

Abstract Submitted  
for the DAMOP16 Meeting of  
The American Physical Society

**Stability of a Unitary Homogeneous Bose-Einstein Condensate**

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NIR NAVON, ZORAN HADZIBABIC, University of Cambridge — We will present  
the first measurements exploring the behavior of a unitary homogeneous Bose-  
Einstein Condensate (BEC). Starting with BEC of  $^{39}\text{K}$  in an optical box potential  
we utilize an RF injection procedure to rapidly transfer the atoms into a strongly  
interacting state and measure the resultant atom loss. We then explore how the  
dependence of loss rate on density varies as we tune the interaction strength up to  
and into the unitary regime.

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Date submitted: 29 Jan 2016

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