

Abstract Submitted
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Dynamics of Bose-Einstein Condensation in Higher Bands¹

SAYAN CHOUDHURY, ERICH MUELLER, Cornell Univ — Motivated by recent experiments, we explore the kinetics of Bose-Einstein condensation in the upper band of a double well optical lattice. These experiments engineer a non-equilibrium situation in which the highest energy state in the band is macroscopically occupied. The system subsequently relaxes and the condensate moves to the lowest energy state. We model this process. We argue that the condensate first evaporates and then recondenses. We explain how this scenario can be verified through future experiments.

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