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Magnetoassociation of KRb Feshbach molecules TYLER CUMBY, JOHN PERREAULT, RUTH SHEWMON, DEBORAH JIN, JILA, National Institute of Standards and Technology, and Department of Physics, University of Colorado, Boulder — I will discuss experiments in which we study the creation of $^{40}K^{87}Rb$ Feshbach molecules via magnetoassociation. We measure the molecule number as a function of the magnetic-field sweep rate through the interspecies Feshbach resonance and explore the dependence of association on the initial atom gas conditions. This study of the Feshbach molecule creation process may be relevant to the production of ultracold polar molecules, where magnetoassociated Feshbach molecules can be a crucial first step [1].

[1] K.-K. Ni, S. Ospelkaus, M. H. G. de Miranda, A. Peer, B. Neyenhuis, J. J. Zirbel, S. Kotochigova, P. S. Julienne, D. S. Jin, and J. Ye, Science, 2008, 322, 231- 235.

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