

Measured "Fermi arcs" on the surface of a metacrystal at 13.3 GHz. [D. Wang *et al.*, Phys. Rev. Lett. **129**, 043602 (2022)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 16 July–22 July 2022

VOLUME 129, NUMBER 4 22 July 2022

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

Soliton Interferometry with Very Narrow Barriers Obtained from Spatially Dependent Dressed States 040401
Callum L. Grimshaw, Thomas P. Billam, and Simon A. Gardiner

Floquet Engineering Topological Dirac Bands 040402
Mingwu Lu, G. H. Reid, A. R. Fritsch, A. M. Piñeiro, and I. B. Spielman

Can Angular Oscillations Probe Superfluidity in Dipolar Supersolids? 040403
Matthew A. Norcia, Elena Poli, Claudia Politi, Lauritz Klaus, Thomas Bland, Manfred J. Mark, Luis Santos, Russell N. Bisset, and Francesca Ferlaino

Approaching Ideal Visibility in Singlet-Triplet Qubit Operations Using Energy-Selective Tunneling-Based Hamiltonian Estimation 040501
Jehyun Kim, Jonginn Yun, Wonjin Jang, Hyeongyu Jang, Jaemin Park, Younguk Song, Min-Kyun Cho, Sangwoo Sim, Hanseo Sohn, Hwanchul Jung, Vladimir Umansky, and Dohun Kim

Scalable Method for Eliminating Residual *ZZ* Interaction between Superconducting Qubits 040502
Zhongchu Ni, Sai Li, Libo Zhang, Ji Chu, Jingjing Niu, Tongxing Yan, Xiuhao Deng, Ling Hu, Jian Li, Youpeng Zhong, Song Liu, Fei Yan, Yuan Xu, and Dapeng Yu

Exact Solution of the Macroscopic Fluctuation Theory for the Symmetric Exclusion Process 040601
Kirone Mallick, Hiroki Moriya, and Tomohiro Sasamoto

Optimizing Thermalization 040602
Kamil Korzekwa and Matteo Lostaglio

Gravitation and Astrophysics

Novel Search for High-Frequency Gravitational Waves with Low-Mass Axion Haloscopes 041101
Valerie Domcke, Camilo Garcia-Cely, and Nicholas L. Rodd

Elementary Particles and Fields

Holography in de Sitter Space via Chern-Simons Gauge Theory 041601
Yasuaki Hikida, Tatsuma Nishioka, Tadashi Takayanagi, and Yusuke Taki

Large N Partition Functions, Holography, and Black Holes 041602
Nikolay Bobev, Junho Hong, and Valentin Reys

First Measurement of High-Energy Reactor Antineutrinos at Daya Bay 041801
F. P. An *et al.* (Daya Bay Collaboration)

Observation of a State $X(2600)$ in the $\pi^+\pi^-\eta'$ System in the Process $J/\psi \to \gamma\pi^+\pi^-\eta'$ 042001
M. Ablikim *et al.* (BESIII Collaboration)

(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 2022 American Physical Society

0031-9007(20220722)129:4;1-0

Nuclear Physics

Precision Determination of the Neutral Weak Form Factor of ^{48}Ca 042501
D. Adhikari *et al.* (CREX Collaboration)

$\Delta I = 2$ Bifurcation as a Characteristic Feature of Scissors Rotational Bands 042502
Cui-Juan Lv, Fang-Qi Chen, Yang Sun, and Mike Guidry

Ab Initio Prediction of the $^4\mathrm{He}(d,\gamma)^6\mathrm{Li}$ Big Bang Radiative Capture 042503
C. Hebborn, G. Hupin, K. Kravvaris, S. Quaglioni, P. Navrátil, and P. Gysbers

Atomic, Molecular, and Optical Physics

Launching Coherent Acoustic Phonon Wave Packets with Local Femtosecond Coulomb Forces 043001
Shaoxiang Sheng, Anne-Catherine Oeter, Mohamad Abdo, Kurt Lichtenberg, Mario Hentschel, and Sebastian Loth

Subpromille Measurements and Calculations of CO (3–0) Overtone Line Intensities 043002
Katarzyna Bielska, Aleksandra A. Kyuberis, Zachary D. Reed, Gang Li, Agata Cygan, Roman Ciuryło, Erin M. Adkins, Lorenzo Lodi, Nikolay F. Zobov, Volker Ebert, Daniel Lisak, Joseph T. Hodges, Jonathan Tennyson, and Oleg L. Polyansky

Single-Mode Photon Blockade Enhanced by Bi-Tone Drive 043601
Ming Li, Yan-Lei Zhang, Shu-Hao Wu, Chun-Hua Dong, Xu-Bo Zou, Guang-Can Guo, and Chang-Ling Zou

Straight Photonic Nodal Lines with Quadrupole Berry Curvature Distribution and Superimaging "Fermi Arcs" 043602
Dongyang Wang, Biao Yang, Ruo-Yang Zhang, Wen-Jie Chen, Z. Q. Zhang, Shuang Zhang, and C. T. Chan

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Intense Wave Formation from Multiple Soliton Fusion and the Role of Extra Dimensions 043901
Feifei Xin, Ludovica Falsi, Davide Pierangeli, Fabrizio Fusella, Galina Perepelitsa, Yehudit Garcia, Aharon J. Agranat, and Eugenio DelRe

Photonic $\mathbb{Z}_2$ Topological Anderson Insulators 043902
Xiaohan Cui, Ruo-Yang Zhang, Zhao-Qing Zhang, and C. T. Chan

Plasma and Beam Physics

Higher Harmonics in Multipactor Induced Plasma Ionization Breakdown near a Dielectric Surface 045001
De-Qi Wen, Peng Zhang, Janez Krek, Yangyang Fu, and John P Verboncoeur

First Intrashot Observation of Runaway-Electron-Driven Instabilities at the Lower-Hybrid Frequency Range under ITER-Relevant Plasma-Wave Dispersion Conditions 045002
W. Bin, C. Castaldo, F. Napoli, P. Buratti, A. Cardinali, A. Selce, and O. Tudisco FTU Team

Condensed Matter: Structure, etc.

Parisi-Sourlas Supersymmetry in Random Field Models 045701
Apratim Kaviraj, Slava Rychkov, and Emilio Trevisani

Robustness of Bilayer Hexagonal Ice against Surface Symmetry and Corrugation 046001
Pu Yang, Chen Zhang, Wenyu Sun, Jia Dong, Duanyun Cao, Jing Guo, and Ying Jiang

Stability and Rupture of an Ultrathin Ionic Wire 046101
Bruno Focassio, Tanna E. R. Fiuza, Jefferson Bettini, Gabriel R. Schleder, Murillo H. M. Rodrigues, João B. Souza Junior, Edson R. Leite, Adalberto Fazzio, and Rodrigo B. Capaz

Learning Grain-Boundary Segregation: From First Principles to Polycrystals 046102
Malik Wagih and Christopher A. Schuh

Condensed Matter: Electronic Properties, etc.

Topological Spin Texture of Chiral Edge States in Photonic Two-Dimensional Quantum Walks 046401
Chao Chen, Xing Ding, Jian Qin, Jizhou Wu, Yu He, Chao-Yang Lu, Li Li, Xiong-Jun Liu, Barry C. Sanders, and Jian-Wei Pan

Fermi Surface and Mass Renormalization in the Iron-Based Superconductor YFe_2Ge_2 046402
Jordan Baglo, Jiasheng Chen, Keiron Murphy, Roos Leenen, Alix McCollam, Michael L. Sutherland, and F. Malte Grosche

(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)

Microwave Dynamical Conductivity in the Quantum Hall Regime 046801
Tomonori Arakawa, Takashi Oka, Seitaro Kon, and Yasuhiro Niimi

Anomalous Crystal Shapes of Topological Crystalline Insulators 046802
Yutaro Tanaka, Tiantian Zhang, Makio Uwaha, and Shuichi Murakami

Gapped Collective Charge Excitations and Interlayer Hopping in Cuprate Superconductors 047001
M. Hepting, M. Bejas, A. Nag, H. Yamase, N. Coppola, D. Betto, C. Falter, M. Garcia-Fernandez, S. Agrestini, Ke-Jin Zhou, M. Minola, C. Sacco, L. Maritato, P. Orgiani, H. I. Wei, K. M. Shen, D. G. Schlom, A. Galdi, A. Greco, and B. Keimer

First-Principles Study of the Optical Dipole Trap for Two-Dimensional Excitons in Graphane 047401
Hiroki Katow, Ryosuke Akashi, Yoshiyuki Miyamoto, and Shinji Tsuneyuki

Dynamical Phase Transitions in the Photodriven Charge-Ordered Dirac-Electron System 047402
Yasuhiro Tanaka and Masahito Mochizuki

Magic-Angle Twisted Bilayer Graphene as a Topological Heavy Fermion Problem 047601
Zhi-Da Song and B. Andrei Bernevig

Ferroelasticity in Two-Dimensional Tetragonal Materials 047602
Xiaoyu Xuan, Wanlin Guo, and Zhuhua Zhang

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

Designing Enhanced Entropy Binding in Single-Chain Nanoparticles 047801
Lorenzo Rovigatti and Francesco Sciortino

Experimentally Measuring Rolling and Sliding in Three-Dimensional Dense Granular Packings 048001
Zackery A. Benson, Anton Peshkov, Nicole Yunger Halpern, Derek C. Richardson, and Wolfgang Losert

Disordered Collective Motion in Dense Assemblies of Persistent Particles 048002
Yann-Edwin Keta, Robert L. Jack, and Ludovic Berthier

Mass Changes the Diffusion Coefficient of Particles with Ligand-Receptor Contacts in the Overdamped Limit 048003
Sophie Marbach and Miranda Holmes-Cerfon

Kramers Rate Theory of Pacemaker Dynamics in Noisy Excitable Media 048101
Zhaoyang Zhang, Gang Hu, Yuhao Zhang, and Zhilin Qu

Instabilities and Geometry of Growing Tissues 048102
Doron Grossman and Jean-Francois Joanny

Extended Anderson Criticality in Heavy-Tailed Neural Networks 048103
Asem Wardak and Pulin Gong

Errata

Erratum: Eightfold Degenerate Fermions in Two Dimensions [Phys. Rev. Lett. **127**, 176401 (2021)] 049901
Peng-Jie Guo, Yi-Wen Wei, Kai Liu, Zheng-Xin Liu, and Zhong-Yi Lu

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.