Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Density scaling of disorder-induced heating in ultracold neutral plasmas SCOTT BERGESON, Brigham Young University, FRANCIS ROBICHEAUX, Auburn University — We present measurements and simulations of disorder-induced heating (DIH) in the first 100 ns after plasma formation. We study plasmas with peak densities up to 4×10^{10} cm^{-3} and initial electron temperatures up to 60 K using laser- induced fluorescence on the plasma ions. Rabi oscillations, DIH, and plasma expansion are clearly visible in the fluorescence signals.

Scott Bergeson
Brigham Young University

Date submitted: 26 Jan 2010 Electronic form version 1.4