

## **Proof of Bose-Einstein Condensation for Dilute Trapped Gases**

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The ground state of bosonic atoms in a trap has been shown experimentally to display Bose-Einstein condensation (BEC). We prove this fact theoretically for bosons with two-body repulsive potentials in the dilute limit, starting from the basic Schrödinger equation; the condensation is 100% that minimizes the Gross-Pitaevskii energy functional. This is the first rigorous proof of BEC in a physically realistic, continuum model.