PHYSICAL REVIEW A

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

PERIODICALS
Postmaster send address changes to:
American Institute of Physics
Suite 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 62, NUMBER 4 ***CONTENTS*** **OCTOBER 2000**

RAPID COMMUNICATIONS

Fundamental concepts

Collective versus local measurements on two parallel or antiparallel spins *(4 pages)* . . . . . 040101(R)
S. Massar

Quantum information

Optimal ***N***-to-*M* cloning of conjugate quantum variables *(3 pages)* . . . . . 040301(R)
N. J. Cerf and S. Iblisdir

Atomic and molecular collisions and interactions

Bound-free correlation in electron scattering by atoms and molecules *(4 pages)* . . . . . 040701(R)
R. K. Nesbet

Atomic and molecular processes in external fields

Synthesis and characterization of entangled mesoscopic superpositions for a trapped electron *(4 pages)* . . . . . 041401(R)
Michol Massini, Mauro Fortunato, Stefano Mancini, and Paolo Tombesi

Matter waves

Low-energy collective excitations in a superfluid trapped Fermi gas *(4 pages)* . . . . . 041601(R)
M. A. Baranov and D. S. Petrov

Quantum optics, physics of lasers, nonlinear optics

Transverse effects in ring fiber laser multimode instabilities *(3 pages)* . . . . . 041801(R)
J. F. Urchueguía, G. J. de Valcárcel, Eugenio Roldán, and F. Prati

Phase-matched high-order harmonic generation in an ionized medium using a buffer gas of exploding atomic clusters *(4 pages)* . . . . . 041802(R)
John W. G. Tisch

Pulse-length dependence of high-order harmonic generation in dissociating cyclic organic molecules *(4 pages)* . . . . . 041803(R)
N. Hay, R. de Nalda, T. Halfmann, K. J. Mendham, M. B. Mason, M. Castillejo, and J. P. Marangos

Copyright 2000 by The American Physical Society

(Continued)

1050-2947(200010)62:4;1-K