

Abstract Submitted
for the DAMOP14 Meeting of
The American Physical Society

Absolute Frequency Measurements of the D_1 and D_2 Transitions in Atomic Li¹ DONAL SHEETS, JOSE ALMAGUER², JACOB BARON³, PETER ELGEE, MICHAEL ROWAN⁴, JASON STALNAKER, Department of Physics and Astronomy, Oberlin College, Oberlin, OH 44074 — We present preliminary results from our measurements of the D_1 and D_2 transitions in Li. The data were obtained from a collimated atomic beam excited by light from an extended cavity diode laser. The frequency of the diode laser was stabilized to an optical frequency comb, providing absolute frequency measurement and control of the excitation laser frequency. These measurements will provide a stringent test of atomic structure calculations and yield information about the nuclear structure. We also discuss plans to extend the technique to other high-lying states in lithium.

¹Funded by the NIST Precision Measurements Grant and NSF Award #1305591.

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Date submitted: 30 Jan 2014

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