

PHYSICAL REVIEW A

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 1050-2947)

PERIODICALS
Postmaster send address changes to:
APS Subscription Services
Suite 1N01
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 77, NUMBER 2
PARTS A AND B

CONTENTS

FEBRUARY 2008

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages 020301(R)-022903, and Part B pages 023401-029904(E).

PART A

RAPID COMMUNICATIONS

Quantum information

- Quantum computing with a single molecular ensemble and a Cooper-pair box (*4 pages*) 020301(R)
Karl Tordrup and Klaus Mølmer
- Quantum memory for images: A quantum hologram (*4 pages*) 020302(R)
Denis V. Vasilyev, Ivan V. Sokolov, and Eugene S. Polzik
- Nested entangled states for distributed quantum channels (*4 pages*) 020303(R)
C. Di Franco, M. Paternostro, and M. S. Kim

Atomic and molecular structure and dynamics

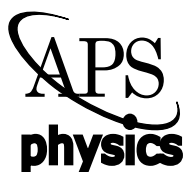
- Hyperfine structure of S states in Li and Be^+ (*4 pages*) 020501(R)
V. A. Yerokhin

Atomic and molecular processes in external fields, including interactions with strong fields and short pulses

- Doppler cooling of calcium ions using a dipole-forbidden transition (*4 pages*) 021401(R)
Richard J. Hendricks, Jens L. Sørensen, Caroline Champenois, Martina Knoop, and Michael Drewsen
- Observation of sub-Doppler temperatures in bosonic magnesium (*4 pages*) 021402(R)
T. E. Mehlstäubler, K. Moldenhauer, M. Riedmann, N. Rehbein, J. Friebe, E. M. Rasel, and W. Ertmer
- Enhancement of intermediate-field two-photon absorption by rationally shaped femtosecond pulses
(*4 pages*) 021403(R)
Lev Chuntonov, Leonid Rybak, Andrey Gandman, and Zohar Amitay

Matter waves

- Feshbach molecules in a one-dimensional optical lattice (*4 pages*) 021601(R)
N. Nygaard, R. Piil, and K. Mølmer
- Tkachenko modes in a superfluid Fermi gas at unitarity (*4 pages*) 021602(R)
Gentaro Watanabe, Marco Cozzini, and Sandro Stringari



Copyright 2008 by The American Physical Society

(Continued)



1050-2947(200802)77:2:A;1-F