

Abstract Submitted
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Deceleration of continuous molecular beams WADE RELLERGERT,
ERIC HUDSON, University of California - Los Angeles — A method for decelerating a continuous beam of neutral polar molecules is theoretically demonstrated. This method utilizes non-uniform, static electric fields and regions of adiabatic population transfer to generate a mechanical force that opposes the molecular beam's velocity. By coupling this method with irreversible trap-loading, molecular densities $\geq 10^{11} \text{ cm}^{-3}$ are possible. When used in combination with forced evaporative cooling, the proposed method may represent a viable route to quantum degeneracy for a wide-class of molecular species.

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