Abstract Submitted for the CAL09 Meeting of The American Physical Society

Towards microwave modulation in a wavelength-tuned magnetooptical trap¹ AARON ALLEN², Clemson University, STEPHEN SEGAL³, EVAN SALIM⁴, MARIKA MEERTENS⁵, DANA ANDERSON⁶, JILA / University of Colorado-Boulder — In this project, I present a new method for trapping Rubidium-87 atoms. The method proposed is microwave modulation of an external cavity diode laser. The modulation is designed so as to produce frequency sidebands for hyperfine pumping in addition to the main cooling frequency. It is designed for use in magneto-optical trapping.

¹Thanks to the NSF, JILA, The University of Colorado-Boulder, and the Physics REU program. ²undergraduate ³graduate student ⁴graduate student ⁵undergraduate ⁶Principal Investigator

> Aaron Allen Clemson University

Date submitted: 14 Sep 2009

Electronic form version 1.4