Abstract Submitted
for the DAMOP06 Meeting of
The American Physical Society

Stark Slowing of Asymmetric Rotors[1] ARNE SCHWETTMANN, JACK FRANKLIN, K. RICHARD OVERSTREET, JONATHAN TALLANT, JAMES P. SHAFFER, University of Oklahoma — Stark deceleration is one of the few methods that can be used to slow polyatomic molecules. We present calculations of Stark shift energies, a quantitative analysis of nonadiabatic transition probabilities, and orientational distribution functions applicable to typical Stark slowing conditions for the two small asymmetric rotors nitromethane and acetaldehyde. We show that asymmetric polyatomic molecules are good candidates for Stark slowing.

[1]We acknowledge funding from the Research Corporation, the OSRHE and the Air Force Office of Scientific Research (FA9550-05-0328).

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Date submitted: 26 Jan 2006 Electronic form version 1.4