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Three-body Efimov physics near a narrow Feshbach resonance with a large background scattering length[1] FATIMA ANIS, Dept. of Physics, Kansas State University, YUJUN WANG, JILA, University of Colorado, Boulder, CO, B.D. ESRY, Dept. of Physics, Kansas State University — We study three-body Efimov physics near a narrow Feshbach resonance that lies on top of a broader one. We have modelled the two-body interactions with a single-channel potential to reproduce the two-body physics of such overlapping resonances and have performed three-body calculations for various resonance parameters. In particular, we study Efimov physics as a function of the scattering length for the narrow resonance when there is a large background scattering length. The Efimov features near an isolated, broad Feshbach resonance can be universally identified by a sequence of minima or peaks in the three-body recombination rates for the positive or negative two-body scattering length, respectively. In the present study, we try to identify the universal three-body physics for the overlapping and narrow resonances.

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