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Cavity QED with trapped neutral atoms CHUNG-YU SHIH, MICHAEL GIBBONS, MICHAEL CHAPMAN, Georgia Institute of Technology — Cavity QED systems consisting of neutral atoms coupled to high-finesse optical micro-cavities have important applications to quantum information processing. We have developed an experiment with trapped atoms in a high finesse cavity in the strong coupling regime. We have demonstrated loading and storage of atoms delivered from a magneto-optic trap to the resonator using two parallel atom conveyors. We will discuss the current progress on atoms-atoms interaction within the cavity, as well as future applications.

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