

Abstract Submitted
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Crossover between universal trimers and Efimov trimers SHIMPEI ENDO, University of Tokyo, PASCAL NAIDON, RIKEN, MASAHITO UEDA, University of Tokyo — For a system of two identical fermions and one distinguishable particle interacting via a short-range potential with a large s -wave scattering length, Efimov trimers [1] and universal trimers [2] exist in different regimes of mass ratio. These trimers have different scaling symmetry: discrete and continuous scaling symmetry. We point out the existence of a third kind of trimers, “crossover trimers,” that continuously connect the two regimes as the mass ratio and the scattering length are varied.

[1] V. Efimov, Nucl. Phys. A **210**, 157 (1973).

[2] O. I. Kartavtsev, and A. V. Malykh, J. Phys. B, **40**, 1429 (2007).

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