

Bibliography

- [1] J. Roberts, Ph.D. thesis, University of Colorado at Boulder, 2001, available at <http://jilawww.colorado.edu/www/sro/thesis/>.
- [2] E. A. Donley, N. R. Claussen, S. L. Cornish, J. L. Roberts, E. A. Cornell, and C. E. Wieman, *Nature* **412**, 295 (2001).
- [3] N. R. Claussen, E. A. Donley, S. T. Thompson, and C. E. Wieman, *Phys. Rev. Lett.* **89**, 010401 (2002).
- [4] E. A. Donley, N. R. Claussen, S. T. Thompson, and C. E. Wieman, *Nature* **417**, 529 (2002).
- [5] F. Dalfovo, S. Giorgini, L. P. Pitaevskii, and S. Stringari, *Rev. Mod. Phys.* **71**, 463 (1999).
- [6] E. Tiesinga, B. J. Verhaar, and H. T. C. Stoof, *Phys. Rev. A* **47**, 4114 (1993).
- [7] A. Moerdijk, B. J. Verhaar, and A. Axelsson, *Phys. Rev. A* **51**, 4852 (1995).
- [8] H. T. C. Stoof, J. M. V. A. Koelman, and B. J. Verhaar, *Phys. Rev. B* **38**, 4688 (1988).
- [9] S. J. J. M. F. Kokkelmans and M. J. Holland, *Phys. Rev. Lett.* **89**, 180401 (2002).
- [10] J. J. Sakurai, Modern Quantum Mechanics (Addison-Wesley, Reading, Massachusetts, 1994).
- [11] R. G. Newton, Scattering Theory of Waves and Particles (Springer, New York, 1982).
- [12] S. Inouye, M. R. Andrews, J. Stenger, H. J. Miesner, D. M. Stamper-Kurn, and W. Ketterle, *Nature* **392**, 151 (1998).
- [13] J. L. Roberts, J. P. Burke, Jr., N. R. Claussen, S. L. Cornish, E. A. Donley, and C. E. Wieman, *Phys. Rev. A* **64**, 024702 (2001).
- [14] E. Timmermans, P. Tommasini, M. Hussein, and A. Kerman, *Phys. Rep.* **315**, 199 (1999).
- [15] F. A. van Abeelen and B. J. Verhaar, *Phys. Rev. Lett.* **83**, 1550 (1999).

- [16] T. Köhler, T. Gasenzer, and K. Burnett, cond-mat/0209100 (2002).
- [17] S. J. J. M. F. K. *et al.*, to be published .
- [18] P. Julienne, private communication .
- [19] C. Myatt, N. Newbury, R. Ghrist, S. Loutzenhiser, and C. Wieman, Opt. Lett. **21**, 290 (1996).
- [20] K. Lindquist, M. Stephens, and C. E. Wieman, Phys. Rev. A **46**, 4082 (1992).
- [21] B. DeMarco, Ph.D. thesis, University of Colorado at Boulder, 2001.
- [22] K. L. Corwin and *et al.*, Appl. Opt. **37**, 3295 (1998).
- [23] I. I. Rabi, S. Millman, P. Kusch, and J. R. Zacharias, Phys. Rev. **55**, 526 (1939).
- [24] N. F. Ramsey, Molecular Beams (Clarendon Press, Oxford, 1956).
- [25] J. H. Moore, C. C. Davis, and M. A. Coplan, Building Scientific Apparatus: A Practical Guide to Design and Construction (Addison-Wesley, Reading, MA, 1989), p. 203.
- [26] S. L. Cornish, N. R. Claussen, J. L. Roberts, E. A. Cornell, and C. E. Wieman, Phys. Rev. Lett. **85**, 1795 (2000).
- [27] V. M. Pérez-García, H. Michinel, J. Cirac, M. Lewenstein, and P. Zoller, Phys. Rev. A **56**, 1424 (1997).
- [28] C. Bradley, C. Sackett, and R. Hulet, Phys. Rev. Lett. **78**, 985 (1997).
- [29] C. Sackett, H. T. C. Stoof, and R. Hulet, Phys. Rev. Lett. **80**, 2031 (1998).
- [30] C. Sackett, J. Gerton, M. Welling, and R. Hulet, Phys. Rev. Lett. **82**, 876 (1999).
- [31] A. Gammal, L. Tomio, and T. Frederico, Phys. Rev. A **66**, 043619 (2002).
- [32] P. Ruprecht, M. Holland, K. Burnett, and M. Edwards, Phys. Rev. A **51**, 4704 (1995).
- [33] J. L. Roberts, N. R. Claussen, S. L. Cornish, E. A. Donley, E. A. Cornell, and C. E. Wieman, Phys. Rev. Lett. **86**, 4211 (2001).
- [34] J. L. Bohn, B. Esry, and C. H. Greene, Phys. Rev. A **58**, 584 (1998).
- [35] R. Dodd, M. Edwards, C. Williams, C. Clark, M. Holland, P. Ruprecht, and K. Burnett, Phys. Rev. A **54**, 661 (1996).
- [36] Y. Kagan, E. Surkov, and G. Shlyapnikov, Phys. Rev. Lett. **79**, 2604 (1997).
- [37] Y. Kagan, A. Muryshev, and G. Shlyapnikov, Phys. Rev. Lett. **81**, 933 (1998).
- [38] J. Stenger, S. Inouye, M. R. Andrews, H. J. Miesner, D. M. Stamper-Kurn, and W. Ketterle, Phys. Rev. Lett. **82**, 2422 (1999).

- [39] J. L. Roberts, N. R. Claussen, S. L. Cornish, and C. E. Wieman, *Phys. Rev. Lett.* **85**, 728 (2000).
- [40] A. K. Pattanayak, A. Gammal, C. A. Sackett, and R. G. Hulet, *Phys. Rev. A* **63**, 033604 (2001).
- [41] C. J. Myatt, Ph.D. thesis, University of Colorado at Boulder, 1997.
- [42] M. Ueda and K. Huang, *Phys. Rev. A* **60**, 3317 (1999).
- [43] H. Saito and M. Ueda, *Phys. Rev. A* **63**, 043601 (2001).
- [44] H. Saito and M. Ueda, *Phys. Rev. Lett.* **86**, 1406 (2001).
- [45] R. A. Duine and H. T. C. Stoof, *Phys. Rev. Lett.* **86**, 2204 (2001).
- [46] L. Santos and G. V. Shlyapnikov, *Phys. Rev. A* **66**, 011602 (2002).
- [47] H. Saito and M. Ueda, *Phys. Rev. A* **65**, 033624 (2002).
- [48] S. K. Adhikari, *Phys. Rev. A* **66**, 013611 (2002).
- [49] E. Timmermans, P. Tommasini, R. Côté, M. Hussein, and A. Kerman, *Phys. Rev. Lett.* **83**, 2691 (1999).
- [50] P. D. Drummond, K. V. Kheruntsyan, and H. He, *Phys. Rev. Lett.* **81**, 3055 (1998).
- [51] V. Yurovsky, A. Ben-Reuven, P. Julienne, and C. Williams, *Phys. Rev. A* **62**, 043605 (2000).
- [52] F. H. Mies, E. Tiesinga, and P. S. Julienne, *Phys. Rev. A* **61**, 022721/1 (2000).
- [53] M. Holland, J. Park, and R. Walser, *Phys. Rev. Lett.* **86**, 1915 (2001).
- [54] E. Burt, R. Ghrist, C. Myatt, M. Holland, E. Cornell, and C. Wieman, *Phys. Rev. Lett.* **79**, 337 (1997).
- [55] M. J. Holland, private communication .
- [56] S. J. J. M. F. Kokkelmans, J. N. Milstein, M. L. C. R. Walser, and M. J. Holland, *Phys. Rev. A* **65**, 053617 (2002).
- [57] H. C. W. Beijerinck, *Phys. Rev. A* **62**, 063614 (2000).
- [58] J. Schuster, A. Marte, S. Amtage, B. Sang, G. Rempe, and H. C. W. Beijerinck, *Phys. Rev. Lett.* **87**, 170404 (2001).
- [59] L. D. Landau, *Phys. Z. Sowjetunion* **2**, 46 (1932).
- [60] C. Zener, *Proc. R. Soc. London Ser. A* **137**, 696 (1932).
- [61] J. R. Rubbmark, M. M. Kash, M. G. Littman, and D. Kleppner, *Phys. Rev. A* **23**, 3107 (1981).
- [62] J. W. Dunn, C. H. Greene, D. Blume, B. E. Granger, and M. J. Holland, *physics/0208031* (2002).

- [63] D. Blume and C. H. Greene, Phys. Rev. A **65**, 043613 (2002).
- [64] E. L. Bolda, E. Tiesinga, and P. S. Julienne, Phys. Rev. A **66**, 013403/1 (2002).
- [65] T. Busch, B.-G. Englert, K. Rzazewski, and M. Wilkens, Found. Phys. **28**, 549 (1998).
- [66] D. Guéry-Odelin and G. Shlyapnikov, Phys. Rev. A **61**, 013605 (1999).
- [67] M. Mackie, K. A. Suominen, and J. Javanainen, cond-mat/0209100 (2002).
- [68] R. A. Duine and H. T. C. Stoof, cond-mat/0210544 (2002).
- [69] E. G. M. van Kempen, S. J. J. M. F. Kokkelmans, D. J. Heinzen, and B. J. Verhaar, Phys. Rev. Lett. **88**, 093201 (2002).
- [70] V. Yurovsky, A. Ben-Reuven, P. Julienne, and C. Williams, Phys. Rev. A **60**, 765 (1999).
- [71] R. C. Forrey, V. Kharchenko, N. Balakrishnan, and A. Dalgarno, Phys. Rev. A **59**, 2146 (1999).
- [72] R. Wynar, R. Freeland, D. Han, C. Ryu, and D. Heinzen, Science **287**, 1016 (2000).
- [73] E. Braaten, H.-W. Hammer, and M. Kusunoki, cond-mat/0206232 (2002).
- [74] P. Courteille, R. S. Freeland, D. J. Heinzen, F. A. van Abeelen, and B. J. Verhaar, Phys. Rev. Lett. **81**, 69 (1998).
- [75] J. L. Roberts, N. R. Claussen, J. P. Burke, Jr., C. H. Greene, E. A. Cornell, and C. E. Wieman, Phys. Rev. Lett. **81**, 5109 (1998).
- [76] V. Vuletić, A. J. Kerman, C. Chin, and S. Chu, Phys. Rev. Lett. **82**, 1406 (1999).
- [77] T. Loftus, C. A. Regal, C. Ticknor, J. L. Bohn, and D. S. Jin, Phys. Rev. Lett. **88**, 173201 (2002).
- [78] F. A. van Abeelen and B. J. Verhaar, Phys. Rev. A **59**, 578 (1999).
- [79] P. J. Leo, C. J. Williams, , and P. S. Julienne, Phys. Rev. Lett. **85**, 2721 (2000).
- [80] C. Chin, V. Vuletic, A. J. Kerman, and S. Chu, Phys. Rev. Lett. **85**, 2717 (2000).
- [81] A. Lagendijk, I. F. Silvera, and B. J. Verhaar, Phys. Rev. B **33**, 626 (1986).
- [82] J. P. Burke, Jr., Ph.D. thesis, University of Colorado at Boulder, 1999, available at <http://jilawww.colorado.edu/www/sro/thesis/>.
- [83] N. R. Claussen, S. J. J. M. F. Kokkelmans, S. T. Thompson, E. A. Donley, and C. E. Wieman, in preparation .
- [84] A. Marte, T. Volz, J. Schuster, S. Dürr, G. Rempe, E. G. M. van Kempen, and B. J. Verhaar, cond-mat/0210651 (2002).

- [85] P. R. Bevington and D. K. Robinson, Data Reduction and Error Analysis for the Physical Sciences (McGraw-Hill, New York, 1992).
- [86] For the ϕ_T^E value, which is not listed in Ref. [84], we used $\phi_T^E = 0.159(18) \text{ K}^{-1}$ (E. G. M. van Kempen and B. J. Verhaar, private communication) .
- [87] The value for $a_{bg} = -450(3) a_0$ was extracted from the KKHV analysis. We refer to this value (as we did also in Ref. [4]) instead of our earlier experimentally determined value of $a_{bg} = -380(21) a_0$ [13], which is less precise and less accurate .
- [88] A. Gammal, T. Frederico, and L. Tomio, Phys. Rev. A **64**, 055602 (2001).
- [89] H. Lewandowski, Ph.D. thesis, University of Colorado at Boulder, 2002, available at <http://jilawww.colorado.edu/www/sro/thesis/>.
- [90] L. Allen and J. H. Eberly, Optical Resonance and Two-Level Atoms (Dover, New York, 1975).
- [91] C. A. Regal, private communication .