

# Flopping between Schrödinger's Cat States

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We show that for an atom in a cavity in the strong coupling regime, flopping between Schrödinger cat states, devised as a superposition of displaced number states, can be accomplished. Beside, the Rabi frequency can be set to zero, so that population trapping or localization can be accomplished. These states could be proved to be useful for quantum computation.

*Key words:* Quantum Computation; Schrödinger's Cat States; Flopping; Cavity Electrodynamics; Strong Coupling Regime.