

Abstract Submitted
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Strongly interacting Bose gases¹ F. CHEVY, B.S. REM, A.T. GRIER, I. FERRIER-BARBUT, U. EISMANN, F. WERNER, N. NAVON, C. SALOMON, Ecole Normale Supérieure, D.S. PETROV, LPTMS Orsay, T. LANGEN, T.U.Wien, L. KHAYKOVICH, Bar Ilan University — Contrary to Fermi systems, the quantitative experimental study of Bose gases have been limited to the weakly interacting regime, due to a strong increase of three-body recombination near Feshbach resonances. In this talk, we will present a quantitative study of the three-body recombination rate at unitarity and show that a unitary Bose gas can be stabilized at high temperature [1]. We will demonstrate that, contrary to Arrhenius's law, the rate of molecule formation follows a $1/T^2$ law dictated by the coupling to the attractive universal Efimov channel. Finally, we will discuss the influence of losses on the thermodynamical properties of the system.

[1] B. Rem *et al.* arXiv:1212.5274.

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