Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Recombination of N bosons near threshold[1] NIRAV MEHTA, Grinnell College / JILA / Univ. of Colorado, SETH RITTENHOUSE, JILA/Univ. of Colorado, JOSE D'INCAO, JAVIER VON STECHER, CHRIS GREENE, JILA/Univ. of Colorado — We derive a generalized cross section for scattering events involving an arbitrary number of particles, and apply our result to the recombination of N bosons. We obtain a semi-analytical formula that encapsulates the overall Wigner threshold scaling as well as resonant enhancements due to the presence of N-body states near threshold. For the case N=4, we obtain quantitative results for the event rate that exhibit resonant enhancement due to known universal 4-boson states tied to Efimov physics.

[1]This work is funded in part by the National Science Foundation.

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Date submitted: 16 Nov 2009 Electronic form version 1.4