

Abstract Submitted
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Beyond Universality in Three-Body Recombination¹ CHEN JI, Ohio University, LUCAS PLATTER, INT, University of Washington, DANIEL PHILLIPS, Ohio University — A three-body system interacting through a large two-body scattering length displays universal features known as Efimov physics. This physics manifests itself in interesting dependencies of the loss rates of trapped cold atoms as an applied magnetic field is varied. In particular, the use of Feshbach resonances allows the exploration of these loss rates as the two-body scattering length is varied by orders of magnitude. Particular loss features were recently observed with trapped Lithium-7 atoms by the Bar-Ilan [1] and Rice [2] groups. Effective field theory (EFT) methods have been shown to provide a good description of the positions of these loss features. I will display the EFT predictions in the limit of interactions with zero effective range [3], and then show how to extend those calculations to the case of a finite effective range [4].

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[4] Ji C., Phillips D., and Platter L., arXiv:1005.1990.

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Chen Ji
Ohio University

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