

Abstract Submitted
for the DAMOP06 Meeting of
The American Physical Society

Measurement of pressure broadening of the 2S-3S transition of ^7Li by noble gases MARK ROSENBERRY, Siena College, KRISTIN BURGESS, KOK WIN GOH, MICHAEL REUTER, BRIAN STEWART, Wesleyan University — Doppler-free two-photon spectroscopy offers a unique combination of advantages for line-broadening studies. The narrow lines make resolution of small changes in linewidth more easily observable, while the fact that entire velocity distribution is excited ensures that a thermal distribution at the temperature of the sample is being studied. We have employed this technique in studying line broadening of the 2s-3s state of ^7Li by Ne, Ar, Kr, and Xe. Experimental broadening rates are modeled in the impact approximation using available ab initio potentials.

Mark Rosenberry
Siena College

Date submitted: 26 Jan 2006

Electronic form version 1.4