

Colloquium Notice

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Learning to control molecular fragmentation using tailored laser pulses

Learning to control molecular fragmentation using tailored laser pulses" Ultrafast laser pulses allow us to view atomic and molecular dynamics with time resolution on the order of 10^{-14} s. Recent advances in laser technology allow us to tailor the electric field of an ultrafast laser pulse and to amplify the pulse to intensities above the atomic unit of intensity. Intense shaped pulses allow us to move from observing to controlling atomic and molecular dynamics.

I will discuss experiments which use shaped ultrafast laser pulses to control molecular fragmentation. The experiments make use of a Genetic Algorithm to discover optimal pulses for control. Our efforts are focused on trying to understand the physical control mechanisms underlying solutions uncovered by the algorithm. Experiments in progress and future experiments will be discussed.

Friday

September 17, 2004

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326