

Abstract Submitted
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Trapped ion system for sympathetic cooling and non-equilibrium dynamics¹ CHARLIE DORET, SIERRA JUBIN, SARAH STEVENSON, Williams College Dept. of Physics — Atomic systems are superbly suited to the study of non-equilibrium dynamics. These systems exquisite isolation from environmental perturbations leads to long relaxation times that enable exploration of far-from-equilibrium phenomena. We present progress towards trapping chains of multiple co-trapped calcium isotopes geared towards measuring thermal equilibration and sympathetic cooling rates. We also discuss plans for future experiments in non-equilibrium statistical mechanics, including exploration of the quantum-to-classical crossover between ballistic transport and diffusive, Fourier's Law conduction.

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Charlie Doret
Williams College Dept. of Physics

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