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Thermal distribution and the contact of Fermi gases at large scattering lengths JOAQUIN DRUT, TIMO LAHDE, Aalto University, TIMOUR TEN, UIC — A few years ago, Tan and others derived a set of exact relations valid for strongly interacting non-relativistic Fermi gases in the regime of short interaction range and large scattering length. Recent developments have shown that a central quantity in these identities, the so-called “contact” C , actually plays a crucial role in the characterization of these systems, as it determines multiple thermodynamic properties as well as linear-response sum rules. However, computing the “contact” presents a challenge as it requires non-perturbative methods such as Quantum Monte Carlo. In this contribution, we present our first results for C as a function of temperature in the limit of infinite scattering length.

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