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**Universal Analysis of Three-Body Recombination of  $^{87}\text{Rb}$  Atoms**<sup>1</sup> ERIC BRAATEN, DAEKYOUNG KANG, LUCAS PLATTER, Ohio State University, HANS-WERNER HAMMER, Universität Bonn — The 3-body recombination rate at threshold for identical bosons with a large scattering length  $a$  is a universal function proportional to  $a^4$  with a coefficient that is a log-periodic function of  $a$ . The Garching group has recently measured 3-body recombination in a Bose-Einstein condensate of  $^{87}\text{Rb}$  atoms near a Feshbach resonance. Their results in the large scattering length region are compatible with the universal prediction if we allow for systematic errors in the measurement and in the calibration of the magnetic field. We determine the Efimov parameter in the universal formula by fitting the Garching data. We then use universal results to predict the scattering lengths at which there are local minima in the recombination rate, recombination resonances, and dimer relaxation resonances.

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Prefer Oral Session  
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