Abstract Submitted
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Raman Optical Lattice RUI ZHANG, NATALYA MORROW, PAUL BERMAN, GEORG RAITHEL, University of Michigan — It is shown that sub-Doppler cooling occurs in an atom-field geometry that can lead to reduced period optical lattices. Four optical fields are combined to produce a standing wave Raman field that drives transitions between two ground state sublevels. Semi-classical solutions of the atomic momentum distribution are calculated and compared with both experimental results and Quantum Monte Carlo Wavefunction simulations.

Rui Zhang
University of Michigan

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