

Visualization of the current sheet at the base of a simulated black-hole plasma jet: horizon (black disk) and positron density (colored background). Selected for a Viewpoint in *Physics* and an Editors' Suggestion. [Phys. Rev. Lett. **122**, 035101 (2019)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 19 January–25 January 2019

VOLUME 122, NUMBER 3 25 January 2019

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

Glassy Properties of Anderson Localization: Pinning, Avalanches, and Chaos 030401
G. Lemarié

Interaction of Mechanical Oscillators Mediated by the Exchange of Virtual Photon Pairs 030402
Omar Di Stefano, Alessio Settineri, Vincenzo Macrì, Alessandro Ridolfo, Roberto Stassi, Anton Frisk Kockum, Salvatore Savasta, and Franco Nori

Using Polarons for sub-nK Quantum Nondemolition Thermometry in a Bose-Einstein Condensate 030403
Mohammad Mehboudi, Aniello Lampo, Christos Charalambous, Luis A. Correa, Miguel Ángel García-March, and Maciej Lewenstein

Trapped Ion Quantum Information Processing with Squeezed Phonons 030501
Wenchao Ge, Brian C. Sawyer, Joseph W. Britton, Kurt Jacobs, John J. Bollinger, and Michael Foss-Feig

Elementary Particles and Fields

Bounded Collection of Feynman Integral Calabi-Yau Geometries 031601
Jacob L. Bourjaily, Andrew J. McLeod, Matt von Hippel, and Matthias Wilhelm

Plasma and Beam Physics

Tunable Plasma-Based Energy Dechirper 034801
R. D'Arcy, S. Wesch, A. Aschikhin, S. Bohlen, C. Behrens, M. J. Garland, L. Goldberg, P. Gonzalez, A. Knetsch, V. Libov, A. Martinez de la Ossa, M. Meisel, T. J. Mehrling, P. Niknejadi, K. Poder, J.-H. Röckemann, L. Schaper, B. Schmidt, S. Schröder, C. Palmer, J.-P. Schwinkendorf, B. Sheeran, M. J. V. Streeter, G. Tauscher, V. Wacker, and J. Osterhoff

Observations of Multiple Nuclear Reaction Histories and Fuel-Ion Species Dynamics in Shock-Driven Inertial Confinement Fusion Implosions 035001
H. Sio, J. A. Frenje, A. Le, S. Atzeni, T. J. T. Kwan, M. Gatu Johnson, G. Kagan, C. Stoeckl, C. K. Li, C. E. Parker, C. J. Forrest, V. Glebov, N. V. Kabadi, A. Bose, H. G. Rinderknecht, P. Amendt, D. T. Casey, R. Mancini, W. T. Taitano, B. Keenan, A. N. Simakov, L. Chacón, S. P. Regan, T. C. Sangster, E. M. Campbell, F. H. Seguin, and R. D. Petrasso

Stellarators Resist Turbulent Transport on the Electron Larmor Scale 035002
G. G. Plunk, P. Xanthopoulos, G. M. Weir, S. A. Bozhenkov, A. Dinklage, G. Fuchert, J. Geiger, M. Hirsch, U. Hoefel, M. Jakubowski, A. Langenberg, N. Pablant, E. Pasch, T. Stange, D. Zhang, and the W7-X Team

First-Principles Plasma Simulations of Black-Hole Jet Launching 035101
Kyle Parfrey, Alexander Philippov, and Benoît Cerutti

(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(20190125)122:3;1-7

Turbulence-Driven Ion Beams in the Magnetospheric Kelvin-Helmholtz Instability 035102
Luca Sorriso-Valvo, Filomena Catapano, Alessandro Retinò, Olivier Le Contel, Denise Perrone, Owen W. Roberts, Jesse T. Coburn, Vincenzo Panebianco, Francesco Valentini, Silvia Perri, Antonella Greco, Francesco Malara, Vincenzo Carbone, Pierluigi Veltri, Oreste Pezzi, Federico Fraternale, Francesca Di Mare, Raffaele Marino, Barbara Giles, Thomas E. Moore, Christopher T. Russell, Roy B. Torbert, Jim L. Burch, and Yuri V. Khotyaintsev

Condensed Matter: Structure, etc.

Critical Analysis of an FeP Empirical Potential Employed to Study the Fracture of Metallic Glasses 035501
Yezeng He, Peng Yi, and Michael L. Falk

Nanomolding of Crystalline Metals: The Smaller the Easier 036101
Ze Liu, Guoxing Han, Sungwoo Sohn, Naijia Liu, and Jan Schroers

Condensed Matter: Electronic Properties, etc.

Spin-Polarization Control Driven by a Rashba-Type Effect Breaking the Mirror Symmetry in Two-Dimensional Dual Topological Insulators 036401
Carlos Mera Acosta and Adalberto Fazzio

Quantum Oscillations of the Positive Longitudinal Magnetoconductivity: A Fingerprint for Identifying Weyl Semimetals 036601
Ming-Xun Deng, G. Y. Qi, R. Ma, R. Shen, Rui-Qiang Wang, L. Sheng, and D. Y. Xing

Observation of an Odd-Integer Quantum Hall Effect from Topological Surface States in Cd_3As_2 036602
Ben-Chuan Lin, Shuo Wang, Steffen Wiedmann, Jian-Ming Lu, Wen-Zhuang Zheng, Dapeng Yu, and Zhi-Min Liao

Bimodal Phase Diagram of the Superfluid Density in $LaAlO_3/SrTiO_3$ Revealed by an Interfacial Waveguide Resonator 036801
Nicola Manca, Daniel Bothner, Ana M. R. V. L. Monteiro, Dejan Davidovikj, Yildiz G. Sağlam, Mark Jenkins, Marc Gabay, Gary A. Steele, and Andrea D. Caviglia

Mottness collapse without metallization in the domain wall of the triangular-lattice Mott insulator $1T - TaS_2$ 036802
Jan Skolimowski, Yaroslav Gerasimenko, and Rok Žitko

Unconventional Antiferromagnetic Quantum Critical Point in $Ba(Fe_{0.97}Cr_{0.03})_2(As_{1-x}P_x)_2$ 037001
Wenliang Zhang, Yuan Wei, Tao Xie, Zhaoyu Liu, Dongliang Gong, Xiaoyan Ma, Ding Hu, Petr Čermák, Astrid Schneidewind, Gregory Tucker, Siqin Meng, Zita Huesges, Zhilun Lu, Jianming Song, Wei Luo, Liangcai Xu, Zengwei Zhu, Xunqing Yin, Hai-Feng Li, Yi-feng Yang, Huiqian Luo, and Shiliang Li

Proposal for Measuring Magnetism with Patterned Apertures in a Transmission Electron Microscope 037201
Devendra Negi, Jakob Spiegelberg, Shunsuke Muto, Thomas Thersleff, Masahiro Ohtsuka, Linus Schönström, Kazuyoshi Tatsumi, and Ján Rusz

Electric Field Control of Spins in Molecular Magnets 037202
Junjie Liu, Jakub Mrozek, William K. Myers, Grigore A. Timco, Richard E. P. Winpenny, Benjamin Kintzel, Winfried Plass, and Arzhang Ardavan

Spin-Wave Amplification and Lasing Driven by Inhomogeneous Spin-Transfer Torques 037203
R. J. Doornenbal, A. Roldán-Molina, A. S. Nunez, and R. A. Duine

Ferroelectric Control of Interface Spin Filtering in Multiferroic Tunnel Junctions 037601
J. Tornos, F. Gallego, S. Valencia, Y. H. Liu, V. Rouco, V. Lauter, R. Abrudan, C. Luo, H. Ryll, Q. Wang, D. Hernandez-Martin, G. Orfila, M. Cabero, F. Cuellar, D. Arias, F. J. Mompean, M. Garcia-Hernandez, F. Radu, T. R. Charlton, A. Rivera-Calzada, Z. Sefrioui, S. G. E. te Velthuis, C. Leon, and J. Santamaria

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

Extensional Strain Hardening in Highly Entangled Molecular Bottlebrushes 037801
Carlos R. López-Barrón and Maksim E. Shivokhin

Protocol Dependence and State Variables in the Force-Moment Ensemble 038001
Ephraim S. Bililign, Jonathan E. Kollmer, and Karen E. Daniels

(Continued on Preceding Page)

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)

Errata

Publisher's Note: Anomalous Conductances in an Ultracold Quantum Wire
[Phys. Rev. Lett. **117**, 255302 (2016)] 039901
M. Kanász-Nagy, L. Glazman, T. Esslinger, and E. A. Demler

Publisher's Note: Realizing and Detecting a Topological Insulator in the AIII Symmetry Class
[Phys. Rev. Lett. **119**, 115301 (2017)] 039902
Carlos G. Velasco and Belen Paredes

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.