



Density map for the three distinct populations of electrons past the plasma-vacuum boundary (blue colormap) and the coherent transition radiation magnetic field generated by the escaping electrons (green-red colormap).
[J. Déchard, X. Davoine, and L. Bergé, Phys. Rev. Lett. **123**, 264801 (2019)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 21 December–31 December 2019

VOLUME 123, NUMBER 26

31 December 2019

General Physics: Statistical and Quantum Mechanics, Quantum Information, etc.

Dissipation Induced Nonstationarity in a Quantum Gas	260401
Berislav Buča and Dieter Jaksch	
Quantitative Acoustic Models for Superfluid Circuits	260402
Guillaume Gauthier, Stuart S. Szigeti, Matthew T. Reeves, Mark Baker, Thomas A. Bell, Halina Rubinsztein-Dunlop, Matthew J. Davis, and Tyler W. Neely	
Heralded Generation of Macroscopic Superposition States in a Spinor Bose-Einstein Condensate	260403
L. Pezzè, M. Gessner, P. Feldmann, C. Klempt, L. Santos, and A. Smerzi	
Quantum Neuromorphic Platform for Quantum State Preparation	260404
Sanjib Ghosh, Tomasz Paterek, and Timothy C. H. Liew	
Emergent Periodic and Quasiperiodic Lattices on Surfaces of Synthetic Hall Tori and Synthetic Hall Cylinders	260405
Yangqian Yan, Shao-Liang Zhang, Sayan Choudhury, and Qi Zhou	
Experimental Measurement of the Hilbert-Schmidt Distance between Two-Qubit States as a Means for Reducing the Complexity of Machine Learning	260501
Vojtěch Trávníček, Karol Bartkiewicz, Antonín Černoč, and Karel Lemr	
Scattering-Based Geometric Shaping of Photon-Photon Interactions	260502
Shahaf Asban and Shaul Mukamel	
Robust and Resource-Efficient Microwave Near-Field Entangling $^9\text{Be}^+$ Gate	260503
G. Zarantonello, H. Hahn, J. Morgner, M. Schulte, A. Bautista-Salvador, R. F. Werner, K. Hammerer, and C. Ospelkaus	
Efficient Verification of Pure Quantum States in the Adversarial Scenario	260504
Huangjun Zhu and Masahito Hayashi	
Variational Spin-Squeezing Algorithms on Programmable Quantum Sensors	260505
Raphael Kaubruegger, Pietro Silvi, Christian Kokail, Rick van Bijnen, Ana Maria Rey, Jun Ye, Adam M. Kaufman, and Peter Zoller	
Eigenstate Thermalization and Rotational Invariance in Ergodic Quantum Systems	260601
Laura Foini and Jorge Kurchan	
Active Hard Spheres in Infinitely Many Dimensions	260602
Thibaut Arnoult de Pirey, Gustavo Lozano, and Frédéric van Wijland	

Elementary Particles and Fields

Testing New Physics Explanations of the MiniBooNE Anomaly at Neutrino Scattering Experiments	261801
Carlos A. Argüelles, Matheus Hostert, and Yu-Dai Tsai	
Detecting Light Dark Matter via Inelastic Cosmic Ray Collisions	261802
James Alvey, Miguel D. Campos, Malcolm Fairbairn, and Tevong You	

Nuclear Physics

Hydrodynamic Attractors, Initial State Energy, and Particle Production in Relativistic Nuclear Collisions	262301
Giuliano Giacalone, Aleksas Mazeliauskas, and Sören Schlichting	

(Continued Inside)



This paper was highlighted in the APS publication *Physics* (physics.aps.org).

By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. Lett. 98, 010001 (2007).

Copyright 2019 American Physical Society



0031-9007(20191231)123:26*1;1-F

	Evidence of Single State Dominance in the Two-Neutrino Double- β Decay of ^{82}Se with CUPID-0 O. Azzolini <i>et al.</i>	262501
	Discovery of an Exceptionally Strong β -Decay Transition of ^{20}F and Implications for the Fate of Intermediate-Mass Stars O. S. Kirsebom, S. Jones, D. F. Strömberg, G. Martínez-Pinedo, K. Langanke, F. K. Röpke, B. A. Brown, T. Eronen, H. O. U. Fynbo, M. Hukkanen, A. Idini, A. Jokinen, A. Kankainen, J. Kostensalo, I. Moore, H. Möller, S. T. Ohlmann, H. Penttilä, K. Riisager, S. Rinta-Antila, P. C. Srivastava, J. Suhonen, W. H. Trzaska, and J. Äystö	262701
	Atomic, Molecular, and Optical Physics	
	Subfemtosecond Tracing of Molecular Dynamics during Strong-Field Interaction Václav Hanus, Sarayoo Kangaparambil, Seyedreza Larimian, Martin Dörner-Kirchner, Xinhua Xie (谢新华), Markus S. Schöffler, Gerhard G. Paulus, Andrius Baltuška, André Staudte, and Markus Kitzler-Zeiler	263201
	Spin-Wave Multiplexed Atom-Cavity Electrodynamics Kevin C. Cox, David H. Meyer, Zachary A. Castillo, Fredrik K. Fatemi, and Paul D. Kunz	263601
	Microscale Generation of Entangled Photons without Momentum Conservation C. Okoth, A. Cavanna, T. Santiago-Cruz, and M. V. Chekhova	263602
	Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.	
	Multitip Near-Field Scanning Thermal Microscopy Philippe Ben-Abdallah	264301
	Microscopic Slip Boundary Conditions in Unsteady Fluid Flows J. A. de la Torre, D. Duque-Zumajo, D. Camargo, and Pep Español	264501
	Plasma and Beam Physics	
	THz Generation from Relativistic Plasmas Driven by Near- to Far-Infrared Laser Pulses J. Déchard, X. Davoine, and L. Bergé	264801
	Net Acceleration and Direct Measurement of Attosecond Electron Pulses in a Silicon Dielectric Laser Accelerator Dylan S. Black, Uwe Niedermayer, Yu Miao, Zhexin Zhao, Olav Solgaard, Robert L. Byer, and Kenneth J. Leedle	264802
	Generation and Characterization of Attosecond Microbunched Electron Pulse Trains via Dielectric Laser Acceleration Norbert Schönenberger, Anna Mittelbach, Peyman Yousefi, Joshua McNeur, Uwe Niedermayer, and Peter Hommelhoff	264803
	Pattern Formation in Low-Pressure Radio-Frequency Plasmas due to a Transport Instability Victor Désangles, Jean-Luc Raimbault, Alexandre Poyé, Pascal Chabert, and Nicolas Plihon	265001
	Condensed Matter: Structure, etc.	
	Local Density Fluctuation Governs the Divergence of Viscosity Underlying Elastic and Hydrodynamic Anomalies in a 2D Glass-Forming Liquid Hayato Shiba, Takeshi Kawasaki, and Kang Kim	265501
	Photonic Topological Spin Hall Effect Mediated by Vortex Pairs Bo Wang (王波), Elhanan Maguid, Kexiu Rong (容科秀), Michael Yannai, Vladimir Kleiner, and Erez Hasman	266101
	Condensed Matter: Electronic Properties, etc.	
	Spectroscopic Signatures of Quantum Many-Body Correlations in Polariton Microcavities Jesper Levinsen, Francesca Maria Marchetti, Jonathan Keeling, and Meera M. Parish	266401
	Localization, Topology, and Quantized Transport in Disordered Floquet Systems Matteo M. Wauters, Angelo Russomanno, Roberta Citro, Giuseppe E. Santoro, and Lorenzo Privitera	266601
	Domain-Wall Tunneling Electroresistance Effect M. Li, L. L. Tao, and Evgeny Y. Tsymbal	266602

(Continued on Preceding Page)

Contents (Continued)

Fusion Channels of Non-Abelian Anyons from Angular-Momentum and Density-Profile Measurements	266801
E. Macaluso, T. Comparin, L. Mazza, and I. Carusotto	
Partial Lattice Defects in Higher-Order Topological Insulators	266802
Raquel Queiroz, Ion Cosma Fulga, Nurit Avraham, Haim Beidenkopf, and Jennifer Cano	
Floquet Hopf Insulators	266803
Thomas Schuster, Snir Gazit, Joel E. Moore, and Norman Y. Yao	
Geometry-Assisted Topological Transitions in Spin Interferometry	266804
M. Wang, H. Saarikoski, A. A. Reynoso, J. P. Baltanás, D. Frustaglia, and J. Nitta	
Electron Transmission through Coordinating Atoms Embedded in Metal-Organic Nanoporous Networks	266805
Ignacio Piquero-Zulaica, Ali Sadeghi, Mohammad Kherelden, Muqing Hua, Jing Liu, Guowen Kuang, Linghao Yan, J. Enrique Ortega, Zakaria M. Abd El-Fattah, Behnam Azizi, Nian Lin, and Jorge Lobo-Checa	
Novel Fe-Based Superconductor LaFe_2As_2 in Comparison with Traditional Pnictides	267001
I. I. Mazin, Makoto Shimizu, Nayuta Takemori, and Harald O. Jeschke	
Dynamics of a Persistent Insulator-to-Metal Transition in Strained Manganite Films	267201
Samuel W. Teitelbaum, B. K. Ofori-Okai, Yu-Hsiang Cheng, Jingdi Zhang, Feng Jin, Wenbin Wu, Richard D. Averitt, and Keith A. Nelson	
Polymer, Soft Matter, Biological, Climate, and Interdisciplinary Physics	
Scaling Behaviors of a Polymer Ejected from a Cavity through a Small Pore	267801
Hao-Chun Huang and Pai-Yi Hsiao	
Dynamical Renormalization Group Approach to the Collective Behavior of Swarms	268001
Andrea Cavagna, Luca Di Carlo, Irene Giardina, Luca Grandinetti, Tomas S. Grigera, and Giulia Pisegna	
Non-negative Interfacial Tension in Phase-Separated Active Brownian Particles	268002
Sophie Hermann, Daniel de las Heras, and Matthias Schmidt	



This paper was highlighted in the APS publication *Physics* (physics.aps.org).

By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. Lett. 98, 010001 (2007).

Physics
spotlighting exceptional research

The American Physical Society's free online publication, *Physics* (physics.aps.org), provides thought-provoking analysis and spotlights exceptional research.