

Frame from a simulation depicting the inspiral phase of the first observed binary neutron star merger [credit: T. Dietrich (FSU/AEI); BAM Collaboration]. Selected for a Viewpoint in *Physics* and an Editors' Suggestion. [B. P. Abbott *et al.* (LIGO Scientific Collaboration and Virgo Collaboration), Phys. Rev. Lett. **119**, 161101 (2017)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 14 October–20 October 2017

VOLUME 119, NUMBER 16 20 October 2017

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

Revealing Quantum Statistics with a Pair of Distant Atoms 160401
C. F. Roos, A. Alberti, D. Meschede, P. Hauke, and H. Häffner
Controlled Asymmetry of Einstein-Podolsky-Rosen Steering with an Injected Nondegenerate Optical Parametric Oscillator 160501
M. K. Olsen
Entangling Two Individual Atoms of Different Isotopes via Rydberg Blockade 160502
Yong Zeng, Peng Xu, Xiaodong He, Yangyang Liu, Min Liu, Jin Wang, D. J. Papoular, G. V. Shlyapnikov, and Mingsheng Zhan
Linear and Logarithmic Time Compositions of Quantum Many-Body Operators 160503
F. Motzoi, M. P. Kaicher, and F. K. Wilhelm
Frenetic Bounds on the Entropy Production 160601
Christian Maes

Gravitation and Astrophysics

GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral 161101
B. P. Abbott *et al.* (LIGO Scientific Collaboration and Virgo Collaboration)
Bounding the Speed of Gravity with Gravitational Wave Observations 161102
Neil Cornish, Diego Blas, and Germano Nardini
Are Gravitational Waves Spinning Down PSR J1023 + 0038? 161103
B. Haskell and A. Patruno
Compact Stars with Sequential QCD Phase Transitions 161104
Mark Alford and Armen Sedrakian

Elementary Particles and Fields

Higgs Amplitudes from $\mathcal{N} = 4$ Supersymmetric Yang-Mills Theory 161601
Andreas Brandhuber, Martyna Kostacińska, Brenda Penante, and Gabriele Travaglini
Free Quantum Fields in 4D and Calabi-Yau Spaces 161602
Robert de Mello Koch, Phumudzo Rabambi, Randle Rabe, and Sanjaye Ramgoolam
Universal Spatial Structure of Nonequilibrium Steady States 161603
Julian Sonner and Benjamin Withers
Dark Matter "Collider" from Inelastic Boosted Dark Matter 161801
Doojin Kim, Jong-Chul Park, and Seodong Shin

Nuclear Physics

JLab Measurements of the ^{3}He Form Factors at Large Momentum Transfers 162501
A. Camsonne *et al.* (The Jefferson Lab Hall A Collaboration)

(Continued Inside)

Selected for a Viewpoint in *Physics*. Please visit http://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 2017 American Physical Society

0031-9007(20171020)119:16;1-F

Atomic, Molecular, and Optical Physics

Observation of Optomechanical Strain in a Cold Atomic Cloud 163201
Noam Matzliah, Hagai Edri, Asif Sinay, Roee Ozeri, and Nir Davidson

Electronic Stopping of Slow Protons in Oxides: Scaling Properties 163401
D. Roth, B. Bruckner, G. Undeutsch, V. Paneta, A. I. Mardare, C. L. McGahan, M. Dosmailov, J. I. Juaristi, M. Alducin, J. D. Pedarnig, R. F. Haglund, D. Primetzhofer, and P. Bauer

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Bound Pulse Trains in Arrays of Coupled Spatially Extended Dynamical Systems 163901
D. Puzyrev, A. G. Vladimirov, A. Pimenov, S. V. Gurevich, and S. Yanchuk

Replica Symmetry Breaking in the Photonic Ferromagneticlike Spontaneous Mode-Locking Phase of a Multimode Nd:YAG Laser 163902
André L. Moura, Pablo I. R. Pincheira, Albert S. Reyna, Ernesto P. Raposo, Anderson S. L. Gomes, and Cid B. de Araújo

Impact of Strong Scattering Resonances on Ballistic and Diffusive Wave Transport 164301
Benoit Tallon, Thomas Brunet, and John H. Page

Dynamo Action in a Quasi-Keplerian Taylor-Couette Flow 164501
Anna Guseva, Rainer Hollerbach, Ashley P. Willis, and Marc Avila

Plasma and Beam Physics

Collisionless Shock Acceleration of High-Flux Quasimonoenergetic Proton Beams Driven by Circularly Polarized Laser Pulses 164801
H. Zhang, B. F. Shen, W. P. Wang, S. H. Zhai, S. S. Li, X. M. Lu, J. F. Li, R. J. Xu, X. L. Wang, X. Y. Liang, Y. X. Leng, R. X. Li, and Z. Z. Xu

Condensed Matter: Structure, etc.

Quantum criticality and the Tomonaga-Luttinger liquid in one-dimensional Bose gases 165701
Bing Yang, Yang-Yang Chen, Yong-Guang Zheng, Hui Sun, Han-Ning Dai, Xi-Wen Guan, Zhen-Sheng Yuan, and Jian-Wei Pan

Submolecular Resolution by Variation of the Inelastic Electron Tunneling Spectroscopy Amplitude and its Relation to the AFM/STM Signal 166001
Bruno de la Torre, Martin Švec, Giuseppe Foti, Ondřej Krejčí, Prokop Hapala, Aran Garcia-Lekue, Thomas Frederiksen, Radek Zbořil, Andres Arnau, Héctor Vázquez, and Pavel Jelínek

Coulometry and Calorimetry of Electric Double Layer Formation in Porous Electrodes 166002
Mathijs Janssen, Elian Griffioen, P. M. Biesheuvel, René van Roij, and Ben Erné

Entropic Comparison of Atomic-Resolution Electron Tomography of Crystals and Amorphous Materials 166101
S. M. Collins, R. K. Leary, P. A. Midgley, R. Tovey, M. Benning, C.-B. Schönlieb, P. Rez, and M. M. J. Treacy

Condensed Matter: Electronic Properties, etc.

Fierz Convergence Criterion: A Controlled Approach to Strongly Interacting Systems with Small Embedded Clusters 166401
Thomas Ayral, Jaksa Vučičević, and Olivier Parcollet

Importance of σ Bonding Electrons for the Accurate Description of Electron Correlation in Graphene 166402
Huihuo Zheng, Yu Gan, Peter Abbamonte, and Lucas K. Wagner

Negative Magnetoresistance without Chiral Anomaly in Topological Insulators 166601
Xin Dai, Z. Z. Du, and Hai-Zhou Lu

Nematic Skyrmions in Odd-Parity Superconductors 167001
A. A. Zyuzin, Julien Garaud, and Egor Babaev

Band Filling Control of the Dzyaloshinskii-Moriya Interaction in Weakly Ferromagnetic Insulators 167201
G. Beutier, S. P. Collins, O. V. Dimitrova, V. E. Dmitrienko, M. I. Katsnelson, Y. O. Kvashnin, A. I. Lichtenstein, V. V. Mazurenko, A. G. A. Nisbet, E. N. Ovchinnikova, and D. Pincini

(Continued on Preceding Page)

Selected for a Viewpoint in *Physics*. Please visit http://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)

Quantum Spin Stabilized Magnetic Levitation 167202
C. C. Rusconi, V. Pöchhacker, K. Kustura, J. I. Cirac, and O. Romero-Isart
Control of the Effective Free-Energy Landscape in a Frustrated Magnet by a Field Pulse 167203
Yuan Wan and Roderich Moessner
Topologically Protected Complete Polarization Conversion 167401
Yu Guo, Meng Xiao, and Shanhui Fan
Insulating Josephson Junction Chains as Pinned Luttinger Liquids 167701
Karin Cedergren, Roger Ackroyd, Sergey Kafanov, Nicolas Vogt, Alexander Shnirman, and Timothy Duty

Polymer, Soft Matter, Biological, Climate, and Interdisciplinary Physics

Spectral Analysis for Resonant Soft X-Ray Scattering Enables Measurement of Interfacial Width in 3D Organic Nanostructures 167801
Thomas Ferron, Michael Pope, and Brian A. Collins
Bistability, Oscillations, and Bidirectional Motion of Ensemble of Hydrodynamically Coupled Molecular Motors 168101
P. Malgaretti, I. Pagonabarraga, and J.-F. Joanny
Robust Weak Chimeras in Oscillator Networks with Delayed Linear and Quadratic Interactions 168301
Christian Bick, Michael Sebek, and István Z. Kiss

Errata

Erratum: Measurement of the b-Quark Production Cross Section in 7 and 13 TeV pp Collisions [Phys. Rev. Lett. **118**, 052002 (2017)] 169901
R. Aaij *et al.* (LHCb Collaboration)

Selected for a Viewpoint in *Physics*. Please visit http://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* (http://physics.aps.org/), provides thought-provoking analysis and spotlights exceptional research.