

Abstract Submitted
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The three-body recombination of a condensed Bose gas near a Feshbach resonance¹ LAN YIN, School of Physics, Peking University — We study the three-body recombination rate of a homogeneous dilute Bose gas with a Feshbach resonance at zero temperature. The ground state and excitations of this system are obtained. The three-body recombination in the ground state is due to the break-up of an atom pair in the quantum depletion and the formation of a molecule by an atom from the broken pair and an atom from the condensate. The rate of this process is in good agreement with the sodium experiment in a wide range of magnetic fields. The three-body recombination at finite temperatures is also discussed.

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