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Three-body recombination in heteronuclear systems at finite temperature with a large positive scattering length¹ SAMUEL EMMONS, BIJAYA ACHARYA, University of Tennessee-Knoxville, LUCAS PLATTER, University of Tennessee-Knoxville, Oak Ridge National Laboratory Physics Division — For an ultracold heteronuclear mixture with a large positive interspecies scattering length and negligible intraspecies scattering length, we determine the three-body recombination rate as a function of collision energy using universal functions of a single scaling variable. We use the zero-range approximation and the Skorniakov–Ter-Martirosian equation to calculate these scaling functions for a range of collision energies. Further, we explore the effects that a nonzero temperature has on three-body recombination, as well as the effects of the formation of deep dimers, for experimentally relevant heteronuclear gases such as the ${}^6\text{Li}$ - ${}^{133}\text{Cs}$ mixture.

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