

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 66, NUMBER 2

CONTENTS

AUGUST 2002

RAPID COMMUNICATIONS

Fundamental concepts

- Measurement of the $6s-7p$ transition probabilities in atomic cesium and a revised value for the weak charge Q_W (4 pages) 020101(R)
A. A. Vasilyev, I. M. Savukov, M. S. Safronova, and H. G. Berry

Atomic and molecular collisions and interactions

- Statistical theory of Fano resonances in atomic and molecular photoabsorption (4 pages) 020701(R)
Wolfgang Ihra

Atomic and molecular processes in external fields

- Optical dipole force trapping of a fermion-boson mixture of ytterbium isotopes (4 pages) 021401(R)
K. Honda, Y. Takasu, T. Kuwamoto, M. Kumakura, Y. Takahashi, and T. Yabuzaki

Matter waves

- Free expansion of a Bose-Einstein condensate in a one-dimensional optical lattice (4 pages) 021601(R)
O. Morsch, M. Cristiani, J. H. Müller, D. Ciampini, and E. Arimondo
- Split vortices in optically coupled Bose-Einstein condensates (4 pages) 021602(R)
Juan J. García-Ripoll, Víctor M. Pérez-García, and Fernando Sols
- Slow light and the phase of a Bose-Einstein condensate (4 pages) 021603(R)
P. Öhberg

Quantum optics, physics of lasers, nonlinear optics

- Extreme-ultraviolet high-order harmonic pulses in the microjoule range (4 pages) 021801(R)
J.-F. Hergott, M. Kovacev, H. Merdji, C. Hubert, Y. Mairesse, E. Jean, P. Breger, P. Agostini, B. Carré, and P. Salières
- Generation of highly coherent submicrojoule soft x rays by high-order harmonics (4 pages) 021802(R)
Eiji Takahashi, Yasuo Nabekawa, Tatsuya Otsuka, Minoru Obara, and Katsumi Midorikawa



ARTICLES

Fundamental concepts

Quantum three-body Coulomb problem in two dimensions (<i>12 pages</i>)	022101
L. Hilico, B. Grémaud, T. Jonckheere, N. Billy, and D. Delande	
Geometric phases of mesoscopic spin in Bose-Einstein condensates (<i>6 pages</i>)	022102
I. Fuentes-Guridi, J. Pachos, S. Bose, V. Vedral, and S. Choi	
Classical Casimir interactions of some simple systems at very high temperature (<i>5 pages</i>)	022103
Larry Spruch	
Separability and correlations in composite states based on entropy methods (<i>10 pages</i>)	022104
A. K. Rajagopal and R. W. Rendell	
Scaling the spin densities separately in density-functional theory (<i>8 pages</i>)	022105
R. J. Magyar, T. K. Whittingham, and K. Burke	
Quantum retrodiction in open systems (<i>11 pages</i>)	022106
David T. Pegg, Stephen M. Barnett, and John Jeffers	
Relations between parameters of a decoherent system and Fisher information (<i>6 pages</i>)	022107
B. Roy Frieden	
Parity nonconservation in heavy atoms: The radiative correction enhanced by the strong electric field of the nucleus (<i>4 pages</i>)	022108
A. I. Milstein and O. P. Sushkov	
Solid-state systems for the electron electric dipole moment and other fundamental measurements (<i>6 pages</i>)	022109
S. K. Lamoreaux	
Measurements of semilocal and nonmaximally entangled states (<i>6 pages</i>)	022110
Berry Groisman and Benni Reznik	
Entanglement and the SU(2) phase states in atomic systems (<i>10 pages</i>)	022111
M. Ali Can, Alexander A. Klyachko, and Alexander S. Shumovsky	
Quantum-controlled measurement device for quantum-state discrimination (<i>5 pages</i>)	022112
Miloslav Dušek and Vladimír Bužek	
Degree of entanglement in a quantum-measurement process (<i>7 pages</i>)	022113
Matthias Jakob, Yonatan Abaranyos, and János A. Bergou	
Double-logarithmic two-loop self-energy corrections to the Lamb shift (<i>9 pages</i>)	022114
U. D. Jentschura and I. Nándori	
Relativistic coherent states and charge structure of the coordinate and momentum operators (<i>11 pages</i>)	022115
B. I. Lev, A. A. Semenov, C. V. Usenko, and J. R. Klauder	
Quantization of the nonintegrable Hamiltonian by Lyapunov analysis (<i>5 pages</i>)	022116
Peijie Wang and Guozhen Wu	
Coulomb-enhanced dynamic localization and Bell-state generation in coupled quantum dots (<i>5 pages</i>)	022117
Ping Zhang, Qi-Kun Xue, Xian-Geng Zhao, and X. C. Xie	
Physical constraints on nonstationary states and nonexponential decay (<i>7 pages</i>)	022118
Cleanthes A. Nicolaides	

Quantum information

Qubit authentication (<i>7 pages</i>)	022301
Marcos Curty, David J. Santos, Esther Pérez, and Priscila García-Fernández	
Numerical simulation of information recovery in quantum computers (<i>11 pages</i>)	022302
P. J. Salas and A. L. Sanz	
Quantum learning and universal quantum matching machine (<i>10 pages</i>)	022303
Masahide Sasaki and Alberto Carlini	

Encoded universality for generalized anisotropic exchange Hamiltonians (10 pages)	022304
Jiri Vala and K. Birgitta Whaley	
Majorization arrow in quantum-algorithm design (5 pages)	022305
J. I. Latorre and M. A. Martín-Delgado	
Inhibiting decoherence via ancilla processes (9 pages)	022306
Guihua Zeng and Christoph H. Keitel	
Fidelity of mixed states of two qubits (5 pages)	022307
Frank Verstraete and Henri Verschelde	
Optimal parameter estimation of a depolarizing channel (8 pages)	022308
Masahide Sasaki, Masashi Ban, and Stephen M. Barnett	
Necessary and sufficient condition for distillability with unit fidelity from finite copies of a mixed state: The most efficient purification protocol (4 pages)	022309
Ping-Xing Chen, Lin-Mei Liang, Cheng-Zu Li, and Ming-Qiu Huang	
Evolution of a qubit under the influence of a succession of weak measurements with unitary feedback (11 pages)	022310
Jürgen Audretsch, Lajos Diósi, and Thomas Konrad	
Quantum universal variable-length source coding (13 pages)	022311
Masahito Hayashi and Keiji Matsumoto	
Quantum-state information retrieval in a Rydberg-atom data register (5 pages)	022312
J. Ahn, C. Rangan, D. N. Hutchinson, and P. H. Bucksbaum	
Quantum-information processing by nuclear magnetic resonance: Experimental implementation of half-adder and subtractor operations using an oriented spin-7/2 system (5 pages)	022313
K. V. R. M. Murali, Neeraj Sinha, T. S. Mahesh, Malcolm H. Levitt, K. V. Ramanathan, and Anil Kumar	
Entangling atoms in bad cavities (8 pages)	022314
Anders Søndberg Sørensen and Klaus Mølmer	
Nonlocal Hamiltonian simulation assisted by local operations and classical communication (12 pages)	022315
G. Vidal and J. I. Cirac	
Fidelity of quantum teleportation through noisy channels (5 pages)	022316
Sangchul Oh, Soonchil Lee, and Hai-woong Lee	
Universal simulation of Hamiltonian dynamics for quantum systems with finite-dimensional state spaces (12 pages)	022317
Michael A. Nielsen, Michael J. Bremner, Jennifer L. Dodd, Andrew M. Childs, and Christopher M. Dawson	
Operations that do not disturb partially known quantum states (17 pages)	022318
Masato Koashi and Nobuyuki Imoto	

Atomic and molecular structure and dynamics

α dependence of transition frequencies for ions Si II, Cr II, Fe II, Ni II, and Zn II (8 pages)	022501
V. A. Dzuba, V. V. Flambaum, M. G. Kozlov, and M. Marchenko	
Relativistic corrections to the Zeeman effect of lithium and lithiumlike ions in the 2^2P_J and 3^2P_J states (6 pages)	022502
Zong-Chao Yan	
Kummer variety, geometry of N -representability, and phase transitions (8 pages)	022503
A. John Coleman	
Anomalies in the decay rates of antiprotonic helium-atom states (6 pages)	022504
H. Yamaguchi, T. Ishikawa, J. Sakaguchi, E. Widmann, J. Eades, R. S. Hayano, M. Hori, H. A. Torii, B. Juhász, D. Horváth, and T. Yamazaki	

Density-matrix functional theory (5 pages)	022505
A. Nagy	
Lie-algebraic approach to vibrational spectra of a linear symmetrical tetratomic molecule: C_2H_2 (10 pages)	022506
Meishan Wang, Shiliang Ding, Dongtai Feng, and Haiying Liu	
Relativistic many-body calculations of excitation energies and transition rates in ytterbiumlike ions (10 pages)	022507
U. I. Safronova, W. R. Johnson, M. S. Safronova, and J. R. Albritton	
Double and triple excitations near the K -shell ionization threshold of N_2 revealed by symmetry-resolved spectroscopy (4 pages)	022508
E. Shigemasa, T. Gejo, M. Nagasono, T. Hatsui, and N. Kosugi	
Doppler interference in dissociative resonant photoemission (10 pages)	022509
A. Baev, F. Gel'mukhanov, P. Salek, H. Agren, K. Ueda, A. de Fanis, K. Okada, and S. Sorensen	
Atomic and molecular collisions and interactions	
Spin-polarization measurements of the krypton $M_{4,5}NN$ and xenon $N_{4,5}OO$ Auger electrons: Orientation and intrinsic parameters (13 pages)	022701
G. Snell, B. Langer, A. T. Young, and N. Berrah	
Rotational-translational state-to-state collisional rate constants of N_2 at low temperature ($3 < T < 16$ K) (5 pages)	022702
A. Ramos, G. Tejeda, J. M. Fernández, and S. Montero	
Energy distributions of He^+ and He_2^+ ions formed in ultracold $He(2^3S_1) + He(2^3P_2)$ collisions (9 pages) . . .	022703
M. Pieksma, M. Čížek, J. W. Thomsen, P. van der Straten, and A. Niehaus	
Parametric equations of motion for the transition operator and the Green's operator (3 pages)	022704
Hansong Cheng, Herschel Rabitz, and Robert C. Forrey	
Detailed experimental and theoretical study of elastic scattering at intermediate energies in the electron-caesium system (9 pages)	022705
G. Baum, N. Pavlović, B. Roth, K. Bartschat, Y. Fang, and I. Bray	
Stopping cross sections for $N^{4+} \rightarrow H$ at low projectile velocity (7 pages)	022706
Remigio Cabrera-Trujillo, John R. Sabin, Erik Deumens, and Yngve Öhrn	
Orientation dependence of inelastic scattering from the laser-excited ($\dots 6s6p \ ^1P_1$) state of barium (12 pages)	022707
P. V. Johnson, P. W. Zetner, D. Fursa, and I. Bray	
Generalization of atomic random-phase-approximation method for diatomic molecules. II. N_2 K -shell photoionization (6 pages)	022708
S. K. Semenov and N. A. Cherepkov	
Total cross section for the dissociative excitation of He_2^+ molecular ions in collision with He (4 pages)	022709
F. B. Yousif	
Regularities and irregularities in partial photoionization cross sections of He (8 pages)	022710
Hugo W. van der Hart and Chris H. Greene	
Differential cross sections at 0° and 180° for electron-impact excitation of the $E \ ^3\Sigma_g^+$ state of N_2 (3 pages)	022711
G. B. Poparić, M. D. Vičić, and D. S. Belić	
Ion-formation total cross sections from dissociative collisions of vibrationally relaxed H_3^+ , D_3^+ , and HD_2^+ molecular ions with He (5 pages)	022712
G. Hinojosa, F. B. Yousif, C. Cisneros, and I. Alvarez	
Semiclassical approach for calculating Regge-pole trajectories for singular potentials (7 pages)	022713
N. B. Avdonina, S. Belov, Z. Felfli, A. Z. Msezane, and S. N. Naboko	
Scattering of magnetized electrons by ions (15 pages)	022714
Christian Toepffer	

Photoionization of Be-like neon (Ne VII) from the low-lying states: Energies, widths, branching ratios, and oscillator strengths of the $1s-2p$ resonances (8 pages)	022715
Jiaolong Zeng and Jianmin Yuan	
Effective range description of annihilating collisions (6 pages)	022716
J. Mitroy	
Analytical local electron-electron interaction model potentials for atoms (11 pages)	022717
Johannes Neugebauer, Markus Reiher, and Juergen Hinze	
Rate enhancement in the recombination of Bi^{80+} ions with electrons (8 pages)	022718
W. Shi, T. Bartsch, C. Böhme, C. Brandau, A. Hoffknecht, H. Knopp, S. Schippers, A. Müller, C. Kozhuharov, K. Beckert, F. Bosch, B. Franzke, P. H. Mokler, F. Nolden, M. Steck, Th. Stöhlker, and Z. Stachura	
Dielectronic recombination of lithiumlike beryllium: A theoretical and experimental investigation (12 pages)	022719
T. Mohamed, D. Nikolić, E. Lindroth, S. Madzunkov, M. Fogle, M. Tokman, and R. Schuch	
Photon, electron, atom, and molecule interactions with solids and surfaces	
Relativistic energy loss in a dispersive medium (6 pages)	022901
Jens M. Houlrik	
Energy transfer of keV Ne atoms to the lattice of a LiF(001) surface under channeling (8 pages)	022902
H. Winter, A. Mertens, R. Pfandzelter, and V. Staemmler	
Clusters (including fullerenes)	
Inner-shell near-threshold photoionization of $A@C_{60}$ endohedral atoms (9 pages)	023201
Arkadiy S. Baltenkov, Valery K. Dolmatov, and Steven T. Manson	
Dynamical studies of mixed rare-gas clusters: Collision-induced absorption in $(\text{Ne})_n-(\text{Ar})_m$ ($n+m \leq 100$) (9 pages)	023202
Markus Meuwly and J. D. Doll	
Application of artificial intelligence to search ground-state geometry of clusters (5 pages)	023203
Maurício Ruv Lemes, L. R. Marim, and A. Dal Pino, Jr.	
Atomic and molecular processes in external fields	
Resonant enhancement of dielectronic recombination from a continuum of finite bandwidth (9 pages)	023401
Victor Klimenko and T. F. Gallagher	
Measuring the mean value of vibrational observables in trapped-ion systems (6 pages)	023402
B. Militello, A. Messina, and A. Napoli	
Branched classical and quantum flow in two-dimensional Wannier-Stark systems (7 pages)	023403
M. Glück, F. Keck, A. R. Kolovsky, and H. J. Korsch	
Theory of nonlinear Landau-Zener tunneling (7 pages)	023404
Jie Liu, Libin Fu, Bi-Yiao Ou, Shi-Gang Chen, Dae-Il Choi, Biao Wu, and Qian Niu	
Stationary cantilever vibrations in oscillating-cantilever-driven adiabatic reversals: Magnetic-resonance-force- microscopy technique (6 pages)	023405
G. P. Berman, D. I. Kamenev, and V. I. Tsifrinovich	
rf-induced Sisyphus cooling in an optical dipole trap (8 pages)	023406
Kurt W. Miller, Stephan Dürr, and Carl E. Wieman	
Effects of chaotic energy-band transport on the quantized states of ultracold sodium atoms in an optical lattice with a tilted harmonic trap (9 pages)	023407
R. G. Scott, S. Bujkiewicz, T. M. Fromhold, P. B. Wilkinson, and F. W. Sheard	

Line-shape study of two-color–three-photon ionization of Rb atoms (10 pages)	023408
Ivo Cacelli, Andrea Fioretti, Carlo Gabbanini, Marina Mazzoni, and Maurizio Persico	
H_3^{2+} molecular ion in a strong magnetic field: Triangular configuration (6 pages)	023409
J. C. López Vieyra and A. V. Turbiner	
Intense source of cold Rb atoms from a pure two-dimensional magneto-optical trap (10 pages)	023410
J. Schoser, A. Batär, R. Löw, V. Schweikhard, A. Grabowski, Yu. B. Ovchinnikov, and T. Pfau	
Prospects for cooling and trapping rotationally hot molecules (7 pages)	023411
R. C. Forrey	
Coulomb-Volkov approach of ionization by extreme-ultraviolet laser pulses in the subfemtosecond regime (7 pages)	023412
G. Duchateau, E. Cormier, and R. Gayet	

Matter waves

Periodic structures generated in a cloud of cold atoms (11 pages)	023601
D. V. Strekalov, Andrey Turlapov, A. Kumarakrishnan, and Tycho Sleator	
Axisymmetric vortices in spinor Bose-Einstein condensates under rotation (8 pages)	023602
Tomoya Isoshima and Kazushige Machida	
Superfluidity versus Bose-Einstein condensation in a Bose gas with disorder (4 pages)	023603
G. E. Astrakharchik, J. Boronat, J. Casulleras, and S. Giorgini	
Theory of a one-dimensional double-X-junction atom interferometer (8 pages)	023604
M. D. Girardeau, Kunal K. Das, and E. M. Wright	
Boson-induced s-wave pairing in dilute boson-fermion mixtures (5 pages)	023605
L. Viverit	
Momentum distribution for a one-dimensional trapped gas of hard-core bosons (6 pages)	023606
G. J. Lapeyre, Jr., M. D. Girardeau, and E. M. Wright	
Precessing domains and the Castaing instability in confined alkali-metal gases (6 pages)	023607
A. Kuklov and A. E. Meyerovich	
Adiabatic propagation in potential structures (11 pages)	023608
Markku Jääskeläinen and Stig Stenholm	
Impurity scattering in a Bose-Einstein condensate at finite temperature (4 pages)	023609
Alberto Montana	
Electron scattering by trapped fermionic atoms (9 pages)	023610
Hai-jun Wang and Wonho Jhe	
Shape of vortices for a rotating Bose-Einstein condensate (7 pages)	023611
Amandine Aftalion and Robert L. Jerrard	
Optical generation of solitonlike pulses in a single-component gas of neutral fermionic atoms (10 pages)	023612
T. Karpiuk, M. Brewczyk, Ł. Dobrek, M. A. Baranov, M. Lewenstein, and K. Rzążewski	
Ground state and elementary excitations of single and binary Bose-Einstein condensates of trapped dipolar gases (12 pages)	023613
K. Góral and L. Santos	

Quantum optics, physics of lasers, nonlinear optics

Limitations of light delay and storage times in electromagnetically induced transparency experiments with condensates (4 pages)	023801
D. C. Roberts, T. Gasenzer, and K. Burnett	
Hydrodynamic theory for spatially inhomogeneous semiconductor lasers. I. A microscopic approach (18 pages)	023802
Jianzhong Li and C. Z. Ning	

Hydrodynamic theory for spatially inhomogeneous semiconductor lasers. II. Numerical results (13 pages) . . .	023803
Jianzhong Li and C. Z. Ning	
Quantum-entanglement production in a micromaser (9 pages)	023804
Paweł Masiak	
Interference effects in high-order harmonic generation with molecules (6 pages)	023805
M. Lein, N. Hay, R. Velotta, J. P. Marangos, and P. L. Knight	
Line shapes of atomic-candle-type Rabi resonances (7 pages)	023806
J. G. Coffey, B. Sickmiller, A. Presser, and J. C. Camparo	
Twin beams, nonlinearity, and walk-off in optical parametric oscillators (5 pages)	023807
Roberta Zambrini and Maxi San Miguel	
Optimization of three-dimensional micropost microcavities for cavity quantum electrodynamics (9 pages) . . .	023808
Jelena Vučković, Matthew Pelton, Axel Scherer, and Yoshihisa Yamamoto	
Nonideal teleportation in coherent-state basis (9 pages)	023809
A. Vukics, J. Janszky, and T. Kobayashi	
Rabi oscillations and macroscopic quantum superposition states (4 pages)	023810
Marco Frasca	
Propagation dynamics of femtosecond laser pulses in argon (8 pages)	023811
Muhammad Nurhuda, Akira Suda, Masatoshi Hatayama, Keigo Nagasaka, and Katsumi Midorikawa	
Dynamical Casimir effect in a leaky cavity at finite temperature (20 pages)	023812
Gernot Schaller, Ralf Schützhold, Günter Plunien, and Gerhard Soff	
Pulse compression by parametric beating with a prepared Raman coherence (16 pages)	023813
Fam Le Kien, K. Hakuta, and A. V. Sokolov	
Photon antibunching by tunneling in a nonlinear beam splitter (5 pages)	023814
M. Deutsch	
Counterpropagating entangled photons from a waveguide with periodic nonlinearity (8 pages)	023815
Mark C. Booth, Mete Atatüre, Giovanni Di Giuseppe, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich	
Laser-driven atoms in half-cavities (20 pages)	023816
U. Dörner and P. Zoller	
Thermal effects and transverse structures in semiconductor microcavities with population inversion (12 pages)	023817
Lorenzo Spinelli, Giovanna Tissoni, Luigi A. Lugiato, and Massimo Brambilla	
Three-dimensional theory for interaction between atomic ensembles and free-space light (13 pages)	023818
L. -M. Duan, J. I. Cirac, and P. Zoller	
Weak-force detection with superposed coherent states (6 pages)	023819
W. J. Munro, K. Nemoto, G. J. Milburn, and S. L. Braunstein	
Time-resolved pattern evolution in a large-aperture class A laser (6 pages)	023820
I. Leyva and J. M. Guerra	
Quantum-trajectory approach to stochastically induced quantum-interference effects in coherently driven two-level atoms (9 pages)	023821
A. Karpati, P. Adam, W. Gawlik, B. Łobodziński, and J. Janszky	
Multiparameter entanglement in quantum interferometry (15 pages)	023822
Mete Atatüre, Giovanni Di Giuseppe, Matthew D. Shaw, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich	

BRIEF REPORTS**Fundamental concepts**

Quantization of constrained systems using the WKB approximation (<i>4 pages</i>)	024101
Eqab M. Rabei, Khaled I. Nawafleh, and Humam B. Ghassib	
Three-particle entanglement versus three-particle nonlocality (<i>4 pages</i>)	024102
José L. Cereceda	
Wave functions of a time-dependent harmonic oscillator in a static magnetic field (<i>4 pages</i>)	024103
C. A. S. Ferreira, P. T. S. Alencar, and J. M. F. Bassalo	

Quantum information

Entanglement teleportation via Bell mixtures (<i>4 pages</i>)	024301
Sibasish Ghosh, Guruprasad Kar, Anirban Roy, Debasis Sarkar, and Ujjwal Sen	
Nonclassical properties of teleported optical fields in quantum teleportation of continuous variables (<i>4 pages</i>)	024302
Fu-li Li, Hong-rong Li, Jun-xiang Zhang, and Shi-yao Zhu	
Theorem for the beam-splitter entangler (<i>2 pages</i>)	024303
Wang Xiang-bin	
Dense coding in entangled states (<i>2 pages</i>)	024304
Hyuk-jae Lee, Doyeol Ahn, and Sung Woo Hwang	
Quantum clock synchronization: Multiparty protocol (<i>2 pages</i>)	024305
Marko Krčo and Prabasaj Paul	
Classical rules in quantum games (<i>2 pages</i>)	024306
S. J. van Enk and R. Pike	
Cloning of symmetric d -level photonic states in physical systems (<i>4 pages</i>)	024307
Heng Fan, Gregor Weihs, Keiji Matsumoto, and Hiroshi Imai	
Quantum phase gate for photonic qubits using only beam splitters and postselection (<i>3 pages</i>)	024308
Holger F. Hofmann and Shigeki Takeuchi	
Delayed-choice entanglement swapping with vacuum-one-photon quantum states (<i>4 pages</i>)	024309
Fabio Sciarrino, Egilberto Lombardi, Giorgio Milani, and Francesco De Martini	

Atomic and molecular structure and dynamics

Nonrelativistic ionization energy for the helium ground state (<i>2 pages</i>)	024501
Vladimir I. Korobov	
Determination of the $^{87}\text{Rb } 5p$ state dipole matrix element and radiative lifetime from the photoassociation spectroscopy of the $\text{Rb}_2 0_g^-(P_{3/2})$ long-range state (<i>4 pages</i>)	024502
R. F. Gutterres, C. Amiot, A. Fioretti, C. Gabbanini, M. Mazzoni, and O. Dulieu	
Intensity distribution shift for the resonant photon scattering on the hydrogen atom (<i>3 pages</i>)	024503
L. Labzowsky and D. Solovjev	

Atomic and molecular collisions and interactions

Molecular transition moments at large internuclear distances (<i>3 pages</i>)	024701
X. Chu and A. Dalgarno	

Atomic and molecular processes in external fields

Intense field stabilization in circular polarization: Three-dimensional time-dependent dynamics (<i>4 pages</i>)	025401
Dae-Il Choi and Will Chism	
Ionization and excitation dynamics of H(1s) in short intense laser pulses. II (<i>4 pages</i>)	025402
H. M. Nilsen, L. B. Madsen, and J. P. Hansen	
Evidence of a two-color trap-loss channel (<i>4 pages</i>)	025403
G. D. Telles, L. S. Aguiar, L. G. Marcassa, and V. S. Bagnato	

Matter waves

Method for monopole creation in spinor Bose-Einstein condensates (<i>4 pages</i>)	025601
D. E. Chang	
Self-similar approximations for a trapped Bose-Einstein condensate (<i>4 pages</i>)	025602
V. I. Yukalov, E. P. Yukalova, and V. S. Bagnato	
Sympathetic cooling and growth of a Bose-Einstein condensate (<i>4 pages</i>)	025603
T. Papenbrock, A. N. Salgueiro, and H. A. Weidenmüller	

Quantum optics, physics of lasers, nonlinear optics

Quadrature-dependent Bogoliubov transformations and multiphoton squeezed states (<i>4 pages</i>)	025801
Ying Wu and Robin Côté	
Pulse propagation in a coherently prepared multilevel medium (<i>4 pages</i>)	025802
E. Paspalakis and Z. Kis	
Laser-intensity effects in high-order autocorrelation calculations (<i>4 pages</i>)	025803
N. A. Papadogiannis, E. Hertz, C. Kalpouzos, and D. Charalambidis	
Exact analytical solution of a polariton model: Undetermined coefficient approach (<i>4 pages</i>)	025804
G. Qin, K. L. Wang, and Z. D. Wang	

ERRATA

Erratum: Variational <i>R</i> -matrix methods for many-electron systems: Unified nonrelativistic theory [Phys. Rev. A 61 , 022725 (2000)] (<i>1 page</i>)	029901(E)
Radosław Szmytkowski	
Erratum: Consequences of induced transparency in a double- Λ scheme: Destructive interference in four-wave mixing [Phys. Rev. A 65 , 063806 (2002)] (<i>1 page</i>)	029902(E)
M. G. Payne and L. Deng	
Erratum: Optical-wave group-velocity reduction without electromagnetically induced transparency [Phys. Rev. A 65 , 051805(R) (2002)] (<i>1 page</i>)	029903(E)
L. Deng, E. W. Hagley, M. Kozuma, and M. G. Payne	

Cumulative Author Index	i
--	---