

Abstract Submitted
for the DAMOP15 Meeting of
The American Physical Society

Triplet state photoassociation of LiNa¹ TIMUR RVACHOV, ALAN JAMISON, LI JING, YIJUN JIANG, MARTIN ZWIERLEIN, WOLFGANG KETTERLE, Massachusetts Institute of Technology — Ultracold molecules have promise to become a useful tool for studies in quantum simulation and ultracold chemistry. We aim to produce ultracold fermionic ${}^6\text{Li}{}^{23}\text{Na}$ molecules in the triplet ground state. Due to the small mass, small spin-orbit coupling, and fermionic character of LiNa, the triplet ground state is expected to be long lived. We report on photoassociation spectra of LiNa to its triplet excited states from an ultracold mixture. This is the first observation of these excited triplet potentials, which have been previously difficult to observe in heat-pipe experiments due to the small spin-orbit coupling in the system. Determining the excited state potentials is a key milestone towards forming triplet ground state LiNa via two-photon STIRAP.

¹Work supported by the NSF, AFOSR-MURI, ARO-MURI, and NSERC.

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Date submitted: 31 Jan 2015

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