

Abstract Submitted
for the DAMOP12 Meeting of
The American Physical Society

Collective excitations in quasi-2D Condensates LIN XIA, DANIEL LOBSEY, ERIC CORNELL, JILA, National Institute of Standards and Technology and University of Colorado — In lower-dimensional gases, remarkable physical phenomena arise due to confinement effects, for example the Berezinskii-Kosterlitz-Thouless transition or the Tonks-Girardeau gas. In a quasi-2D condensate, the frequency of collective excitations are shifted because of 2D effects [1,2]. We report our latest results on the measurements of collective excitation frequencies in quasi-2D condensates. These frequencies are normalized by precise measurements of the trapping frequency.

[1] Y. Hu et al., Phys. Rev. Lett. 107, 110401 (2011).

[2] M. Olshanii et al., Phys. Rev. Lett. 105, 095302 (2010).

Lin Xia
JILA, National Institute of Standards and Technology
and University of Colorado

Date submitted: 31 Jan 2012

Electronic form version 1.4