

Abstract Submitted
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Phase Kink Dynamics in fluctuating Bose condensates AMY CASSIDY, LUDWIG MATHEY, CHARLES CLARK, Joint Quantum Institute, NIST and University of Maryland — We study the dynamics of Bose gases following a phase imprint. Numerical results within truncated Wigner approximation, which includes both quantum and thermal fluctuations, are compared with analytical predictions. In order to emphasize the effects of fluctuations in these approximations, we also compare our results with dynamics governed by the Gross Pitaevskii equation. We study the dynamics of several observables, including the density and single-particle and density-density correlation functions, with particular focus on experimentally relevant quantities.

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