

On 25 November 2006, the KATRIN main spectrometer was transported through the village of Eggenstein-Leopoldshafen in Germany. Exactly 13 years later, the collaboration published its first neutrino mass measurements. Selected for a Viewpoint in *Physics* and an Editors' Suggestion. [M. Aker *et al.* (KATRIN Collaboration), Phys. Rev. Lett. **123**, 221802 (2019)] (Image by Karlsruhe Institute of Technology)

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 23 November–29 November 2019

VOLUME 123, NUMBER 22 29 November 2019

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

Witnessing Quantum Resource Conversion within Deterministic Quantum Computation Using One Pure Superconducting Qubit 220501
W. Wang, J. Han, B. Yadin, Y. Ma, J. Ma, W. Cai, Y. Xu, L. Hu, H. Wang, Y. P. Song, Mile Gu, and L. Sun

Variational Thermal Quantum Simulation via Thermofield Double States 220502
Jingxiang Wu and Timothy H. Hsieh

Gravitation and Astrophysics

Nonlinear Dynamics of Spinning Bosonic Stars: Formation and Stability 221101
N. Sanchis-Gual, F. Di Giovanni, M. Zilhão, C. Herdeiro, P. Cerdá-Durán, J. A. Font, and E. Radu

Understanding the Multiwavelength Observation of Geminga's Tev Halo: The Role of Anisotropic Diffusion of Particles 221103
Ruo-Yu Liu, Huirong Yan, and Heshou Zhang

Search for Light Weakly-Interacting-Massive-Particle Dark Matter by Annual Modulation Analysis with a Point-Contact Germanium Detector at the China Jinping Underground Laboratory 221301
L. T. Yang *et al.* (CDEX Collaboration)

Elementary Particles and Fields

Entanglement Wedges from the Information Metric in Conformal Field Theories 221601
Yuki Suzuki, Tadashi Takayanagi, and Koji Umemoto

Flux Tube *S*-Matrix Bootstrap 221602
Joan Elias Miró, Andrea L. Guerrieri, Aditya Hebbar, João Penedones, and Pedro Vieira

Softened Symmetry Breaking in Composite Higgs Models 221801
Simone Blasi and Florian Goertz

Improved Upper Limit on the Neutrino Mass from a Direct Kinematic Method by KATRIN 221802
M. Aker *et al.* (KATRIN Collaboration)

Nuclear Physics

Energy of the ^{229}Th Nuclear Clock Isomer Determined by Absolute γ-ray Energy Difference 222501
A. Yamaguchi, H. Muramatsu, T. Hayashi, N. Yuasa, K. Nakamura, M. Takimoto, H. Haba, K. Konashi, M. Watanabe, H. Kikunaga, K. Maehata, N. Y. Yamasaki, and K. Mitsuda

Underlying Structure of Collective Bands and Self-Organization in Quantum Systems 222502
T. Otsuka, Y. Tsunoda, T. Abe, N. Shimizu, and P. Van Duppen

Atomic, Molecular, and Optical Physics

Phasonic Spectroscopy of a Quantum Gas in a Quasicrystalline Lattice 223201
Shankari V. Rajagopal, Toshihiko Shimasaki, Peter Dotti, Mantas Račiūnas, Ruwan Senaratne, Egidijus Anisimovas, André Eckardt, and David M. Weld

(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(20191129)123:22;1-Y

Vanishing and Revival of Resonance Raman Scattering 223202
Yu Guo (郭裕), Chuan-Cun Shu (束传存), Daoyi Dong, and Franco Nori (野理)
In-line Spectral Interferometry in Shortwave-Infrared Laser Filaments in Air 223203
Xiaoming Ren, Yang Wang, Zenghu Chang, James Welch, Aaron Bernstein, Michael Downer, Jeffrey Brown, Mette Gaarde, Arnaud Couairon, Miroslav Kolesik, and Pavel Polynkin
Attosecond Molecular Angular Streaking with All-Ionic Fragments Detection 223204
Wei Quan, Vladislav V. Serov, MingZheng Wei, Meng Zhao, Yu Zhou, YanLan Wang, XuanYang Lai, Anatoli S. Kheifets, and XiaoJun Liu
Dark States of Multilevel Fermionic Atoms in Doubly Filled Optical Lattices 223601
A. Piñeiro Orioli and A. M. Rey
Feedback Cooling of a Room Temperature Mechanical Oscillator close to its Motional Ground State 223602
Jingkun Guo, Richard Norte, and Simon Gröblacher

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Solenoidal Scaling Laws for Compressible Mixing 224501
John Panickacheril John, Diego A. Donzis, and Katepalli R. Sreenivasan

Plasma and Beam Physics

Entropy Measurement in Strongly Coupled Complex Plasmas 225001
Frank Wieben and Dietmar Block
Role of Microtearing Turbulence in DIII-D High Bootstrap Current Fraction Plasmas 225002
X. Jian, C. Holland, J. Candy, E. Belli, V. Chan, A. M. Garofalo, and S. Ding
Pressure Tensor Elements Breaking the Frozen-In Law During Reconnection in Earth's Magnetotail 225101
J. Egedal, J. Ng, A. Le, W. Daughton, B. Wetherton, J. Dorelli, D. Gershman, and A. Rager

Condensed Matter: Electronic Properties, etc.

Resistivity Saturation in Metallic Liquids Above a Dynamical Crossover Temperature Observed in Measurements Aboard the International Space Station 226601
D. C. Van Hoesen, A. K. Gangopadhyay, G. Lohöfer, M. E. Sellers, C. E. Pueblo, S. Koch, P. K. Galenko, and K. F. Kelton
Survival of the Quantum Anomalous Hall Effect in Orbital Magnetic Fields as a Consequence of the Parity Anomaly 226602
Jan Böttcher, Christian Tutschku, Laurens W. Molenkamp, and E. M. Hankiewicz
Sachdev-Ye-Kitaev Non-Fermi-Liquid Correlations in Nanoscopic Quantum Transport 226801
Alexander Altland, Dmitry Bagrets, and Alex Kamenev
Prediction of Attractive Level Crossing via a Dissipative Mode 227201
Weichao Yu (余伟超), Jiongjie Wang, H. Y. Yuan, and Jiang Xiao (萧江)
Nonsymmorphic-Symmetry-Protected Topological Magnons in Three-Dimensional Kitaev Materials 227202
Wonjune Choi, Tomonari Mizoguchi, and Yong Baek Kim
Absence of Evidence of Electrical Switching of the Antiferromagnetic Néel Vector 227203
C. C. Chiang, S. Y. Huang, D. Qu, P. H. Wu, and C. L. Chien
Voigt Exceptional Points in an Anisotropic ZnO-Based Planar Microcavity: Square-Root Topology, Polarization Vortices, and Circularity 227401
Steffen Richter, Heinrich-Gregor Zirnstein, Jesús Zúñiga-Pérez, Evgeny Krüger, Christiane Deparis, Lukas Trefflich, Chris Sturm, Bernd Rosenow, Marius Grundmann, and Rüdiger Schmidt-Grund

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

Motility-Induced Temperature Difference in Coexisting Phases 228001
Suvendu Mandal, Benno Liebchen, and Hartmut Löwen

(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)

Nonequilibrium Theory of Epigenomic Microphase Separation in the Cell Nucleus 228101
Davide Michieletto, Davide Colì, Davide Marenduzzo, and Enzo Orlandini
Surface Tension Controls the Hydraulic Fracture of Adhesive Interfaces Bridged by Molecular Bonds 228102
Dimitri Kaurin and Marino Arroyo
Robust Increase in Supply by Vessel Dilation in Globally Coupled Microvasculature 228103
Felix J. Meigel, Peter Cha, Michael P. Brenner, and Karen Alim

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.