Fermi Gas (Nishida and Son, Phys.Rev.Lett.97:050403, 2006). I will describe some recent results: 1. effective Lagrangian (Landau-Ginzburg-like functional) for Unitary Fermi Gas and its applications (superfluid vortex structure, surface tension of the normal/superfluid phase interface in the polarized (imbalanced) gas); 2. low energy density-density correlation function and the dynamic structure factor.

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