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Probe momentum distribution of a quasi-2d condensate using condensate focusing SHIHKUANG TUNG, GIACOMO LAMPORESI, ERIC CORNELL, JILA, National Institute of Standards and Technology and University of Colorado — A Bose-Einstein condensate is created in a TOP trap, then loaded into a 1D optical lattice. The optical lattice slices the condensate into several quasi-2D condensates. Using a selective microwave pumping scheme, we are able to select one slice of condensate and suddenly turn off interactions. We then focus [I. Shvarchuck et al, PRL 89,270404 (2002)] the selected condensate slice in two dimensions to image the momentum distribution below and above the BKT transition temperature.

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