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Probing quasi-2D condensates in an 1D optical lattice SHIHKUANG TUNG, JILA and University of Colorado, GIACOMO LAMPORESI, LENS, European Laboratory for Non-Linear Spectroscopy and Dipartimento di Fisica, Università di Firenze, DANIEL LOBSER, LIN XIA, ERIC CORNELL, JILA and University of Colorado — Quasi-2D condensate slices are created by loading a 3D Bose-Einstein condensate into a 1D optical lattice. A microwave pumping scheme is then applied to select one slice for imaging. In our experiment, we use in-trap and time-of-flight imaging techniques to probe a quasi-2d Bose gas. The results from the two different imaging techniques help determine more accurately the nature of an interacting Bose gas in a harmonically trapped system.

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