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Feshbach molecule creation in a Bose-Fermi (40K-87Rb) mixture¹ MING-GUANG HU, JILA, University of Colorado, TYLER CUMBY, RUTH SHEWMON, DEBORAH JIN, JIN TEAM — In an ultracold atom gas, a sweep of a magnetic field across a Fano-Feshbach resonance can associate pairs of atoms into weakly bound molecules. For an ultracold 40K-87Rb mixture, we observe that this association efficiency (the number of observed molecules divided by the number of possible pairs) for adiabatic sweeps is significantly lower than the prediction of a phenomenological model that was developed in conjunction with single-species experiments [Ref.E.Hodby,et al.(2005).PRL 94 120402]. We will report on investigation of this magneto-association process in the 87Rb-40K gas.

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