

Abstract Submitted  
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**Ultracold three-body collisions near overlapping Feshbach resonances** J. P. D'INCAO, B. D. ESRY, Department of Physics, Kansas State University — We adapt the framework we previously developed [1] for a single resonant interaction to the case of overlapping Feshbach resonances. As a result, ultracold three-body collision rates now depend on two different scattering lengths and have a much richer structure. We have determined the scattering length and energy dependence for all relevant ultracold three-body collision rates and will discuss the effect of the overlap on ultracold gas mixtures. These results will apply so long as the system is in the threshold regime, i.e., when the collision energy is the smallest energy in the system. [1] J. P. D'Incao and B. D. Esry, Phys. Rev. Lett. **94**, 213201 (2005). Supported by the National Science Foundation.

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