

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 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 78, NUMBER 1
PARTS A AND B

CONTENTS

JULY 2008

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages 010101(R)-012902, and Part B pages 013201-019905(E).

PART A

<i>Physical Review A</i> Editorial Policies	iii
<i>Physical Review A</i> Information for Contributors	vii
Guidelines for PRA Section Selection	x

RAPID COMMUNICATIONS

Fundamental concepts

Mesoscopic spin-boson models of trapped ions (<i>4 pages</i>)	010101(R)
D. Porras, F. Marquardt, J. von Delft, and J. I. Cirac	

Quantum information

Fidelity analysis of topological quantum phase transitions (<i>4 pages</i>)	010301(R)
Damian F. Abasto, Alioscia Hama, and Paolo Zanardi	
Demonstration of pure geometric universal single-qubit operation on two-level atoms (<i>4 pages</i>)	010302(R)
Hiromitsu Imai and Atsuo Morinaga	
Universal control of nuclear spins via anisotropic hyperfine interactions (<i>4 pages</i>)	010303(R)
J. S. Hodges, J. C. Yang, C. Ramanathan, and D. G. Cory	
Detection of transverse entanglement in phase space (<i>4 pages</i>)	010304(R)
D. S. Tasca, S. P. Walborn, P. H. Souto Ribeiro, and F. Toscano	
Maximally entangling tripartite protocols for Josephson phase qubits (<i>4 pages</i>)	010305(R)
Andrei Galiatdinov and John M. Martinis	
Evolution of entanglement entropy following a quantum quench: Analytic results for the XY chain in a transverse magnetic field (<i>4 pages</i>)	010306(R)
Maurizio Fagotti and Pasquale Calabrese	
Continuous-variable quantum swapping gate between light and atoms (<i>4 pages</i>)	010307(R)
T. Takano, M. Fuyama, R. Namiki, and Y. Takahashi	
Decoherence-free quantum information in Markovian systems (<i>4 pages</i>)	010308(R)
Manas K. Patra and Peter G. Brooke	



Copyright 2008 by The American Physical Society

(Continued)



1050-2947(200807)78:1:A;1-0

Atomic and molecular structure and dynamics

- Atomic electric-dipole moments from Higgs-boson-mediated interactions (*4 pages*) 010501(R)
 B. K. Sahoo, B. P. Das, Rajat K. Chaudhuri, Debashis Mukherjee, and E. P. Venugopal
- Prospects for an electron electric-dipole moment search in metastable ThO and ThF⁺ (*4 pages*) 010502(R)
 Edmund R. Meyer and John L. Bohn
- Convergence of all-order many-body methods: Coupled-cluster study for Li (*4 pages*) 010503(R)
 A. Derevianko, S. G. Porsev, and K. Beloy

Atomic and molecular collisions and interactions

- Feshbach resonances in ultracold ^{6,7}Li+²³Na atomic mixtures (*4 pages*) 010701(R)
 Marko Gacesa, Philippe Pellegrini, and Robin Côté

Photon, electron, atom, and molecule interactions with solids and surfaces

- Reexamination of local spin polarization at surfaces probed by hollow atoms (*4 pages*) 010901(R)
 M. Busch, S. Wethekam, and H. Winter
- Quantum reflection of helium atom beams from a microstructured grating (*4 pages*) 010902(R)
 Bum Suk Zhao, Stephan A. Schulz, Samuel A. Meek, Gerard Meijer, and Wieland Schöllkopf

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

- Spectroscopy of atomic rubidium at 500-bar buffer gas pressure: Approaching the thermal equilibrium of dressed atom-light states (*4 pages*) 011401(R)
 Ulrich Vogl and Martin Weitz

Matter waves

- Pair breaking in rotating Fermi gases (*4 pages*) 011601(R)
 Michael Urban and Peter Schuck
- Atom-atom correlations and relative number squeezing in dissociation of spatially inhomogeneous molecular condensates (*4 pages*) 011602(R)
 Magnus Ögren and K. V. Kheruntsyan
- Population-imbalanced fermions in harmonically trapped optical lattices (*4 pages*) 011603(R)
 M. Iskin and C. J. Williams
- Accelerating evaporative cooling of atoms into Bose-Einstein condensation in optical traps (*4 pages*) 011604(R)
 Chen-Lung Hung, Xibo Zhang, Nathan Gemelke, and Cheng Chin
- Effect of even and odd numbers of atoms in a condensate inside a double-well potential (*4 pages*) 011605(R)
 R. Lü, M. Zhang, J. L. Zhu, and L. You
- Symmetry-conserving vortex clusters in small rotating clouds of ultracold bosons (*4 pages*) 011606(R)
 Igor Romanovsky, Constantine Yannouleas, and Uzi Landman

Quantum optics, physics of lasers, nonlinear optics, classical optics

- Enhancing the yield of high-order harmonics with an array of gas jets (*4 pages*) 011801(R)
 Angela Pirri, Chiara Corsi, and Marco Bellini

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 78, NUMBER 1

JULY 2008

Pulse dynamics and solitons in mode-locked lasers (<i>4 pages</i>)	011802(R)
Mark J. Ablowitz and Theodoros P. Horikis	
Generation of a self-pulsed picosecond solitary wave train from a periodically amplifying Bragg structure (<i>4 pages</i>)	011803(R)
Jianhua Zeng, Jianying Zhou, Gershon Kurizki, and Tomas Opatrny	
Discrete cavity solitons due to saturable nonlinearity (<i>4 pages</i>)	011804(R)
A. V. Yulin, A. R. Champneys, and D. V. Skryabin	
Dramatic density-of-state enhancement of Raman scattering at the band edge in a one-dimensional photonic-crystal waveguide (<i>4 pages</i>)	011805(R)
Kuon Inoue, Hisaya Oda, Akio Yamanaka, Naoki Ikeda, Hitoshi Kawashima, Yoshimasa Sugimoto, and Kiyoshi Asakawa	
Temporal characterization of attosecond wave forms in the sub-optical-cycle regime (<i>4 pages</i>)	011806(R)
Isabell Thomann, Emily Gregonis, Xuan Liu, Rick Trebino, Arvinder S. Sandhu, Margaret M. Murnane, and Henry C. Kapteyn	
Quasilinear evolution and saturation of the modulational instability of partially coherent optical waves (<i>4 pages</i>)	011807(R)
T. Hansson, D. Anderson, M. Lisak, V. E. Semenov, and U. Österberg	
Observations of delayed all-optical routing in a slow-light regime (<i>4 pages</i>)	011808(R)
Byoung S. Ham	

ARTICLES

Fundamental concepts

von Neumann lattices in finite-dimensional Hilbert spaces (<i>7 pages</i>)	012101
M. Revzen and F. C. Khanna	
Extension of the Huttner-Barnett model to a magnetodielectric medium (<i>8 pages</i>)	012102
Fardin Kheirandish and Morteza Soltani	
Complete conditions for legitimate Wigner distributions (<i>6 pages</i>)	012103
Hyunchul Nha	
Casimir forces between cylinders and plates (<i>11 pages</i>)	012104
Sahand Jamal Rahi, Thorsten Emig, Robert L. Jaffe, and Mehran Kardar	
Spontaneous emission of an atom near a wedge (<i>8 pages</i>)	012105
F. S. S. Rosa, T. N. C. Mendes, A. Tenório, and C. Farina	
Structure of quantum correlations in momentum space and off-diagonal long-range order in η pairing and BCS states (<i>11 pages</i>)	012106
Paolo Giorda and Alberto Anfossi	
The role of internal degrees of freedom in Aharonov-Bohm-type interference phenomena (<i>6 pages</i>)	012107
S. A. R. Horsley and M. Babiker	
Quantum mechanics with extended probabilities (<i>13 pages</i>)	012108
James B. Hartle	
Measuring the size of a quantum superposition of many-body states (<i>5 pages</i>)	012109
Florian Marquardt, Benjamin Abel, and Jan von Delft	

(Continued)

Zero-point energy of a cylindrical layer of finite thickness (<i>9 pages</i>)	012110
K. Tatur, L. M. Woods, and I. V. Bondarev	
Lorentz-invariant photon number density (<i>5 pages</i>)	012111
Margaret Hawton	
Greenberger-Horne-Zeilinger-type violation of local realism by mixed states (<i>5 pages</i>)	012112
Xiao-Qi Zhou, Chao-Yang Lu, Wei-Bo Gao, Jin Zhang, Zeng-Bing Chen, Tao Yang, and Jian-Wei Pan	
Partial K -way negativities and three-tangle for three-qubit states (<i>5 pages</i>)	012113
S. Shelly Sharma and N. K. Sharma	
Detecting gravitational waves using entangled photon states (<i>5 pages</i>)	012114
Fabrizio Tamburini, Bruce A. Bassett, and Carlo Ungarelli	
Casimir energy between a plane and a sphere in electromagnetic vacuum (<i>4 pages</i>)	012115
Paulo A. Maia Neto, Astrid Lambrecht, and Serge Reynaud	
Quantum information	
Experimental generation of four-mode continuous-variable cluster states (<i>6 pages</i>)	012301
Mitsuyoshi Yukawa, Ryuji Ukai, Peter van Loock, and Akira Furusawa	
Protected Rabi oscillation induced by natural interactions among physical qubits (<i>9 pages</i>)	012302
Naoaki Kokubun and Akira Shimizu	
Exact quantum search by parallel unitary discrimination schemes (<i>8 pages</i>)	012303
Xiaodi Wu and Runyao Duan	
Fidelity susceptibility and long-range correlation in the Kitaev honeycomb model (<i>6 pages</i>)	012304
Shuo Yang, Shi-Jian Gu, Chang-Pu Sun, and Hai-Qing Lin	
Methods for a linear optical quantum Fredkin gate (<i>5 pages</i>)	012305
Yan-Xiao Gong, Guang-Can Guo, and Timothy C. Ralph	
Graphical nonbinary quantum error-correcting codes (<i>11 pages</i>)	012306
Dan Hu (胡丹), Weidong Tang (汤卫东), Meisheng Zhao (赵梅生), Qing Chen (陈清), Sixia Yu (郁司夏), and C. H. Oh	
Measurement and control of spatial qubits generated by passing photons through double slits (<i>9 pages</i>)	012307
Gen Taguchi, Tatsuo Dougakiuchi, Nobuaki Yoshimoto, Katsuya Kasai, Masataka Iinuma, Holger F. Hofmann, and Yutaka Kadoya	
Distance bounds on quantum dynamics (<i>7 pages</i>)	012308
Daniel A. Lidar, Paolo Zanardi, and Kaveh Khodjasteh	
Locality and nonlocality in quantum pure-state identification problems (<i>11 pages</i>)	012309
Y. Ishida, T. Hashimoto, M. Horibe, and A. Hayashi	
Faster quantum-walk algorithm for the two-dimensional spatial search (<i>6 pages</i>)	012310
Avatar Tulsi	
Proper monogamy inequality for arbitrary pure quantum states (<i>4 pages</i>)	012311
Yong-Cheng Ou, Heng Fan, and Shao-Ming Fei	
Greenberger-Horne-Zeilinger versus W states: Quantum teleportation through noisy channels (<i>11 pages</i>)	012312
Eylee Jung, Mi-Ra Hwang, You Hwan Ju, Min-Soo Kim, Sahng-Kyoon Yoo, Hungsoo Kim, DaeKil Park, Jin-Woo Son, S. Tamaryan, and Seong-Keuck Cha	

PHYSICAL REVIEW A	THIRD SERIES, VOLUME 78, NUMBER 1	JULY 2008
Analysis of experimental feasibility of polar-molecule-based phase gates (<i>11 pages</i>)		012313
Elena Kuznetsova, Robin Côté, Kate Kirby, and S. F. Yelin		
Hamiltonian formulation of quantum error correction and correlated noise: Effects of syndrome extraction in the long-time limit (<i>18 pages</i>)		012314
E. Novais, Eduardo R. Mucciolo, and Harold U. Baranger		
Coexistence of qubit effects (<i>9 pages</i>)		012315
Peter Stano, Daniel Reitzner, and Teiko Heinosaari		
Thermal entanglement in fully connected spin systems and its random-phase-approximation description (<i>8 pages</i>)		012316
J. M. Matera, R. Rossignoli, and N. Canosa		
Pure-state transformations and catalysis under operations that completely preserve positivity of partial transpose (<i>8 pages</i>)		012317
William Matthews and Andreas Winter		
Geometrically induced singular behavior of entanglement (<i>5 pages</i>)		012318
D. Cavalcanti, P. L. Saldanha, O. Cosme, F. G. S. L. Brandão, C. H. Monken, S. Pádua, M. França Santos, and M. O. Terra Cunha		
Optimal tracking for pairs of qubit states (<i>16 pages</i>)		012319
Paulo E. M. F. Mendonça, Alexei Gilchrist, and Andrew C. Doherty		
Construction of model Hamiltonians for adiabatic quantum computation and its application to finding low-energy conformations of lattice protein models (<i>15 pages</i>)		012320
Alejandro Perdomo, Colin Truncik, Ivan Tubert-Brohman, Geordie Rose, and Alán Aspuru-Guzik		
Efficient simulation of quantum evolution using dynamical coarse graining (<i>13 pages</i>)		012321
M. Khasin and R. Kosloff		
Extensions of the quantum Fano inequality (<i>4 pages</i>)		012322
Naresh Sharma		
Creation of cluster states of trapped ions by collective addressing (<i>5 pages</i>)		012323
Peter A. Ivanov, Nikolay V. Vitanov, and Martin B. Plenio		
Martingale dynamics in quantum discrimination (<i>5 pages</i>)		012324
Michael R. Frey		
Entanglement monogamy in a three-qubit state (<i>7 pages</i>)		012325
Jie-Hui Huang and Shi-Yao Zhu		
Quantum random walks and wave-packet reshaping at the single-photon level (<i>5 pages</i>)		012326
P. H. Souto Ribeiro, S. P. Walborn, C. Raitz, Jr., L. Davidovich, and N. Zagury		
Relative entropy of entanglement for multipartite mixed states: Permutation-invariant states and Dür states (<i>17 pages</i>)		012327
Tzu-Chieh Wei		
Liquid-state nuclear magnetic resonance as a testbed for developing quantum control methods (<i>14 pages</i>)		012328
C. A. Ryan, C. Negrevergne, M. Laforest, E. Knill, and R. Laflamme		
Excess-noise-free recording and uploading of nonclassical states to continuous-variable quantum memory (<i>9 pages</i>)		012329
Radim Filip		

Quantum many-body dynamics of coupled double-well superlattices (<i>12 pages</i>)	012330
Peter Barmettler, Ana Maria Rey, Eugene Demler, Mikhail D. Lukin, Immanuel Bloch, and Vladimir Gritsev	
Computable bounds for the discrimination of Gaussian states (<i>8 pages</i>)	012331
Stefano Pirandola and Seth Lloyd	
Channel estimation theory of low-noise multiple parameters: Attainability problem of the Cramér-Rao bounds (<i>10 pages</i>)	012332
M. Hotta and T. Karasawa	
State discrimination with error margin and its locality (<i>7 pages</i>)	012333
A. Hayashi, T. Hashimoto, and M. Horibe	
Controlling entanglement by direct quantum feedback (<i>10 pages</i>)	012334
A. R. R. Carvalho, A. J. S. Reid, and J. J. Hope	
Distillable entanglement and area laws in spin and harmonic-oscillator systems (<i>10 pages</i>)	012335
Daniel Cavalcanti, Alessandro Ferraro, Artur García-Saenz, and Antonio Acín	
Scaling the neutral-atom Rydberg gate quantum computer by collective encoding in holmium atoms (<i>10 pages</i>)	012336
M. Saffman and K. Mølmer	
Encoding one logical qubit into six physical qubits (<i>12 pages</i>)	012337
Bilal Shaw, Mark M. Wilde, Ognian Oreshkov, Isaac Kremsky, and Daniel A. Lidar	
Quantum spin models with electrons in Penning traps (<i>9 pages</i>)	012338
G. Ciaramicoli, I. Marzoli, and P. Tombesi	
Entanglement-seeded, dual, optical parametric amplification: Applications to quantum imaging and metrology (<i>5 pages</i>)	012339
Ryan T. Glasser, Hugo Cable, Jonathan P. Dowling, Francesco De Martini, Fabio Sciarrino, and Chiara Vitelli	
Fractional revival “matrix mechanics” in quantum billiards (<i>14 pages</i>)	012340
Bernd Rohwedder	
Classical enhancement of quantum-error-correcting codes (<i>6 pages</i>)	012341
Isaac Kremsky, Min-Hsiu Hsieh, and Todd A. Brun	
Multipartite entanglement measure for all discrete systems (<i>7 pages</i>)	012342
Beatrix C. Hiesmayr and Marcus Huber	
Permutation-invariant monotones for multipartite entanglement characterization (<i>6 pages</i>)	012343
Xi-Jun Ren, Wei Jiang, Xingxiang Zhou, Zheng-Wei Zhou, and Guang-Can Guo	
Quantum secret sharing with multilevel mutually (un)biased bases (<i>5 pages</i>)	012344
I-Ching Yu, Feng-Li Lin, and Ching-Yu Huang	
Generation of time-bin-entangled photons without temporal postselection (<i>6 pages</i>)	012345
Alessandro Rossi, Giuseppe Vallone, Francesco De Martini, and Paolo Mataloni	
Computational power of symmetric Hamiltonians (<i>8 pages</i>)	012346
Alastair Kay	
Scalable protocol for identification of correctable codes (<i>5 pages</i>)	012347
M. Silva, E. Magesan, D. W. Kribs, and J. Emerson	

CONTENTS - Continued

PHYSICAL REVIEW A	THIRD SERIES, VOLUME 78, NUMBER 1	JULY 2008
Random-party entanglement distillation in multipartite states (9 pages)		012348
Ben Fortescue and Hoi-Kwong Lo		
Local entanglement of multidimensional continuous-variable systems (11 pages)		012349
H.-C. Lin and A. J. Fisher		
Memory imperfections in atomic-ensemble-based quantum repeaters (14 pages)		012350
Jonatan Bohr Brask and Anders Søndberg Sørensen		
Quantum states for perfectly secure secret sharing (4 pages)		012351
Dong Pyo Chi, Jeong Woon Choi, Jeong San Kim, Taewan Kim, and Soojoon Lee		
Realizable Hamiltonians for universal adiabatic quantum computers (7 pages)		012352
Jacob D. Biamonte and Peter J. Love		
Subsystem stabilizer codes cannot have a universal set of transversal gates for even one encoded qudit (14 pages)		012353
Xie Chen, Hyeyoun Chung, Andrew W. Cross, Bei Zeng, and Isaac L. Chuang		
Repeat-until-success distributed quantum computation by using single-photon interference at a beam splitter (5 pages)		012354
Xun-Li Feng, Jun Qian, L. C. Kwek, and C. H. Oh		
Rigorous bounds on the performance of a hybrid dynamical-decoupling quantum-computing scheme (14 pages)		012355
Kaveh Khodjasteh and Daniel A. Lidar		
Finite automata for caching in matrix product algorithms (13 pages)		012356
Gregory M. Crosswhite and Dave Bacon		
Decoherence of Bell states by local interactions with a dynamic spin environment (8 pages)		012357
Cecilia Cormick and Juan Pablo Paz		
State-independent control theory for weakly dissipative quantum systems (9 pages)		012358
M. Wenin and W. Pötz		
Mixed-state localizable entanglement for continuous variables (10 pages)		012359
Ladislav Mišta, Jr. and Jaromír Fiurášek		
Atomic and molecular structure and dynamics		
Scheme for calculating the orbital-dependent exchange-correlation potential using the virial theorem: Application to atomic systems (6 pages)		012501
M. Koderá, K. Higuchi, A. Narita, and M. Higuchi		
Measurement of the hyperfine splitting of the $6S_{1/2}$ level in rubidium (11 pages)		012502
A. Pérez Galván, Y. Zhao, and L. A. Orozco		
Potassium ground-state scattering parameters and Born-Oppenheimer potentials from molecular spectroscopy (13 pages)		012503
Stephan Falke, Horst Knöckel, Jan Friebe, Matthias Riedmann, Eberhard Tiemann, and Christian Lisdat		
Nuclear mass correction to the magnetic interaction of atomic systems (6 pages)		012504
Krzysztof Pachucki		
Wave function and external potential from constrained search in density-functional theory (7 pages)		012505
Ji Luo		

(Continued)

Calculation of the electron-nucleus scalar-pseudoscalar interaction constant W_S for YbF and BaF molecules: A perturbative approach (5 pages)	012506
Malaya K. Nayak and Rajat K. Chaudhuri	
L -subshell vacancy decay processes for elements with $52 \leq Z \leq 57$ following ionization using Mn $K\alpha$ x rays (19 pages)	012507
Veena Sharma, Sanjeev Kumar, D. Mehta, and Nirmal Singh	
Theoretical study of lifetimes and polarizabilities in Ba^+ (7 pages)	012508
E. Iskrenova-Tchoukova and M. S. Safronova	
Angular distributions of antiprotons elastically and inelastically scattered by helium (7 pages)	012509
James S. Cohen	
Valence calculations of lanthanide anion binding energies: $6p$ attachments to $4f^n 6s^2$ thresholds (7 pages)	012510
Steven M. O'Malley and Donald R. Beck	
SeOClI: A promising candidate for the detection of parity violation in chiral molecules (4 pages)	012511
D. Figgen and P. Schwerdtfeger	
Correlated dynamics of electrons with reduced two-electron density matrices (6 pages)	012512
B. Schäfer-Bung and M. Nest	
Hyperfine structure of Li and Be^+ (16 pages)	012513
V. A. Yerokhin	
Determination of the proton mass from a measurement of the cyclotron frequencies of D^+ and H_2^+ in a Penning trap (6 pages)	012514
A. Solders, I. Bergström, Sz. Nagy, M. Suhonen, and R. Schuch	
<i>Ab initio</i> determination of polarizabilities and van der Waals coefficients of Li atoms using the relativistic coupled-cluster method (7 pages)	012515
L. W. Wansbeek, B. K. Sahoo, R. G. E. Timmermans, B. P. Das, and D. Mukherjee	
Atomic and molecular collisions and interactions	
Signature of Ericson fluctuations in helium inelastic scattering cross sections near the double ionization threshold (7 pages)	012701
Junliang Xu, Anh-Thu Le, Toru Morishita, and C. D. Lin	
General form of the quantum-defect theory for $-1/r^\alpha$ type of potentials with $\alpha > 2$ (16 pages)	012702
Bo Gao	
Stochastic variational method for elastic scattering (11 pages)	012703
J. Y. Zhang and J. Mitroy	
Electron-impact ionization of B^+ (5 pages)	012704
J. C. Berengut, S. D. Loch, M. S. Pindzola, C. P. Ballance, D. C. Griffin, M. Fogle, and M. E. Bannister	
Theoretical and laboratory study of suppression effects in fine-structure-changing collisions of Ti with He (8 pages)	012705
Bernard Zygelman and Jonathan D. Weinstein	
Positron scattering from C_{20} (11 pages)	012706
Ralph Carey, Robert R. Lucchese, and F. A. Gianturco	
Cross sections for H^+ and H atoms colliding with Li in the low-keV-energy region (7 pages)	012707
R. Cabrera-Trujillo, John R. Sabin, E. Deumens, and Y. Öhrn	

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 78, NUMBER 1

JULY 2008

Charge transfer and excitation in $H^+ + CH_3$ collisions below 10 keV (9 pages)	012708
Masatoshi Nagao, Ken-nosuke Hida, Mineo Kimura, Sachchida N. Rai, Heinz-Peter Liebermann, Robert J. Buenker, Hiroya Suno, and Phillip C. Stancil	
Analysis of averaged multichannel delay times (6 pages)	012709
N. G. Kelkar and M. Nowakowski	
Suppression of primary electron interferences in the ionization of N_2 by 1–5-MeV/u protons (5 pages)	012710
J. L. Baran, S. Das, F. J��rai-Szab��, K. P��ra, L. Nagy, and J. A. Tanis	
High-lying resonances in Ps-H scattering below the Ps^-H^+ threshold (4 pages)	012711
Z.-C. Yan and Y. K. Ho	
Low-lying resonances in electron-argon scattering: Measurements at 5-meV resolution and comparison with theory (16 pages)	012712
K. Franz, T. H. Hoffmann, J. B��mmels, A. Gopalan, G. Sauter, W. Meyer, M. Allan, M.-W. Ruf, and H. Hotop	
Excitation cross sections for electron scattering from K^+ ions (9 pages)	012713
S. S. Tayal and O. Zatsarinny	
Effect of angular electron correlation in He: Second-order calculations for transfer ionization (5 pages)	012714
A. L. Godunov, Colm T. Whelan, and H. R. J. Walters	
Positron-atom scattering using pseudostate energy shifts (13 pages)	012715
J. Mitroy, J. Y. Zhang, M. W. J. Bromley, and S. I. Young	

Photon, electron, atom, and molecule interactions with solids and surfaces

Kinetic study on self-energy and stopping power of charged particles moving in metallic carbon nanotubes (8 pages)	012901
Yuan-Hong Song, Dan Zhao, and You-Nian Wang	
Energy-loss straggling of swift heavy ions in an electron gas (4 pages)	012902
I. Nagy, R. Vincent, J. I. Juaristi, and P. M. Echenique	

PART B

Clusters (including fullerenes)

Dynamical effects of confinement on atomic valence photoionization in $Mg@C_{60}$ (4 pages)	013201
Himadri S. Chakraborty, Mohamed E. Madjet, Jan-M. Rost, and Steven T. Manson	

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

Lithium ionization by an intense laser field using classical ensemble simulation (7 pages)	013401
Jing Guo and Xue-shen Liu	
Optically induced spin echoes in rubidium atoms: On- and off-resonant manipulations of spins (10 pages) . . .	013402
T. Moriyasu, Y. Koyama, Y. Fukuda, and T. Kohmoto	
Lifetime of metastable helium molecule in intense laser fields (9 pages)	013403
Tomokazu Yasuike and Kiyohiko Someda	

(Continued)

Submillimeter-resolution magnetic resonance imaging at the Earth's magnetic field with an atomic magnetometer (<i>4 pages</i>)	013404
Shoujun Xu, C. W. Crawford, Simon Rochester, Valeriy Yashchuk, Dmitry Budker, and Alexander Pines	
Molecular symmetry effects in the ionization of CS ₂ by intense few-cycle laser pulses (<i>4 pages</i>)	013405
D. Mathur, A. K. Dharmadhikari, F. A. Rajgara, and J. A. Dharmadhikari	
Sub-Poissonian angular momentum distribution near threshold in atomic ionization by short laser pulses (<i>6 pages</i>)	013406
Diego G. Arbó, Konstantinos I. Dimitriou, Emil Persson, and Joachim Burgdörfer	
Discrepancies in the resonance-fluorescence spectrum calculated with two methods (<i>7 pages</i>)	013407
Qing Xu, Xiang-ming Hu, and Jian-wu Yin	
Collective oscillations in ultracold atomic gas (<i>8 pages</i>)	013408
J. T. Mendonça, R. Kaiser, H. Terças, and J. Loureiro	
Nonsequential double ionization of the hydrogen molecule: Dependence on molecular alignment (<i>12 pages</i>)	013409
S. Baier, A. Becker, and L. Plaja	
Atom microtraps based on near-field Fresnel diffraction (<i>5 pages</i>)	013410
Thejesh N. Bandi, Vladimir G. Minogin, and Síle Nic Chormaic	
Photoionization processes of the beryllium atom (<i>9 pages</i>)	013411
Ju-Tang Hsiao, Lin-Ru Wang, Hsiao-Ling Sun, Sheng-Fang Lin, Cheng-Liang Lu, and Keh-Ning Huang	
Snapshot imaging of postpulse transient molecular alignment revivals (<i>7 pages</i>)	013412
V. Lorient, R. Tehini, E. Hertz, B. Lavorel, and O. Faucher	
Above-threshold ionization in a strong dc electric field (<i>7 pages</i>)	013413
Y. Ni, S. Zamith, F. Lépine, T. Martchenko, M. Kling, O. Ghafur, H. G. Muller, G. Berden, F. Robicheaux, and M. J. J. Vrakking	
Photo-double-ionization of H ₂ : Two-center interference and its dependence on the internuclear distance (<i>5 pages</i>)	013414
M. S. Schöffler, K. Kreidi, D. Akoury, T. Jahnke, A. Staudte, N. Neumann, J. Titze, L. Ph. H. Schmidt, A. Czasch, O. Jagutzki, R. A. Costa Fraga, R. E. Grisenti, M. Smolarski, P. Ranitovic, C. L. Cocke, T. Osipov, H. Adaniya, S. Lee, J. C. Thompson, M. H. Prior, A. Belkacem, Th. Weber, A. Landers, H. Schmidt-Böcking, and R. Dörner	
Photoionization of atoms confined in giant single-walled and multiwalled fullerenes (<i>6 pages</i>)	013415
V. K. Dolmatov, P. Brewer, and S. T. Manson	
Heteronuclear molecules in an optical dipole trap (<i>7 pages</i>)	013416
J. J. Zirbel, K.-K. Ni, S. Ospelkaus, T. L. Nicholson, M. L. Olsen, P. S. Julienne, C. E. Wieman, J. Ye, and D. S. Jin	
<i>F</i> -resolved magneto-optical resonances in the <i>D</i> ₁ excitation of cesium: Experiment and theory (<i>8 pages</i>)	013417
M. Auzinsh, R. Ferber, F. Gahbauer, A. Jarmola, and L. Kalvans	
Nonperturbative broadening of paramagnetic resonance lines by transverse magnetic field gradients (<i>9 pages</i>)	013418
K. F. Zhao, M. Schaden, and Z. Wu	
Quantum model for double ionization of atoms in strong laser fields (<i>13 pages</i>)	013419
Jakub S. Prauzner-Bechcicki, Krzysztof Sacha, Bruno Eckhardt, and Jakub Zakrzewski	

Matter waves

Model for partial coherence and wavefront curvature in grating interferometers (<i>10 pages</i>)	013601
Ben McMorran and Alexander D. Cronin	
Controlled quantum stirring of Bose-Einstein condensates (<i>11 pages</i>)	013602
Moritz Hiller, Tsampikos Kottos, and Doron Cohen	
Spontaneous symmetry breaking of gap solitons and phase transitions in double-well traps (<i>6 pages</i>)	013603
M. Trippenbach, E. Infeld, J. Gocałek, M. Matuszewski, M. Oberthaler, and B. A. Malomed	
Ground-state properties of a few-boson system in a one-dimensional hard-wall split potential (<i>7 pages</i>)	013604
Xiangguo Yin, Yajiang Hao, Shu Chen, and Yunbo Zhang	
Number filter for matter waves (<i>8 pages</i>)	013605
G. Nandi, A. Sizmann, J. Fortágh, C. Weiß, and R. Walser	
Stability of excited states of a Bose-Einstein condensate in an anharmonic trap (<i>12 pages</i>)	013606
Dmitry A. Zezyulin, Georgy L. Alfimov, Vladimir V. Konotop, and Víctor M. Pérez-García	
Quantum phases of Fermi-Fermi mixtures in optical lattices (<i>12 pages</i>)	013607
M. Iskin and C. A. R. Sá de Melo	
Double-barrier potentials for matter-wave gap solitons (<i>5 pages</i>)	013608
V. Ahufinger, B. A. Malomed, G. Birkel, R. Corbalán, and A. Sanpera	
Optical lattice quantum Hall effect (<i>13 pages</i>)	013609
Rebecca N. Palmer, Alexander Klein, and Dieter Jaksch	
Rovibrational quantum interferometers and gravitational waves (<i>12 pages</i>)	013610
Andreas Wicht, Claus Lämmerzahl, Dennis Lorek, and Hansjörg Dittus	
Matter-wave solitons with a periodic, piecewise-constant scattering length (<i>10 pages</i>)	013611
A. S. Rodrigues, P. G. Kevrekidis, Mason A. Porter, D. J. Frantzeskakis, P. Schmelcher, and A. R. Bishop	
Energy levels of two identical fermions in a harmonic trap near a p -wave Feshbach resonance (<i>4 pages</i>)	013612
S.-K. Yip	
Small mass- and trap-imbalanced two-component Fermi systems (<i>12 pages</i>)	013613
D. Blume	
Nonrelativistic conformal field theory and trapped atoms: Virial theorems and the state-operator correspondence in three dimensions (<i>12 pages</i>)	013614
Thomas Mehen	
Dynamics and stability of Bose-Einstein condensates with attractive $1/r$ interaction (<i>11 pages</i>)	013615
Holger Cartarius, Tomaž Fabčić, Jörg Main, and Günter Wunner	
Solitons in the discrete nonpolynomial Schrödinger equation (<i>12 pages</i>)	013616
Aleksandra Maluckov, Ljupčo Hadžievski, Boris A. Malomed, and Luca Salasnich	
Thermodynamical approaches to efficient sympathetic cooling in ultracold Fermi-Bose atomic mixtures (<i>12 pages</i>)	013617
Michael Brown-Hayes, Qun Wei, Carlo Presilla, and Roberto Onofrio	
Many-body effects on nonadiabatic Feshbach conversion in bosonic systems (<i>7 pages</i>)	013618
Jie Liu, Bin Liu, and Li-Bin Fu	

Fermion-mediated interactions in a dilute Bose-Einstein condensate (<i>12 pages</i>)	013619
D. H. Santamore and Eddy Timmermans	
Ground-state reference systems for expanding correlated fermions in one dimension (<i>7 pages</i>)	013620
F. Heidrich-Meisner, M. Rigol, A. Muramatsu, A. E. Feiguin, and E. Dagotto	
Tunneling dynamics of a few bosons in a double well (<i>10 pages</i>)	013621
Sascha Zöllner, Hans-Dieter Meyer, and Peter Schmelcher	
Hybrid phase-space simulation method for interacting Bose fields (<i>12 pages</i>)	013622
Scott E. Hoffmann, Joel F. Corney, and Peter D. Drummond	
Spontaneous rotation in one-dimensional systems of cold atoms (<i>6 pages</i>)	013623
Akiyuki Tokuno and Masahiro Sato	
Effect of anisotropic hopping on the Bose-Hubbard model phase diagram: Strong-coupling perturbation theory on a square lattice (<i>4 pages</i>)	013624
J. K. Freericks	
Phase diagram and momentum distribution of an interacting Bose gas in a bichromatic lattice (<i>9 pages</i>)	013625
Xiaolong Deng, R. Citro, A. Minguzzi, and E. Orignac	
Relaxation of a one-dimensional Mott insulator after an interaction quench (<i>9 pages</i>)	013626
Marcus Kollar and Martin Eckstein	
Theory of correlations between ultracold bosons released from an optical lattice (<i>19 pages</i>)	013627
E. Toth, A. M. Rey, and P. B. Blakie	
Anomalous enhancement of quasiparticle current near a potential barrier in a Bose-Einstein condensate (<i>4 pages</i>)	013628
Shunji Tsuchiya and Yoji Ohashi	
Composite fermionization of one-dimensional Bose-Bose mixtures (<i>9 pages</i>)	013629
Sascha Zöllner, Hans-Dieter Meyer, and Peter Schmelcher	
Energy measurement and virial theorem for confined universal Fermi gases (<i>3 pages</i>)	013630
J. E. Thomas	
Vortex-lattice formation and melting in a nonrotating Bose-Einstein condensate (<i>9 pages</i>)	013631
Gary Ruben, David M. Paganin, and Michael J. Morgan	
Phase-separated charge-density-wave phase in the two-species extended Bose-Hubbard model (<i>6 pages</i>)	013632
Tapan Mishra, B. K. Sahoo, and Ramesh V. Pai	
Quantum motion effects in an ultracold-atom Mach-Zehnder interferometer (<i>10 pages</i>)	013633
I. Lizuain, S. V. Mousavi, D. Seidel, and J. G. Muga	
Correlation effects in ultracold two-dimensional Bose gases (<i>10 pages</i>)	013634
Lih-King Lim, C. Morais Smith, and H. T. C. Stoof	
Trapped polarized Fermi gas at unitarity (<i>5 pages</i>)	013635
D. Blume	
Three-boson problem at low energy and implications for dilute Bose-Einstein condensates (<i>24 pages</i>)	013636
Shina Tan	
Fulde-Ferrell-Larkin-Ovchinnikov state in the one-dimensional attractive Hubbard model and its fingerprint in spatial noise correlations (<i>8 pages</i>)	013637
Andreas Lüscher, Reinhard M. Noack, and Andreas M. Läuchli	

Dispersion compensation in atom interferometry by a Sagnac phase (5 pages)	013638
Marion Jacqurey, Alain Miffre, Gérard Trénec, Matthias Büchner, Jacques Vigué, and Alexander Cronin	
Entanglement of two distant Bose-Einstein condensates by detection of Bragg-scattered photons (8 pages)	013639
B. Deb and G. S. Agarwal	
Single-atom detection with optical cavities (11 pages)	013640
R. Poldy, B. C. Buchler, and J. D. Close	
Mode-exchange collisions in an exactly solvable two-mode Bose-Einstein condensate (10 pages)	013641
P. Barberis-Blostein and I. Fuentes-Schuller	
Formation of vortices in a dense Bose-Einstein condensate (6 pages)	013642
V. P. Barros, Ch. Moseley, A. Gammal, and K. Ziegler	
Quantum optics, physics of lasers, nonlinear optics, classical optics	
Semidiscrete solitons in arrayed waveguide structures with Kerr nonlinearity (5 pages)	013801
N.-C. Panoiu, B. A. Malomed, and R. M. Osgood, Jr.	
Observation of narrow Autler-Townes components in the resonant response of a dense atomic gas (5 pages)	013802
Vladimir A. Sautenkov, Yuri V. Rostovtsev, and Eric R. Eliel	
Optical imaging beyond the diffraction limit via dark states (6 pages)	013803
Hebin Li, Vladimir A. Sautenkov, Michael M. Kash, Alexei V. Sokolov, George R. Welch, Yuri V. Rostovtsev, M. Suhail Zubairy, and Marlan O. Scully	
Control of light speed: From slow light to superluminal light (5 pages)	013804
Qun-Feng Chen, Yong-Sheng Zhang, Bao-Sen Shi, and Guang-Can Guo	
Electromagnetically induced transparency inside the laser cavity: Switch between first-order and second-order phase transitions (5 pages)	013805
Qingqing Sun, M. Selim Shahriar, and M. Suhail Zubairy	
Three-dimensional <i>ab initio</i> investigation of light-matter interaction in Mie lasers (6 pages)	013806
A. Fratalocchi, C. Conti, and G. Ruocco	
Half-cycle optical soliton in quadratic nonlinear media (7 pages)	013807
Hervé Leblond	
Photon-mediated interaction between two distant atoms (15 pages)	013808
Stefan Rist, Jürgen Eschner, Markus Hennrich, and Giovanna Morigi	
Parametric amplification in an electromagnetically-induced-transparency medium (6 pages)	013809
Ken-ichi Harada, Kenji Mori, Junji Okuma, Nobuhito Hayashi, and Masaharu Mitsunaga	
Wigner function evolution of quantum states in the presence of self-Kerr interaction (9 pages)	013810
Magdalena Stobińska, G. J. Milburn, and Krzysztof Wódkiewicz	
Attosecond pulse generation in Thomson scattering with phase-controlled few-cycle laser pulses (4 pages)	013811
Peng Zhang, Yanrong Song, and Zhigang Zhang	
Single-photon transistor using microtoroidal resonators (4 pages)	013812
Fang-Yu Hong and Shi-Jie Xiong	

Helical core optical fibers maintaining propagation of a solitary optical vortex (8 pages)	013813
Constantine N. Alexeyev, Boris P. Lapin, and Maxim A. Yavorsky	
Reflection solitons supported by competing nonlinear gratings (6 pages)	013814
C. Rizza, A. Ciattoni, and E. DelRe	
Transfer of light waves in optical waveguides via a continuum (10 pages)	013815
S. Longhi	
Nonlocal dispersion control of a single-photon waveform (4 pages)	013816
So-Young Baek, Osung Kwon, and Yoon-Ho Kim	
Slow light in saturable absorbers (7 pages)	013817
Bruno Macke and Bernard Ségard	
Measurement of the dispersion induced by a slow-light system based on coupled active-resonator-induced transparency (5 pages)	013818
Yannick Dumeige, Thi Kim Ngân Nguyễn, Laura Ghiša, Stéphane Trebaol, and Patrice Féron	
Radiationless electromagnetic interference shaping of evanescent cylindrical vector waves (4 pages)	013819
L. E. Helseth	
Fundamental limits on $1/f$ frequency noise in rare-earth-metal-doped fiber lasers due to spontaneous emission (7 pages)	013820
Scott Foster	
Coherent effects in a nonlinear birefringent resonance impurity-doped fiber (11 pages)	013821
Sergei O. Elyutin	
Cavity-assisted spontaneous emission as a single-photon source: Pulse shape and efficiency of one-photon Fock-state preparation (14 pages)	013822
M. Khanbekyan, D.-G. Welsch, C. Di Fidio, and W. Vogel	
Nonlinear dynamics of optical absorption of intense beams (4 pages)	013823
D. Corbett, C. L. van Oosten, and M. Warner	
Cavity optomechanical coupling assisted by an atomic gas (7 pages)	013824
H. Ian, Z. R. Gong, Yu-xi Liu, C. P. Sun, and Franco Nori	
Thermodynamic analysis of quantum light purification (10 pages)	013825
E. Boukobza and D. J. Tannor	
Two-dimensional Whittaker solitons in nonlocal nonlinear media (7 pages)	013826
Wei-Ping Zhong, Milivoj Belić, Rui-Hua Xie, and Goong Chen	
Consecutive high-order harmonic generation and formation of subfemtosecond light pulses in aperiodical nonlinear photonic crystals (6 pages)	013827
Ivan V. Shutov and Anatoly S. Chirkin	
Experimental generation of genuine four-partite entangled states with total three-party correlation for continuous variables (5 pages)	013828
Aihong Tan, Yu Wang, Xiaoli Jin, Xiaolong Su, Xiaojun Jia, Jing Zhang, Changde Xie, and Kunchi Peng	
Nonlinear diffraction of light beams propagating in photorefractive media with embedded reflecting wire (12 pages)	013829
E. G. Khamis, A. Gammal, G. A. El, Yu. G. Gladush, and A. M. Kamchatnov	

Quantum control of electromagnetically induced transparency dispersion via atomic tunneling in a double-well Bose-Einstein condensate (<i>11 pages</i>)	013830
James Owen Weatherall, Christopher P. Search, and Markku Jääskeläinen	
Quantum optical spring (<i>6 pages</i>)	013831
Amit Rai and G. S. Agarwal	
Two-color, nonlocal vector solitary waves with angular momentum in nematic liquid crystals (<i>8 pages</i>)	013832
Gaetano Assanto, Noel F. Smyth, and Annette L. Worthy	
Magneto-optical Stern-Gerlach effect in an atomic ensemble (<i>8 pages</i>)	013833
Yu Guo (郭裕), Lan Zhou (周兰), Le-Man Kuang (匡乐满), and C. P. Sun (孙昌璞)	
Nondegenerate four-wave mixing in rubidium vapor: The diamond configuration (<i>6 pages</i>)	013834
F. E. Becerra, R. T. Willis, S. L. Rolston, and L. A. Orozco	
Liquid-core liquid-cladding optical fibers sustained by light radiation pressure: Electromagnetic model and geometrical analog (<i>7 pages</i>)	013835
Etienne Brasselet and Jean-Pierre Delville	
Omnidirectional band gap in Fibonacci photonic crystals with metamaterials using a band-edge formalism (<i>6 pages</i>)	013836
W. J. Hsueh, C. T. Chen, and C. H. Chen	
Fractional revivals through Rényi uncertainty relations (<i>6 pages</i>)	013837
E. Romera and F. de los Santos	
Controllable generation and propagation of asymptotic parabolic optical waves in graded-index waveguide amplifiers (<i>7 pages</i>)	013838
Lei Wu, Lu Li, and Jie-Fang Zhang	
Multiwavelength elemental contrast phase imaging by the use of dispersion effects (<i>5 pages</i>)	013839
Chanh Q. Tran	
Influence of non-Markovian relaxation processes on self-induced transparency: Memory function theory for optical solitons (<i>10 pages</i>)	013840
G. T. Adamashvili, D. J. Kaup, A. Knorr, and C. Weber	
Sum rule for local densities of states in absorbing dielectrics (<i>4 pages</i>)	013841
Stefan Scheel	
Unified homogenization theory for magnetoinductive and electromagnetic waves in split-ring metamaterials (<i>5 pages</i>)	013842
J. D. Baena, L. Jelinek, R. Marqués, and M. Silveirinha	
Radiation torque exerted on a spheroid: Analytical solution (<i>17 pages</i>)	013843
Feng Xu, James A. Lock, Gérard Gouesbet, and Cameron Tropea	
Spectrally bright and broad fiber-based heralded single-photon source (<i>4 pages</i>)	013844
E. A. Goldschmidt, M. D. Eisaman, J. Fan, S. V. Polyakov, and A. Migdall	
Passive mode-locking using phase-sensitive amplification (<i>7 pages</i>)	013845
J. Nathan Kutz	
Laser theory with finite atom-field interacting time (<i>8 pages</i>)	013846
Deshui Yu and Jingbiao Chen	
Nonlinear switching of low-index defect modes in photonic lattices (<i>4 pages</i>)	013847
Fangwei Ye, Yaroslav V. Kartashov, Victor A. Vysloukh, and Lluís Torner	

BRIEF REPORTS

Quantum information

Addendum to “Grover search with pairs of trapped ions” (3 pages)	014301
Z. Y. Xu and M. Feng	
Tripartite entanglement from the cavity with second-order harmonic generation (4 pages)	014302
Shuqin Zhai, Rongguo Yang, Daihe Fan, Juan Guo, Kui Liu, Junxiang Zhang, and Jiangrui Gao	
Bound entanglement in the set of Bell-state mixtures of two qutrits (4 pages)	014303
Reinhold A. Bertlmann and Philipp Krammer	
Many-qubit network employing cavity QED in a decoherence-free subspace (4 pages)	014304
Hua Wei, Wan Li Yang, Zhi Jiao Deng, and Mang Feng	
Local implementation of nonlocal operations with block forms (4 pages)	014305
Ning Bo Zhao and An Min Wang	
Quantum logic gates with single trapped ions could be implemented for arbitrary Lamb-Dicke parameters (4 pages)	014306
L. F. Wei, Miao Zhang, H. Y. Jia, and Y. Zhao	

Atomic and molecular structure and dynamics

Resolving controversy about the correlation potential of density-functional theory far outside a finite system (3 pages)	014501
A. Holas	
Dipole polarizabilities of $ns^2\ ^1S_0$ and $nsnp\ ^3P_0$ states and relevant magic wavelengths of group-IIIB atoms (4 pages)	014502
Anpei Ye (叶安培) and Guangfu Wang (王广福)	

Atomic and molecular collisions and interactions

Electron excitation of the $3s4s\ ^1S_0$ and $3s4p\ ^1P_1$ states of magnesium (3 pages)	014701
Lalita Sharma, Rajesh Srivastava, and A. D. Stauffer	

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

Maxwell’s demon in the generation of an intense and slow guided beam (4 pages)	015401
G. Reinaudi and D. Guéry-Odelin	
Control of the photon emission of single molecules in a solid matrix (4 pages)	015402
Baiping Han and Yujun Zheng	
Intensity-dependent transitions between different pathways of strong-field double ionization (4 pages)	015403
A. Rudenko, Th. Ergler, K. Zrost, B. Feuerstein, V. L. B. de Jesus, C. D. Schröter, R. Moshhammer, and J. Ullrich	
Calculation of analytic populations for a multilevel atom at low laser intensity (4 pages)	015404
Geol Moon, Myung-Sun Heo, Seo Ro Shin, Heung-Ryoul Noh, and Wonho Jhe	
Instantaneous multiphoton ionization rate and initial distribution of electron momentum (4 pages)	015405
Denys I. Bondar	

Matter waves

- Time-reversal operation of tunneling dynamics of Bose-Einstein condensates in optical lattices (*4 pages*) 015601
 Noriaki Tsukada, Hiroyuki Yoshida, and Takashi Suzuki
- Adiabatic cooling and heating of cold bosons in three-dimensional optical lattices and the superfluid-normal phase transition (*4 pages*) 015602
 S. Yoshimura, S. Konabe, and T. Nikuni

Quantum optics, physics of lasers, nonlinear optics, classical optics

- Derivation of Maxwell-Bloch-type equations by projection of quantum models (*4 pages*) 015801
 Hideo Mabuchi
- Laser intensity dependence of high-order harmonic generation from aligned CO₂ molecules (*4 pages*) 015802
 Peng Liu, Pengfei Yu, Zhinan Zeng, Hui Xiong, Xiaochun Ge, Ruxin Li, and Zhizhan Xu
- Influence of granularity on the optical properties of a negative-refractive-index lens (*4 pages*) 015803
 J. Li and K. J. Webb
- Permutation asymmetry inducing entanglement between degrees of freedom in multiphoton states (*4 pages*) 015804
 F. W. Sun, B. H. Liu, C. W. Wong, and G. C. Guo
- Divergent Petermann factor of interacting resonances in a stadium-shaped microcavity (*4 pages*) 015805
 Soo-Young Lee, Jung-Wan Ryu, Jeong-Bo Shim, Sang-Bum Lee, Sang Wook Kim, and Kyungwon An

COMMENTS

- Comment on “Decoherence and dissipation of a quantum harmonic oscillator coupled to two-level systems” (*1 page*) 016101
 D. Mogilevtsev and V. Shatokhin
- Reply to “Comment on ‘Decoherence and dissipation of a quantum harmonic oscillator coupled to two-level systems’ ” (*1 page*) 016102
 Maximilian Schlosshauer, A. P. Hines, and G. J. Milburn
- Reply to “Comment on ‘Arbitrated quantum-signature scheme’ ” (*5 pages*) 016301
 Guihua Zeng
- Comment on “Critique of the foundations of time-dependent density-functional theory” (*2 pages*) 016501
 A. Holas, M. Cinal, and N. H. March
- Comment on “Momentum density and spatial form of correlated density matrix in model two-electron atoms with harmonic confinement” (*2 pages*) 016502
 Sébastien Ragot

ERRATA

- Publisher’s Note: Measurement of the cesium $7d\ ^2D_{3/2}$ hyperfine coupling constants in a thermal beam using two-photon fluorescence spectroscopy [Phys. Rev. A **77**, 062505 (2008)] (*1 page*) 019901(E)
 A. Kortyna, V. Fiore, and J. Farrar

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 78, NUMBER 1

JULY 2008

Erratum: High-visibility multiphoton interference of Hanbury Brown–Twiss type for classical light [Phys. Rev. A 77 , 053801 (2008)] (<i>1 page</i>)	019902(E)
I. N. Agafonov, M. V. Chekhova, T. Sh. Iskhakov, and A. N. Penin	
Erratum: Applications of single-qubit rotations in quantum public-key cryptography [Phys. Rev. A 77 , 032348 (2008)] (<i>1 page</i>)	019903(E)
Georgios M. Nikolopoulos	
Erratum: Quantum limits to center-of-mass measurements [Phys. Rev. A 75 , 033617 (2007)] (<i>1 page</i>)	019904(E)
Timothy Vaughan, Peter Drummond, and Gerd Leuchs	
Erratum: Effects of detector efficiency mismatch on security of quantum cryptosystems [Phys. Rev. A 74 , 022313 (2006)] (<i>1 page</i>)	019905(E)
Vadim Makarov, Andrey Anisimov, and Johannes Skaar	