

Abstract Submitted
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Efimov Physics in a ${}^6\text{Li}$ - ${}^{133}\text{Cs}$ Atomic Mixture JACOB JOHANSEN, LEI FENG, COLIN PARKER, CHENG CHIN, The James Franck Institute, The Enrico Fermi Institute, and Department of Physics, The University of Chicago, Chicago, Illinois 60637, USA, YUJUN WANG, Department of Physics, Kansas State University, Manhattan, KS, 66506 — We investigate Efimov physics based on three-body recombination in an atomic mixture of ${}^6\text{Li}$ and ${}^{133}\text{Cs}$ in the vicinity of interspecies Feshbach resonances at 843 and 889 G. This allows us to compare the loss spectra near different resonances and test the universality of Efimov states. Theoretically the Efimov spectrum near 889 G is expected to be similar to that near 843 G, except that the first resonance is absent near the former Feshbach resonance. This is due to the difference in the Cs-Cs scattering length near the two resonances: At 843 G it is negative, whereas at 889 G it is positive. Although it is primarily the Li-Cs interactions that lead to Efimov resonances, the Cs-Cs scattering length is expected to influence the spectrum. This work is supported by NSF and Chicago MRSEC.

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