

Abstract Submitted
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Progress Towards a Cavity QED system for Quantum Information K.M. FORTIER, S. KIM, M. GIBBONS, M.S. CHANG, MICHAEL CHAPMAN, School of Physics, Georgia Institute of Technology — Ultracold ^{87}Rb atoms are delivered into a high-finesse optical micro-cavity using a translating optical lattice trap and detected via the cavity field. Our cavity satisfies the strong-coupling requirements for a single intracavity atom, thus permitting real-time observation of single atoms transported into the cavity. Recent improvements to trap transport, trap lifetime, and active cavity locking lead towards a workable cavity QED experiment for quantum information.

Kevin Fortier

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