

Abstract Submitted  
for the DAMOP07 Meeting of  
The American Physical Society

**Signatures of Efimov's effect in ultracold gases** THORSTEN KOEHLER, MARK LEE, University of Oxford, PAUL JULIENNE, NIST — Based on the approach of G. Smirne et al. [e-print cond-mat/0604183 (Phys. Rev. A, in press)], we present numerically exact calculations of resonance-enhanced three-body recombination in ultracold  $^{133}\text{Cs}$  Bose gases. We discuss associated atom-loss-rate constants at low magnetic-field strengths in comparison with recent experiments on Efimov's effect by Kraemer et al. [Nature (London) 440, 315 (2006)]. We interpret these measurements in terms of their relation to similar studies on helium trimers in molecular beams. We show how, as yet unobserved, excited Efimov-trimer molecules could be detected in ultracold gases of  $^{85}\text{Rb}$ , as well as  $^{133}\text{Cs}$  at high fields in the vicinity of 800 G.

Thorsten Koehler  
University of Oxford

Date submitted: 02 Feb 2007

Electronic form version 1.4