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
P.O. Box 41
Annapolis Junction, MD 20701

THIRD SERIES, VOLUME 92, NUMBER 6
PARTS A AND B

CONTENTS

DECEMBER 2015

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages 060301(R)–062717, and Part B pages 063401–069906(E).

PART A

RAPID COMMUNICATIONS

Quantum information

Error compensation of single-qubit gates in a surface-electrode ion trap using composite pulses *(5 pages)* . . . . . 060301(R)
Emily Mount, Chingiz Kabytayev, Stephen Crain, Robin Harper, So-Young Baek, Geert Vrijsen, Steven T. Flammia, Kenneth R. Brown, Peter Maunz, and Jungsang Kim

Characterizing universal gate sets via dihedral benchmarking *(5 pages)* . . . . . 060302(R)
Arnaud Carignan-Dugas, Joel J. Wallman, and Joseph Emerson

Robustness of the round-robin differential-phase-shift quantum-key-distribution protocol against source flaws *(5 pages)* . . . . . 060303(R)
Akihiro Mizutani, Nobuyuki Imoto, and Kiyoshi Tamaki

Atomic and molecular structure and dynamics

Measurement of Rb $5P_{3/2}$ scalar and tensor polarizabilities in a 1064-nm light field *(5 pages)* . . . . . 060501(R)
Yun-Jhih Chen, Luís Felipe Gonçalves, and Georg Raithel

Actinide ions for testing the spatial α-variation hypothesis *(5 pages)* . . . . . 060502(R)
V. A. Dzuba, M. S. Safronova, U. I. Safronova, and V. V. Flambaum

Atomic and molecular collisions and interactions

Plasmon-mediated electron emission from the coronene molecule under fast ion impact *(5 pages)* . . . . . 060701(R)
Shubhadeep Biswas and L. C. Tribedi

Broad universal Feshbach resonances in the chaotic spectrum of dysprosium atoms *(5 pages)* . . . . . 060702(R)
T. Maier, I. Ferrier-Barbut, H. Kadau, M. Schmitt, M. Wenzel, C. Wink, T. Pfau, K. Jachymski, and P. S. Julienne

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

Intense field double detachment of atomic versus molecular anions *(6 pages)* . . . . . 061401(R)
Y. Albeck, G. Lerner, D. M. Kandhasamy, V. Chandrasekaran, and D. Strasser

Copyright 2015 by American Physical Society

(Continued)

1050-2947(201512)92:6:A;1-H

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A THIRD SERIES, VOLUME 92, NUMBER 6 DECEMBER 2015

Modulating carrier and sideband coupling strengths in a standing-wave gate beam *(5 pages)* . . . . . 061402(R)
Thomas E. deLaubenfels, Karl A. Burkhardt, Grahame Vittorini, J. True Merrill, Kenneth R. Brown, and Jason M. Amini

Protocol for observing molecular dipole excitations by attosecond self-streaking *(5 pages)* . . . . . 061403(R)
Georg Wachter, Stefan Nagele, Shunsuke A. Sato, Renate Pazourek, Michael Wais, Christoph Lemell, Xiao-Min Tong, Kazuhiro Yabana, and Joachim Burgdörfer

Matter waves and collective properties of cold atoms and molecules

Crossover between few and many fermions in a harmonic trap *(6 pages)* . . . . . 061601(R)
Tomasz Grining, Michał Tomza, Michał Lesiuk, Michał Przybytek, Monika Musiał, Robert Moszynski, Maciej Lewenstein, and Pietro Massignan

Kohn-Sham theory of a rotating dipolar Fermi gas in two dimensions *(5 pages)* . . . . . 061602(R)
Francesco Ancilotto

Crystallization of a dilute atomic dipolar condensate *(5 pages)* . . . . . 061603(R)
R. N. Bisset and P. B. Blakie

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

Measurement of the motional sidebands of a nanogram-scale oscillator in the quantum regime *(5 pages)* . . . . . 061801(R)
M. Underwood, D. Mason, D. Lee, H. Xu, L. Jiang, A. B. Shkarin, K. Børkje, S. M. Girvin, and J. G. E. Harris

ARTICLES

Fundamental concepts

Scheme for a compact cold-atom clock based on diffuse laser cooling in a cylindrical cavity *(4 pages)* 062101
Peng Liu, Yanling Meng, Jinyin Wan, Xiumei Wang, Yaning Wang, Ling Xiao, Huadong Cheng, and Liang Liu

Quantum estimation via parametric amplification in circuit-QED arrays *(5 pages)* 062102
Ashley Wilkins and Carlos Sabín

Finite-temperature quantum criticality in a complex-parameter plane *(6 pages)* 062103
C. Li and Z. Song

Analytical solution for the Klein-Gordon equation and action function of the solution for the Dirac equation in counterpropagating laser waves *(8 pages)* 062105
Huayu Hu and Jie Huang

Time-limited optimal dynamics beyond the quantum speed limit *(7 pages)* 062106
Miroslav Gajdacz, Kunal K. Das, Jan Arlt, Jacob F. Sherson, and Tomáš Opatrný

Proposal for a macroscopic test of local realism with phase-space measurements *(8 pages)* 062107
Atul S. Arora and Ali Asadian

Floquet-Boltzmann equation for periodically driven Fermi systems *(15 pages)* 062108
Maximilian Genske and Achim Rosch

Time-invariant discord in dynamically decoupled systems *(6 pages)* 062109
Carole Addis, Göktuğ Karpat, and Sabrina Maniscalco

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Quantum speed limit and optimal control of many-boson dynamics *(7 pages)* 062110
Ioannis Brouzos, Alexej I. Streltsov, Antonio Negretti, Ressa S. Said, Tommaso Caneva, Simone Montangero, and Tommaso Calarco

Elementary test for nonclassicality based on measurements of position and momentum *(20 pages)* 062111
Luca Fresta, Johannes Borregaard, and Anders S. Sørensen

Unraveling quantum Brownian motion: Pointer states and their classical trajectories *(10 pages)* 062112
Lutz Sörgel and Klaus Hornberger

Continuous decomposition of quantum measurements via Hamiltonian feedback *(6 pages)* 062113
Jan Florjanczyk and Todd A. Brun

Partly invariant steady state of two interacting open quantum systems *(14 pages)* 062114
József Zsolt Bernád and Juan Mauricio Torres

Peculiarities of qubit initial-state preparation by nonselective measurements on an overcomplete basis *(11 pages)* 062115
V. V. Ignatyuk

Analysis of quantum-state disturbance in a protective measurement of a spin-1/2 particle *(8 pages)* 062116
Maximilian Schlosshauer

Controllable blazed grating for electrons using Kapitza-Dirac diffraction with multiple-harmonic standing waves *(5 pages)* 062117
Pierre Vidil and Benoit Chalopin

Energy-level shifts and the decay rate of an atom in the presence of a conducting wedge *(12 pages)* 062118
Zahra Mohammadi and Fardin Kheirandish

Volterra filters for quantum estimation and detection *(10 pages)* 062119
Mankei Tsang

Identifying nonconvexity in the sets of limited-dimension quantum correlations *(11 pages)* 062120
John Matthew Donohue and Elie Wolfe

Weak values obtained in matter-wave interferometry *(10 pages)* 062121
Stephan Sponar, Tobias Denkmayr, Hermann Geppert, Hartmut Lemmel, Alexandre Matzkin, Jeff Tollaksen, and Yuji Hasegawa

Dynamical invariants of open quantum systems *(7 pages)* 062122
S. L. Wu (武松林), X. Y. Zhang (张兴远), and X. X. Yi (衣学喜)

Geometric phases in electric dipole searches with trapped spin-1/2 particles in general fields and measurement cells of arbitrary shape with smooth or rough walls *(18 pages)* 062123
R. Golub, C. Kaufman, G. Müller, and A. Steyerl

Relativistic ponderomotive Hamiltonian of a Dirac particle in a vacuum laser field *(13 pages)* 062124
D. E. Ruiz, C. L. Ellison, and I. Y. Dodin

Quantum theory allows for absolute maximal contextuality *(6 pages)* 062125
Barbara Amaral, Marcelo Terra Cunha, and Adán Cabello

Adaptive low-rank approximation and denoised Monte Carlo approach for high-dimensional Lindblad equations *(5 pages)* 062126
C. Le Bris, P. Rouchon, and J. Roussel

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Dynamical invariants in a non-Markovian quantum-state-diffusion equation *(5 pages)* 062127
Da-Wei Luo, P. V. Pyshkin, Chi-Hang Lam, Ting Yu, Hai-Qing Lin, J. Q. You, and Lian-Ao Wu

Natural approach to quantum dissipation *(5 pages)* 062128
David Taj and Hans Christian Öttinger

Structure of quantum and broadcasting nonlocal correlations *(6 pages)* 062129
Debashis Saha and Marcin Pawłowski

Steering criteria via covariance matrices of local observables in arbitrary-dimensional quantum systems *(6 pages)* 062130
Se-Wan Ji, Jaehak Lee, Jiyong Park, and Hyunchul Nha

Vacuum fluctuations and radiation reaction in radiative processes of entangled states *(8 pages)* 062131
G. Menezes and N. F. Svaiter

Modeling Leggett-Garg-inequality violation *(5 pages)* 062132
Saulo V. Moreira, Arne Keller, Thomas Coudreau, and Pérola Milman

Novelty, efficacy, and significance of weak measurements for quantum tomography *(11 pages)* 062133
Jonathan A. Gross, Ninnat Dangniam, Christopher Ferrie, and Carlton M. Caves

Demonstrating nonclassicality and non-Gaussianity of single-mode fields: Bell-type tests using generalized phase-space distributions *(13 pages)* 062134
Jiyong Park and Hyunchul Nha

Scattering in $\mathcal{PT}$- and $\mathcal{RT}$-symmetric multimode waveguides: Generalized conservation laws and spontaneous symmetry breaking beyond one dimension *(8 pages)* 062135
Li Ge, Konstantinos G. Makris, Demetrios N. Christodoulides, and Liang Feng

Pulse design without the rotating-wave approximation *(6 pages)* 062136
S. Ibáñez, Yi-Chao Li, Xi Chen, and J. G. Muga

General spin and pseudospin symmetries of the Dirac equation *(4 pages)* 062137
P. Alberto, M. Malheiro, T. Frederico, and A. de Castro

Quantum information

Reducing computational complexity of quantum correlations *(18 pages)* 062301
Titas Chanda, Tamoghna Das, Debasis Sadhukhan, Amit Kumar Pal, Aditi Sen(De), and Ujjwal Sen

Reduced-dynamics approach for optimally designing unitary transformations *(12 pages)* 062302
Kenta Arai and Yukiyoshi Ohtsuki

℘ Quantum metrology: Heisenberg limit with bound entanglement *(9 pages)* 062303
Ł. Czekaj, A. Przysiężna, M. Horodecki, and P. Horodecki

Device-independent quantum key distribution based on measurement inputs *(9 pages)* 062304
Ramij Rahaman, Matthew G. Parker, Piotr Mironowicz, and Marcin Pawłowski

Quantum state transfer in a disordered one-dimensional lattice *(8 pages)* 062305
S. Ashhab

Non-Markovianity measure using two-time correlation functions *(11 pages)* 062306
Md. Manirul Ali, Ping-Yuan Lo, Matisse Wei-Yuan Tu, and Wei-Min Zhang

(Continued)

℘ The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Localization and limit laws of a three-state alternate quantum walk on a two-dimensional lattice *(9 pages)* 062307
Takuya Machida and C. M. Chandrashekar

Counterfactual distribution of Schrödinger cat states *(7 pages)* 062308
Akshata Shenoy-Hejamadi and R. Srikanth

Reducing the overhead for quantum computation when noise is biased *(8 pages)* 062309
Paul Webster, Stephen D. Bartlett, and David Poulin

Certifying single-system steering for quantum-information processing *(12 pages)* 062310
Che-Ming Li, Yueh-Nan Chen, Neill Lambert, Ching-Yi Chiu, and Franco Nori

Generation of stable entanglement between two cavity mirrors by squeezed-reservoir engineering *(9 pages)* 062311
Chun-Jie Yang, Jun-Hong An, Wanli Yang, and Yong Li

Continuous-variable quantum enigma machines for long-distance key distribution *(12 pages)* 062312
Cosmo Lupo and Seth Lloyd

Coherent frequency up-conversion of microwaves to the optical telecommunications band in an Er:YSO crystal *(7 pages)* 062313
Xavier Fernandez-Gonzalvo, Yu-Hui Chen, Chunming Yin, Sven Rogge, and Jevon J. Longdell

Increasing relative nonclassicality quantified by standard entanglement potentials by dissipation and unbalanced beam splitting *(12 pages)* 062314
Adam Miranowicz, Karol Bartkiewicz, Neill Lambert, Yueh-Nan Chen, and Franco Nori

Robust calibration of a universal single-qubit gate set via robust phase estimation *(13 pages)* 062315
Shelby Kimmel, Guang Hao Low, and Theodore J. Yoder

Parallelizable adiabatic gate teleportation *(19 pages)* 062316
Kosuke Nakago, Michal Hajdušek, Shojun Nakayama, and Mio Murao

Optimal synthesis of multivalued quantum circuits *(7 pages)* 062317
Yao-Min Di and Hai-Rui Wei

Solving strongly correlated electron models on a quantum computer *(24 pages)* 062318
Dave Wecker, Matthew B. Hastings, Nathan Wiebe, Bryan K. Clark, Chetan Nayak, and Matthias Troyer

Communication between inertial observers with partially correlated reference frames *(8 pages)* 062319
Mehdi Ahmadi, Alexander R. H. Smith, and Andrzej Dragan

Adiabatic quantum optimization in the presence of discrete noise: Reducing the problem dimensionality *(14 pages)* 062320
Salvatore Mandrà, Gian Giacomo Guerreschi, and Alán Aspuru-Guzik

Deterministic generation of remote entanglement with active quantum feedback *(12 pages)* 062321
Leigh Martin, Felix Motzoi, Hanhan Li, Mohan Sarovar, and K. Birgitta Whaley

Pulse-controlled quantum gate sequences on a strongly coupled qubit chain *(10 pages)* 062322
Holger Frydrych, Michael Marthaler, and Gernot Alber

Two-way Gaussian quantum cryptography against coherent attacks in direct reconciliation *(7 pages)* 062323
Carlo Ottaviani, Stefano Mancini, and Stefano Pirandola

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Quantum key distribution using qudits that each encode one bit of raw key *(4 pages)* 062324
H. F. Chau

Mutually unbiased bases with free parameters *(10 pages)* 062325
Dardo Goyeneche and Santiago Gómez

BosonSampling is robust against small errors in the network matrix *(5 pages)* 062326
Alex Arkhipov

Measurement-device-independent quantum coin tossing *(7 pages)* 062327
Liangyuan Zhao, Zhenqiang Yin, Shuang Wang, Wei Chen, Hua Chen, Guangcan Guo, and Zhengfu Han

Reexamination of the evidence for entanglement in a quantum annealer *(11 pages)* 062328
Tameem Albash, Itay Hen, Federico M. Spedalieri, and Daniel A. Lidar

Degree of quantum correlation required to speed up a computation *(7 pages)* 062329
Alastair Kay

Large-N-approximated field theory for multipartite entanglement *(11 pages)* 062330
P. Facchi, G. Florio, G. Parisi, S. Pascazio, and A. Scardicchio

Recovering full coherence in a qubit by measuring half of its environment *(5 pages)* 062331
Filippo M. Miatto, Kevin Piché, Thomas Brougham, and Robert W. Boyd

High-fidelity gate operations for quantum computing beyond dephasing time limits *(5 pages)* 062332
Alexandre M. Souza, Roberto S. Sarthour, Ivan S. Oliveira, and Dieter Suter

Optimal measurements for symmetric quantum states with applications to optical communication *(10 pages)* 062333
Hari Krovi, Saikat Guha, Zachary Dutton, and Marcus P. da Silva

Hamiltonian quantum computer in one dimension *(12 pages)* 062334
Tzu-Chieh Wei and John C. Liang

Universality in random quantum networks *(6 pages)* 062335
Jaroslav Novotný, Gernot Alber, and Igor Jex

Entanglement generation via non-Gaussian transfer over atmospheric fading channels *(13 pages)* 062336
Nedasadat Hosseinidehaj and Robert Malaney

Unidimensional continuous-variable quantum key distribution *(6 pages)* 062337
Vladyslav C. Usenko and Frédéric Grosshans

Genuine multipartite entanglement detection and lower bound of multipartite concurrence *(6 pages)* 062338
Ming Li, Shao-Ming Fei, Xianqing Li-Jost, and Heng Fan

Trade-off relations of Bell violations among pairwise qubit systems *(4 pages)* 062339
Hui-Hui Qin, Shao-Ming Fei, and Xianqing Li-Jost

Source and accessible entanglement of few-body systems *(19 pages)* 062340
D. Sauerwein, K. Schwaiger, M. Cuquet, J. I. de Vicente, and B. Kraus

Reexamination of the purity entanglement measure: Peculiarities of a truly thermodynamic quantum correlation measure *(13 pages)* 062341
J. Batle, C. H. Raymond Ooi, and S. Abdalla

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Information transmission over an amplitude damping channel with an arbitrary degree of memory *(12 pages)* 062342
Antonio D'Arrigo, Giuliano Benenti, Giuseppe Falci, and Chiara Macchiavello

Dressing the chopped-random-basis optimization: A bandwidth-limited access to the trap-free landscape *(7 pages)* 062343
N. Rach, M. M. Müller, T. Calarco, and S. Montangero

Statistical-fluctuation analysis for quantum key distribution with consideration of after-pulse contributions *(8 pages)* 062344
Hongxin Li, Haodong Jiang, Ming Gao, Zhi Ma, Chuangui Ma, and Wei Wang

Generalized monogamy relations of concurrence for N-qubit systems *(4 pages)* 062345
Xue-Na Zhu and Shao-Ming Fei

Decoherence-protected spin-photon quantum gates in a hybrid semiconductor-superconductor circuit *(8 pages)* 062346
Li Wang, Tao Tu, Bo Gong, and Guang-Can Guo

Atomic and molecular structure and dynamics

Explicitly correlated wave function for a boron atom *(5 pages)* 062501
Mariusz Puchalski, Jacek Komasa, and Krzysztof Pachucki

Alternative to the Kohn-Sham equations: The Pauli potential differential equation *(5 pages)* 062502
H. Levämäki, Á. Nagy, K. Kokko, and L. Vitos

Thermalization of a two-level atom in a planar dielectric system out of thermal equilibrium *(6 pages)* 062503
Puxun Wu and Hongwei Yu

Casimir interaction between a sphere and a grating *(14 pages)* 062504
Riccardo Messina, Paulo A. Maia Neto, Brahim Guizal, and Mauro Antezza

Relativistic configuration-interaction calculations for atoms with one valence electron based on altering hydrogenlike or Dirac-Fock spin orbitals *(8 pages)* 062505
Leszek Głowacki

Quantum interference shifts in laser spectroscopy with elliptical polarization *(5 pages)* 062506
Pedro Amaro, Filippo Fratini, Laleh Safari, Aldo Antognini, Paul Indelicato, Randolf Pohl, and José Paulo Santos

Atomic and molecular collisions and interactions

Ultracold magnetically tunable interactions without radiative-charge-transfer losses between Ca^+, Sr^+, Ba^+, and Yb^+ ions and Cr atoms *(9 pages)* 062701
Michał Tomza

Spatial and temporal localization of light in two dimensions *(7 pages)* 062702
C. E. Máximo, N. Piovella, Ph. W. Courteille, R. Kaiser, and R. Bachelard

Inelastic processes in Na^+-Ne, Na^+-Ar, Ne^+-Na, and Ar^+-Na collisions in the energy range 0.5–14 keV *(12 pages)* 062703
R. A. Lomsadze, M. R. Gochitashvili, and R. Ya. Kezerashvili

Classical treatment of the electron emission from collisions of uracil molecules with fast protons *(9 pages)* 062704
L. Sarkadi

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A THIRD SERIES, VOLUME 92, NUMBER 6 DECEMBER 2015

Modification of the quantum mechanical flux formula for electron-hydrogen ionization through Bohm's velocity field *(8 pages)* 062706
J. M. Randazzo and L. U. Ancarani

Spin-orbit interaction in bremsstrahlung and its effect on the electron motion in a strong Coulomb field *(6 pages)* 062707
Oleksiy Kovtun, Valeri Tioukine, Andrey Surzhykov, Vladimir A. Yerokhin, Bo Cederwall, and Stanislav Tashenov

Experimental determination of multiple ionization cross sections in Si by electron impact *(8 pages)* 062708
Pablo Daniel Pérez, Andrés Sepúlveda, Gustavo Castellano, and Jorge Trincavelli

Influence of beam collimation on fast-atom diffraction studied via a semiquantum approach *(6 pages)* 062709
M. S. Gravielle and J. E. Miraglia

Charge-state dependence of inner-shell processes in collisions between highly charged Xe ions and solids at intermediate energies *(6 pages)* 062710
Jieru Ren, Yongtao Zhao, Xianming Zhou, Xing Wang, Yu Lei, Ge Xu, Rui Cheng, Yuyu Wang, Shidong Liu, Yuanbo Sun, and Guoqing Xiao

Distance dependence of two-atom dipole interactions with one atom in an excited state *(6 pages)* 062711
Peter W. Milonni and Seyed Mohammad Hashemi Rafsanjani

Differential ionization of a one-electron target under bare-ion impact: Application to proton-impact ionization of atomic hydrogen *(13 pages)* 062712
H. R. J. Walters and Colm T. Whelan

Three-body-fragmentation dynamics of CO_2^{4+} investigated by electron collisions at an impact energy of 500 eV *(8 pages)* 062713
Enliang Wang, Xu Shan, Zhenjie Shen, Xingyu Li, Maomao Gong, Yaguo Tang, and Xiangjun Chen

Observation of deeply bound $^{85}Rb_2$ vibrational levels using Feshbach optimized photoassociation *(5 pages)* 062714
S. P. Krzyzewski, T. G. Akin, J. Dizikes, Michael A. Morrison, and E. R. I. Abraham

Universal range corrections to Efimov trimers for a class of paths to the unitary limit *(7 pages)* 062715
A. Kievsky and M. Gattobigio

Efimov correlations in strongly interacting Bose gases *(10 pages)* 062716
Marcus Barth and Johannes Hofmann

Level-resolved quantum statistical theory of electron capture into many-electron compound resonances in highly charged ions *(10 pages)* 062717
J. C. Berengut, C. Harabati, V. A. Dzuba, V. V. Flambaum, and G. F. Gribakin

PART B

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

Attosecond-magnetic-field-pulse generation by electronic currents in bichromatic circularly polarized UV laser fields *(6 pages)* 063401
Kai-Jun Yuan and André D. Bandrauk

Universal nonmonotonic structure in the saturation curves of magneto-optical-trap-loaded Na^+ ions stored in an ion-neutral hybrid trap: Prediction and observation *(6 pages)* 063402
R. Blümel, J. E. Wells, D. S. Goodman, J. M. Kwolek, and W. W. Smith

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Absolute frequency and isotope shift of the magnesium $(3s^2)\,{}^1S_0 \rightarrow (3s3d)\,{}^1D_2$ two-photon transition by direct frequency-comb spectroscopy *(6 pages)* 063403
E. Peters, S. Reinhardt, Th. W. Hänsch, and Th. Udem

Selective enhancement of resonant multiphoton ionization with strong laser fields *(6 pages)* 063404
Min Li, Peng Zhang, Siqiang Luo, Yueming Zhou, Qingbin Zhang, Pengfei Lan, and Peixiang Lu

Opportunities for detecting ring currents using an attoclock setup *(8 pages)* 063405
Jivesh Kaushal, Felipe Morales, and Olga Smirnova

Imaging and addressing of individual fermionic atoms in an optical lattice *(6 pages)* 063406
G. J. A. Edge, R. Anderson, D. Jervis, D. C. McKay, R. Day, S. Trotzky, and J. H. Thywissen

Dynamical phases in a one-dimensional chain of heterospecies Rydberg atoms with next-nearest-neighbor interactions *(7 pages)* 063407
Jing Qian, Lu Zhang, Jingjing Zhai, and Weiping Zhang

Measuring and manipulating the temperature of cold molecules trapped on a chip *(7 pages)* 063408
S. Marx, D. Adu Smith, G. Insero, S. A. Meek, B. G. Sartakov, G. Meijer, and G. Santambrogio

Ionization-site effects on the photofragmentation of chloro- and bromoacetic acid molecules *(10 pages)* 063409
Helena Levola, Eero Itälä, Kim Schlesier, Kuno Kooser, Sanna Laine, Joakim Laksman, Dang Trinh Ha, Elisabeth Rachlew, Marta Tarkanovskaja, Katrin Tanzer, and Edwin Kukk

Temporal interferences driven by a single-cycle terahertz pulse in the photodetachment dynamics of negative ions *(15 pages)* 063410
B. C. Yang and F. Robicheaux

Population transfer and quantum entanglement implemented in cold atoms involving two Rydberg states via an adiabatic passage *(5 pages)* 063411
Xue-Dong Tian, Yi-Mou Liu, Cui-Li Cui, and Jin-Hui Wu

Population dynamics of molecular nitrogen initiated by intense femtosecond laser pulses *(5 pages)* 063412
Peng Wang, Chengyin Wu, Mingwei Lei, Bo Dai, Hong Yang, Hongbing Jiang, and Qihuang Gong

Quantum treatment of two-stage sub-Doppler laser cooling of magnesium atoms *(11 pages)* 063413
O. N. Prudnikov, D. V. Brazhnikov, A. V. Taichenachev, V. I. Yudin, A. E. Bonert, R. Ya. Il'enkov, and A. N. Goncharov

Coherence, ionization, and recombination in a microwave field *(6 pages)* 063414
Vincent Carrat, E. Magnuson, and T. F. Gallagher

Near-time-optimal control for quantum systems *(7 pages)* 063415
Qi-Ming Chen, Re-Bing Wu, Tian-Ming Zhang, and Herschel Rabitz

Role of interspecies interactions in the preparation of a low-entropy gas of polar molecules in a lattice *(8 pages)* 063416
A. Safavi-Naini, M. L. Wall, and A. M. Rey

Origin of the cusp in the transverse momentum distribution for the process of strong-field ionization *(8 pages)* . . . 063417
I. A. Ivanov

Reduction of the dc-electric-field sensitivity of circular Rydberg states using nonresonant dressing fields *(10 pages)* 063418
Y. Ni, P. Xu, and J. D. D. Martin

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A THIRD SERIES, VOLUME 92, NUMBER 6 DECEMBER 2015

Effects of molecular resonances on Rydberg blockade *(9 pages)* 063419
Andrei Derevianko, Péter Kómár, Turker Topcu, Ronen M. Kroeze, and Mikhail D. Lukin

Wigner representation of ionization and scattering in strong laser fields *(9 pages)* 063420
C. Baumann, H.-J. Kull, and G. M. Fraiman

Above-threshold ionization and photoelectron spectra in atomic systems driven by strong laser fields *(15 pages)* 063421
Noslen Suárez, Alexis Chacón, Marcelo F. Ciappina, Jens Biegert, and Maciej Lewenstein

Dipole phase and photoelectron group delay in inner-shell photoionization *(9 pages)* 063422
A. S. Kheifets, S. Saha, P. C. Deshmukh, D. A. Keating, and S. T. Manson

Electron-correlation effects in enhanced ionization of molecules: A time-dependent generalized-active-space configuration-interaction study *(11 pages)* 063423
S. Chattopadhyay, S. Bauch, and L. B. Madsen

Absolute single-photoionization cross sections of Se^{2+}: Experiment and theory *(11 pages)* 063424
D. A. Macaluso, A. Aguilar, A. L. D. Kilcoyne, E. C. Red, R. C. Bilodeau, R. A. Phaneuf, N. C. Sterling, and B. M. McLaughlin

Imaging electric fields in the vicinity of cryogenic surfaces using Rydberg atoms *(6 pages)* 063425
T. Thiele, J. Deiglmayr, M. Stammeier, J.-A. Agner, H. Schmutz, F. Merkt, and A. Wallraff

Fibonacci optical lattices for tunable quantum quasicrystals *(8 pages)* 063426
K. Singh, K. Saha, S. A. Parameswaran, and D. M. Weld

Numerical simulation of the double-to-single ionization ratio for the helium atom in strong laser fields *(9 pages)* 063427
Zhangjin Chen, Yanyan Zheng, Weifeng Yang, Xiaohong Song, Junliang Xu, L. F. DiMauro, Oleg Zatsarinny, Klaus Bartschat, Toru Morishita, Song-Feng Zhao, and C. D. Lin

R-matrix-incorporating-time method for $H_2{}^+$ in short and intense laser fields *(11 pages)* 063428
Cathal Ó Broin and L. A. A. Nikolopoulos

Effects of strong laser fields on hadronic helium atoms *(9 pages)* 063429
Han-Chieh Lee and Tsin-Fu Jiang

Resonance-mediated atomic ionization dynamics induced by ultraintense x-ray pulses *(12 pages)* 063430
Phay J. Ho, E. P. Kanter, and L. Young

Matter waves and collective properties of cold atoms and molecules

Controllable nonlocal interactions between dark solitons in dipolar condensates *(7 pages)* 063601
T. Bland, M. J. Edmonds, N. P. Proukakis, A. M. Martin, D. H. J. O'Dell, and N. G. Parker

Beyond the Hubbard bands in strongly correlated lattice bosons *(8 pages)* 063602
Hugo U. R. Strand, Martin Eckstein, and Philipp Werner

Coupled spin-vortex pair in dipolar spinor Bose-Einstein condensates *(6 pages)* 063603
Tiantian Li, Su Yi, and Yunbo Zhang

Photon-induced self-trapping and entanglement of a bosonic Josephson junction inside an optical resonator *(6 pages)* 063604
P. Rosson, G. Mazzarella, G. Szirmai, and L. Salasnich

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Dynamical depinning of a Tonks-Girardeau gas *(5 pages)* 063605
Florian Cartarius, Eiji Kawasaki, and Anna Minguzzi

Modulational instability in binary spin-orbit-coupled Bose-Einstein condensates *(7 pages)* 063606
Ishfaq Ahmad Bhat, T. Mithun, B. A. Malomed, and K. Porsezian

Nonequilibrium kinetic theory for trapped binary condensates *(26 pages)* 063607
M. J. Edmonds, K. L. Lee, and N. P. Proukakis

Dynamics of quantized vortices in Bose-Einstein condensates with laser-induced spin-orbit coupling *(8 pages)* . . . 063608
Kenichi Kasamatsu

Thermal equation of state of polarized fermions in one dimension via complex chemical potentials *(13 pages)* . . . 063609
Andrew C. Loheac, Jens Braun, Joaquín E. Drut, and Dietrich Roscher

Persistent atomic spin squeezing at the Heisenberg limit *(5 pages)* 063610
Ling-Na Wu, Meng Khoon Tey, and L. You

Robust vortex lines, vortex rings, and hopfions in three-dimensional Bose-Einstein condensates *(7 pages)* 063611
R. N. Bisset, Wenlong Wang, C. Ticknor, R. Carretero-González, D. J. Frantzeskakis, L. A. Collins, and P. G. Kevrekidis

N-atom collective-state atomic interferometer with ultrahigh Compton frequency and ultrashort de Broglie wavelength, with $\sqrt{N}$ reduction in fringe width *(17 pages)* 063612
Resham Sarkar, May E. Kim, Renpeng Fang, and Selim M. Shahriar

Laser-ranging long-baseline differential atom interferometers for space *(5 pages)* 063613
Sheng-wey Chiow, Jason Williams, and Nan Yu

Thermalization of matter waves in speckle potentials *(7 pages)* 063614
Nicolas Cherroret, Tomasz Karpiuk, Benoît Grémaud, and Christian Miniatura

Tunable Chern insulator with optimally shaken lattices *(9 pages)* 063615
Albert Verdeny and Florian Mintert

Phase diagram of a strongly interacting spin-imbalanced Fermi gas *(6 pages)* 063616
Ben A. Olsen, Melissa C. Revelle, Jacob A. Fry, Daniel E. Sheehy, and Randall G. Hulet

Influence of chirping the Raman lasers in an atom gravimeter: Phase shifts due to the Raman light shift and to the finite speed of light *(7 pages)* 063617
B. Cheng, P. Gillot, S. Merlet, and F. Pereira Dos Santos

Quantum Hall effects in a non-Abelian honeycomb lattice *(10 pages)* 063618
Ling Li, Ningning Hao, Guocai Liu, Zhiming Bai, Zai-Dong Li, Shu Chen, and W. M. Liu

Spreading of correlations and Loschmidt echo after quantum quenches of a Bose gas in the Aubry-André potential *(9 pages)* 063619
Nicola Lo Gullo and Luca Dell'Anna

Classical field records of a quantum system: Their internal consistency and accuracy *(10 pages)* 063620
Joanna Pietraszewicz and Piotr Deuar

Anderson localization in optical lattices with correlated disorder *(8 pages)* 063621
E. Fratini and S. Pilati

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Calorimetry of a harmonically trapped Bose gas *(7 pages)* 063622
S. K. Ruddell, D. H. White, A. Ullah, D. Baillie, and M. D. Hoogerland

Universal scaling of density and momentum distributions in Lieb-Liniger gases *(12 pages)* 063623
Wei Xu and Marcos Rigol

Two-state Bogoliubov theory of a molecular Bose gas *(21 pages)* 063624
Brandon M. Peden, Ryan M. Wilson, Maverick L. McLanahan, Jesse Hall, and Seth T. Rittenhouse

Contact interaction in a unitary ultracold Fermi gas *(7 pages)* 063625
Renato Pessoa, S. Gandolfi, S. A. Vitiello, and K. E. Schmidt

Wave-packet dynamics on Chern-band lattices in a trap *(11 pages)* 063626
Sthitadhi Roy, Adolfo G. Grushin, Roderich Moessner, and Masudul Haque

Geometry of Bloch states probed by Stückelberg interferometry *(18 pages)* 063627
Lih-King Lim, Jean-Noël Fuchs, and Gilles Montambaux

Perfect-fluid behavior of a dilute Fermi gas near unitary *(6 pages)* 063628
Gabriel Wlazłowski, Wei Quan, and Aurel Bulgac

Spectral properties of the Goldstino in supersymmetric Bose-Fermi mixtures *(11 pages)* 063629
Jean-Paul Blaizot, Yoshimasa Hidaka, and Daisuke Satow

Phase diagrams of the Bose-Hubbard model and the Haldane-Bose-Hubbard model with complex hopping amplitudes *(12 pages)* 063630
Yoshihito Kuno, Takashi Nakafuji, and Ikuo Ichinose

Lower bound for the hyperfine populations of spin-2 condensates against a magnetic field under the single-spatial-mode approximation *(7 pages)* 063631
Y. M. Liu, Y. Z. He, and C. G. Bao

Spatiotemporal detection of Kelvin waves in quantum turbulence simulations *(7 pages)* 063632
P. Clark di Leoni, P. D. Mininni, and M. E. Brachet

Using superlattice potentials to probe long-range magnetic correlations in optical lattices *(11 pages)* 063633
Kim G. L. Pedersen, Brian M. Andersen, Georg M. Bruun, and Anders S. Sørensen

Strongly interacting mesoscopic systems of anyons in one dimension *(6 pages)* 063634
N. T. Zinner

℘ Polaronic effects in one- and two-band quantum systems *(20 pages)* 063635
Tao Yin, Daniel Cocks, and Walter Hofstetter

Comparison of strong-coupling theories for a two-dimensional Fermi gas *(5 pages)* 063636
Brendan C. Mulkerin, Kristian Fenech, Paul Dyke, Chris J. Vale, Xia-Ji Liu, and Hui Hu

Interaction effects on Wannier functions for bosons in an optical lattice *(5 pages)* 063637
Shaoqi Zhu (朱少奇) and Biao Wu (吴飙)

Pairing fluctuations and an anisotropic pseudogap phenomenon in an ultracold superfluid Fermi gas with plural p-wave superfluid phases *(13 pages)* 063638
Daisuke Inotani and Yoji Ohashi

(Continued)

℘ The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Stability of a Bose-Einstein condensate in a driven optical lattice: Crossover between weak and tight transverse confinement *(9 pages)* 063639
Sayan Choudhury and Erich J. Mueller

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

Nonlinear microwave photon occupancy of a driven resonator strongly coupled to a transmon qubit *(8 pages)* 063801
B. Suri, Z. K. Keane, Lev S. Bishop, S. Novikov, F. C. Wellstood, and B. S. Palmer

Resonance retrieval of stored coherence in an rf-optical double-resonance experiment *(5 pages)* 063802
Vladimir Djokic, Georg Enzian, Frank Vewinger, and Martin Weitz

Fraunhofer-like diffracted lateral photoelectron momentum distributions of $H_2{}^+$ in charge-resonance-enhanced ionization in strong laser fields *(5 pages)* 063803
Lin Xin, Han-Cheng Qin, Wan-Yang Wu, and Feng He

Linear electro-optic effects due to high-order spatial dispersion *(7 pages)* 063804
F. Castles

Polarization-selective optical nonlinearities in cold Rydberg atoms *(10 pages)* 063805
Jin-Hui Wu, M. Artoni, and G. C. La Rocca

Optics near a hyperbolic defect *(5 pages)* 063806
Sébastien Fumeron, Bertrand Berche, Fernando Santos, Erms Pereira, and Fernando Moraes

Nonlinear reversal of the $\mathcal{PT}$-symmetric phase transition in a system of coupled semiconductor microring resonators *(8 pages)* 063807
Absar U. Hassan, Hossein Hodaei, Mohammad-Ali Miri, Mercedeh Khajavikhan, and Demetrios N. Christodoulides

Thermodynamics and dynamics of atomic self-organization in an optical cavity *(18 pages)* 063808
Stefan Schütz, Simon B. Jäger, and Giovanna Morigi

Systematic and quantitative analysis of residual amplitude modulation in Pound-Drever-Hall frequency stabilization *(13 pages)* 063809
Hui Shen, Liufeng Li, Jin Bi, Jia Wang, and Lisheng Chen

Four-level N-scheme crossover resonances in Rb saturation spectroscopy in magnetic fields *(9 pages)* 063810
S. Scotto, D. Ciampini, C. Rizzo, and E. Arimondo

Generation of below-threshold even harmonics by a stretched $H_2{}^+$ molecular ion in intense linearly and circularly polarized laser fields *(8 pages)* 063811
K. Nasiri Avanaki, Dmitry A. Telnov, H. Z. Jooya, and Shih-I Chu

Hybrid Einstein-Podolsky-Rosen steering in an atom-optomechanical system *(9 pages)* 063812
Huatang Tan and Lihui Sun

Flat bands and $\mathcal{PT}$ symmetry in quasi-one-dimensional lattices *(5 pages)* 063813
Mario I. Molina

Noise and instability of an optical lattice clock *(7 pages)* 063814
Ali Al-Masoudi, Sören Dörscher, Sebastian Häfner, Uwe Sterr, and Christian Lisdat

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Analytic solution and pulse area theorem for three-level atoms *(5 pages)* 063815
Gavriil Shchedrin, Chris O'Brien, Yuri Rostovtsev, and Marlan O. Scully

Entangled collective-spin states of atomic ensembles under nonuniform atom-light interaction *(5 pages)* 063816
Jiazhong Hu, Wenlan Chen, Zachary Vendeiro, Hao Zhang, and Vladan Vuletić

Few-photon transport in many-body photonic systems: A scattering approach *(15 pages)* 063817
Changhyoup Lee, Changsuk Noh, Nikolaos Schetakis, and Dimitris G. Angelakis

Simple analytical derivation of the fields of an ultrashort tightly focused linearly polarized laser pulse *(6 pages)* 063818
Yousef I. Salamin

Stability of polarization singularities in disordered photonic crystal waveguides *(6 pages)* 063819
Ben Lang, Daryl M. Beggs, Andrew B. Young, John G. Rarity, and Ruth Oulton

Testing the validity of Bose-Einstein statistics in molecules *(7 pages)* 063820
P. Cancio Pastor, I. Galli, G. Giusfredi, D. Mazzotti, and P. De Natale

Phase-matched second-harmonic generation in slow-light photonic crystal waveguides *(11 pages)* 063821
Sina Saravi, Séverine Diziain, Matthias Zilk, Frank Setzpfandt, and Thomas Pertsch

Cooperative ordering in lattices of interacting two-level dipoles *(6 pages)* 063822
Robert J. Bettles, Simon A. Gardiner, and Charles S. Adams

Spin squeezing a cold molecule *(8 pages)* 063823
M. Bhattacharya

Lensing effect of electromagnetically induced transparency involving a Rydberg state *(6 pages)* 063824
Jingshan Han, Thibault Vogt, Manukumara Manjappa, Ruixiang Guo, Martin Kiffner, and Wenhui Li

Quantum simulation of quantum field theory using continuous variables *(7 pages)* 063825
Kevin Marshall, Raphael Pooser, George Siopsis, and Christian Weedbrook

℘ Underlying conservation and stability laws in nonlinear propagation of axicon-generated Bessel beams *(8 pages)* 063826
Miguel A. Porras, Carlos Ruiz-Jiménez, and Juan Carlos Losada

Telecom-heralded single-photon absorption by a single atom *(8 pages)* 063827
Andreas Lenhard, Matthias Bock, Christoph Becher, Stephan Kucera, José Brito, Pascal Eich, Philipp Müller, and Jürgen Eschner

Absolute measurement of the ultrafast nonlinear electronic and rovibrational response in H_2 and D_2 *(10 pages)* 063828
J. K. Wahlstrand, S. Zahedpour, Y.-H. Cheng, J. P. Palastro, and H. M. Milchberg

Spectral method for efficient computation of time-dependent phenomena in complex lasers *(10 pages)* 063829
O. Malik, K. G. Makris, and H. E. Türeci

Multiphoton quantum Rabi oscillations in ultrastrong cavity QED *(10 pages)* 063830
Luigi Garziano, Roberto Stassi, Vincenzo Macrì, Anton Frisk Kockum, Salvatore Savasta, and Franco Nori

Electromagnetic Green's function for layered topological insulators *(14 pages)* 063831
J. A. Crosse, Sebastian Fuchs, and Stefan Yoshi Buhmann

(Continued)

℘ The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Dissipative two-mode Tavis-Cummings model with time-delayed feedback control *(9 pages)* 063832
Wassilij Kopylov, Milan Radonjić, Tobias Brandes, Antun Balaž, and Axel Pelster

Graphene-like optical light field and its interaction with two-level atoms *(9 pages)* 063833
V. E. Lembessis, Johannes Courtial, N. Radwell, A. Selyem, S. Franke-Arnold, O. M. Aldossary, and M. Babiker

Numerical studies of light-matter interaction driven by plasmonic fields: The velocity gauge *(9 pages)* 063834
A. Chacón, M. F. Ciappina, and M. Lewenstein

Non-Hermitian Hamiltonian approach to the microwave transmission through a one-dimensional qubit chain *(15 pages)* 063835
Ya. S. Greenberg and A. A. Shtygashev

Designable single-photon quantum routings with atomic mirrors *(7 pages)* 063836
Xingmin Li and L. F. Wei

Luminal pulse velocity in a superluminal medium *(7 pages)* 063837
Heisuke Amano and Makoto Tomita

Spin-flip model of spin-polarized vertical-cavity surface-emitting lasers: Asymptotic analysis, numerics, and experiments *(10 pages)* 063838
H. Susanto, K. Schires, M. J. Adams, and I. D. Henning

Time-dependent phase matching of high-order-harmonic generation *(8 pages)* 063839
Feng Wang, Lixin He, Chunyang Zhai, Wenjing Shi, Qingbin Zhang, Pengfei Lan, and Peixiang Lu

Atomic lenses and ideal single-photon detections *(5 pages)* 063840
Xingmin Li, Lingyun Xie, and L. F. Wei

Physical meaning of the radial index of Laguerre-Gauss beams *(10 pages)* 063841
William N. Plick and Mario Krenn

Optical Tamm state and giant asymmetry of light transmission through an array of nanoholes *(8 pages)* 063842
Vasily V. Klimov, Ilya V. Treshin, Alexander S. Shalin, Pavel N. Melentiev, Artur A. Kuzin, Anton E. Afanasiev, and Victor I. Balykin

Generation of cluster states in optomechanical quantum systems *(10 pages)* 063843
Oussama Houhou, Habib Aissaoui, and Alessandro Ferraro

Kinetic-energy structure of a laser-produced-plasma channel in air *(6 pages)* 063844
Xiao-Fang Shu, Cheng-Xin Yu, Wei Li, and Shi-Bing Liu

Magneto-optical coupling in whispering-gallery-mode resonators *(7 pages)* 063845
J. A. Haigh, S. Langenfeld, N. J. Lambert, J. J. Baumberg, A. J. Ramsay, A. Nunnenkamp, and A. J. Ferguson

Quantum dynamics and spectra of vibrational Raman-resonance fluorescence in a two-mode cavity *(9 pages)* 063847
C. H. Raymond Ooi, Eyob A. Sete, and W. M. Liu

Rectification of light in the quantum regime *(7 pages)* 063848
Jibo Dai, Alexandre Roulet, Huy Nguyen Le, and Valerio Scarani

Dynamic power balance for nonlinear waves in unbalanced gain and loss landscapes *(6 pages)* 063849
Yannis Kominis

(Continued)

The editors and referees of PRA find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. A 88, 020001 (2013).

PHYSICAL REVIEW A **THIRD SERIES, VOLUME 92, NUMBER 6** **DECEMBER 2015**

Effect of two-color laser pulse duration on intense terahertz generation at different laser intensities *(7 pages)* 063850
Chenhui Lu, Tao He, Liqiang Zhang, Hui Zhang, Yunhua Yao, Shufen Li, and Shian Zhang

Tailoring speckles with Weibull intensity statistics *(5 pages)* 063851
João P. Amaral, Eduardo J. S. Fonseca, and Alcenisio J. Jesus-Silva

Adaptive identification of coherent states *(7 pages)* 063852
Markku P. V. Stenberg, Kevin Pack, and Frank K. Wilhelm

ERRATA

Erratum: TaN molecule as a candidate for the search for a T, P-violating nuclear magnetic quadrupole moment
[Phys. Rev. A **92**, 012521 (2015)] *(1 page)* . . . . . 069901(E)
L. V. Skripnikov, A. N. Petrov, N. S. Mosyagin, A. V. Titov, and V. V. Flambaum

Erratum: Theoretical study of laser cooling of magnesium monofluoride using *ab initio* methods
[Phys. Rev. A **91**, 042511 (2015)] *(2 pages)* . . . . . 069902(E)
Shuying Kang, Yufeng Gao, Fangguang Kuang, Tao Gao, Jiguang Du, and Gang Jiang

Publisher's Note: Distributed quantum dense coding with two receivers in noisy environments
[Phys. Rev. A **92**, 052330 (2015)] *(1 page)* . . . . . 069903(E)
Tamoghna Das, R. Prabhu, Aditi Sen(De), and Ujjwal Sen

Erratum: Gaussian and Airy wave packets of massive particles with orbital angular momentum
[Phys. Rev. A **91**, 013847 (2015)] *(1 page)* . . . . . 069904(E)
Dmitry V. Karlovets

Erratum: Temperature sensitivity of the cavity scale factor enhancement for a Gaussian absorption resonance
[Phys. Rev. A **92**, 053845 (2015)] *(1 page)* . . . . . 069905(E)
Krishna Myneni, David D. Smith, Hongrok Chang, and H. A. Luckay

Erratum: Stationary discrete solitons in a driven dissipative Bose-Hubbard chain
[Phys. Rev. A **91**, 033823 (2015)] *(1 page)* . . . . . 069906(E)
Uta Naether, Fernando Quijandría, Juan José García-Ripoll, and David Zueco