

Abstract Submitted
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Three-body Recombination of Fermionic Atoms with Large Scattering Lengths¹ DAEKYOUNG KANG, ERIC BRAATEN, The Ohio State University, HANS-WERNER HAMMER, Bonn U., HISKP, LUCAS PLATTER, The Ohio State University — The 3-body recombination rate at threshold for fermions with three spin states and large scattering lengths is calculated in the zero-range approximation. The only parameters in this limit are the three scattering lengths and the Efimov parameter, which can be complex valued. Semi-analytic results are obtained for the cases of negative scattering lengths, two of which are equal. The general result is applied to the three lowest hyperfine states of Lithium-6 atoms in regions of the magnetic field in which the three scattering lengths are all large and negative. Comparisons with recent experiments provide indications of loss features associated with Efimov trimers near the 3-atom threshold.

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