Abstract Submitted
for the DAMOP08 Meeting of
The American Physical Society

Measurements of Binding Energies of p-wave Feshbach Molecules in a gas of ^{6}Li CHRISTOPHER TICKNOR, JURGEN FUCHS, PAUL DYKE, GOPI VEERAVALLI, EVA KUHNLE, WAYNE ROWLANDS, PETER HANNAFORD, CHRIS VALE, ARC Centre of Excellence for Quantum-Atom Optics and Centre for Atom Optics and Ultrafast Spectroscopy, Swinburne University of Technology, Australia — We present measurements of the binding energies of ^{6}Li p-wave Feshbach molecules in the three resonances of the two lowest hyperfine states. We find the binding energy scales linearly with magnetic field detuning across all resonances. The gradients of the binding energies have been determined to be 113 +-7, 111+-6, and 119+-8 for the 11, 12, and 22 Feshbach resonances, respectively, in good agreement with theoretical predictions. Further properties of these Feshbach molecules are also investigated.

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Date submitted: 28 Jan 2008 Electronic form version 1.4