

Abstract Submitted
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Identification of collisional resonances and three-body universality based on an ultracold mixture of Li-6 and Cs-133 atoms¹ SHIH-KUANG TUNG, COLIN PARKER, JACOB JOHANSEN, CHENG CHIN, University of Chicago — One unique feature about ultracold atom experiments is that we are able to control how atoms interact. When two atoms move towards each other, their scattering wavefunction can couple to a bound state near the scattering continuum, and the scattering amplitude can develop a resonant enhancement, which we called a Feshbach resonance. Here we report our observations on the Feshbach resonances in an ultracold mixture of fermionic Li-6 and bosonic Cs-133 atoms. Those resonances provides us essential information to control the interactions between the two atomic species, which opens up many exciting research fronts, especially to explore the three-body universality of the mixture.

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