

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Detecting the squeezing and entanglement of nanomechanical modes: a practical scheme L. TIAN, S. M. CARR, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8423, Gaithersburg, MD 20899 — Nanomechanical systems are promising candidates for realizing the continuous variable protocols of quantum information processing. The detection of the squeezing and entanglement of nanomechanical modes is a crucial step towards such applications. Here, we show that by coupling a nanomechanical mode with another continuous variable mode – a superconducting phase variable, the squeezing and entanglement can be observed within current experimental techniques.

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Date submitted: 30 Nov 2005

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