

# Quantum trajectory computation of ultrashort laser pulse excitation dynamics

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The Quantum Trajectory Method for electronic transitions [R. E. Wyatt, C. L. Lopreore, and G. Parlant, J. Chem. Phys. **114**, 5113 (2001)] is adapted to compute the time evolution of two adiabatic electronic states coupled through an ultrashort laser-pulse. Our approach takes advantage of the short duration and high field intensity of the laser pulse to decouple interstate transitions from single-state nuclear motions. The calculation of population transfer (Rabi flopping) requires a very small number of trajectories and is in excellent agreement with exact quantum wave packet calculations.