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Exploring Efimov physics in three spin fermionic atomic gases[1]
JOSE P. D'INCAO, JILA, Department of Physics, University of Colorado at Boulder, DANIEL J. HAXTON, Lawrence Berkeley National Lab., CHRIS H. GREENE, JILA, Department of Physics, University of Colorado at Boulder — We explore three-body universal properties of ultracold collisions involving 6Li atoms in three different internal spin states. Our model is adjusted to reproduce the proper magnetic field dependence of both two-body scattering length and binding energies. We then apply the model to determine the three-body scattering properties. More specifically, we calculate three-body recombination and atom-dimer relaxation in order to test our theoretical description against the currently available experimental data, which indicate the existence of several features related to Efimov physics.

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