Abstract Submitted for the DAMOP12 Meeting of The American Physical Society

Efimov physics in a mixture of $^{40}\mathrm{K}$ and $^{87}\mathrm{Rb^1}$ TYLER CUMBY, RUTH SHEWMON, MING-GUANG HU, DEBORAH JIN, JILA, National Institute of Standards and Technology and University of Colorado; Physics Department, University of Colorado, Boulder, Colorado 80309 — Three-body Efimov resonances have now been detected in a number of ultracold atom species using measurements of three-body recombination rates. Moreover, recent observations suggest that the locations of these resonances has some universality, in that they can be predicted using the two-body van der Waals length [1]. To compare with a recent prediction for the $^{40}\mathrm{K}$ + $^{87}\mathrm{Rb}$ system [2] and with a previous experimental result for $^{41}\mathrm{K}$ + $^{87}\mathrm{Rb}$ [3], we measure three-body recombination and molecule loss rates in an ultracold trapped gas of $^{40}\mathrm{K}$ and $^{87}\mathrm{Rb}$ atoms near an interspecies Feshbach resonance.

- [1] PRL 107, 120401 (2011)
- [2] arXiv:1111.1484v1
- [3] PRL 103, 043201 (2009)

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