

Abstract Submitted  
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**Ultracold Interactions between Li Feshbach molecules and Yb atoms** ALEXANDER KHRAMOV, ANDERS HANSEN, ALAN JAMISON, WILLIAM DOWD, VLADYSLAV IVANOV, SUBHADEEP GUPTA, University of Washington — We report on collisional studies in an ultracold three-component system of  $^{174}\text{Yb}$  and two spin states of  $^6\text{Li}$  with tunable interactions. The Li-Li *s*-wave scattering length can be varied through a Feshbach resonance at 834 G. We study the effect of the non-resonant Yb cloud on the formation rate and stability of Li Feshbach dimers and compare to theoretical prediction. We discuss the potential usefulness of a third non-resonant component for the efficient production and cooling of Feshbach molecules.

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