PHYSICAL REVIEW LETTERS

Contents

VOLUME 78, NUMBER 10 10 March 1997

General Physics

Quantum Jumps as Decoherent Histories 1833
Todd A. Brun

Hydrodynamic Modes in a Trapped Bose Gas above the Bose-Einstein Transition 1838
A. Griffin, Wen-Chin Wu, and S. Stringari

Finite Temperature Excitations of a Trapped Bose Gas 1842
D. A. W. Hutchinson, E. Zaremba, and A. Griffin

Coherent State Wave Function for Systems with Spin-Dependent Correlations 1846
J. W. Lawson, S. A. Vitiello, K. E. Schmidt, and S. Fantoni

Crossover from Isotropic to Directed Percolation 1850
Per Fröjdh and Marcel den Nijs

Gravitation and Astrophysics

Duality and Zero-Point Length of Spacetime 1854
T. Padmanabhan

Understanding the Area Proposal for Extremal Black Hole Entropy 1858
A. Ghosh and P. Mitra

What Would We Learn by Detecting a Gravitational Wave Signal in the Cosmic Microwave Background Anisotropy? 1861
David H. Lyth

Elementary Particles and Fields

Type-IIB Instanton as a Wave in Twelve Dimensions 1864
A. A. Tseytlin

Nuclear Physics

Evidence for "Magnetic Rotation" in Nuclei: Lifetimes of States in the M1 bands of ^{198,199}Pb 1868
R. M. Clark, S. J. Asztalos, G. Baldsiefen, J. A. Becker, L. Bernstein, M. A. Deleplanque, R. M. Diamond, P. Fallon, I. M. Hibbert, H. Hübel, R. Krücken, I. Y. Lee, A. O. Macchiavelli, R. W. MacLeod, G. Schmid, F. S. Stephens, K. Vetter, R. Wadsworth, and S. Frauendorf

Atomic, Molecular, and Optical Physics

Spin-Density Functionals from Current-Density Functional Theory and Vice Versa: A Road towards New Approximations 1872
K. Capelle and E. K. U. Gross

Observation of an Electric Octupole Transition in a Single Ion 1876
M. Roberts, P. Taylor, G. P. Barwood, P. Gill, H. A. Klein, and W. R. C. Rowley

Collisional Stability of Double Bose Condensates 1880
P. S. Julienne, F. H. Mies, E. Tiesinga, and C. J. Williams

Nonsequential Double Ionization of Helium 1884
J. B. Watson, A. Sanpera, D. G. Lappas, P. L. Knight, and K. Burnett

Collective Switching and Inversion without Fluctuation of Two-Level Atoms in Confined Photonic Systems 1888
Sajeev John and Tran Quang

(Continued on Third Cover)

CODEN: PRLTAO 78 (10), 1833–2031 (10 March 1997)

Contents (Continued)

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, Etc.

Indecomposable Continua and the Characterization of Strange Sets in Nonlinear Dynamics 1892
Miguel A. F. Sanjuán, Judy Kennedy, Edward Ott, and James A. Yorke

Heat Conduction in Chains of Nonlinear Oscillators 1896
Stefano Lepri, Roberto Livi, and Antonio Politi

Secondary Instabilities of Flows with Elliptic Streamlines 1900
Bruce Fabijonas, Darryl D. Holm, and Alexander Lifschitz

Probability Distribution Functions for the Random Forced Burgers Equation 1904
Weinan E, Konstantin Khanin, Alexandre Mazel, and Yakov Sinai

Vortex Dynamics in Dissipative Systems 1908
Ola Törnkvist and Elsebeth Schröder

Free Oscillations and Surfactant Studies of Superdeformed Drops in Microgravity 1912
Robert E. Apfel, Yuren Tian, Joseph Jankovsky, Tao Shi, X. Chen, R. Glynn Holt, Eugene Trinh, Arvid Croonquist, Kathyrn C. Thornton, Albert Sacco, Jr., Catherine Coleman, Fred W. Leslie, and David H. Matthiesen

Plasma and Beam Physics

Drift Motion of Field-Reversed-Configuration Plasma across a Curved Magnetic Field 1916
H. Himura, H. Wada, S. Okada, S. Sugimoto, and S. Goto

Propagation of a Rippled Shock Wave Driven by Nonuniform Laser Ablation 1920
R. Ishizaki and K. Nishihara

Condensed Matter: Structure, Etc.

Meniscus and Dislocations in Free-Standing Films of Smectic-*A* Liquid Crystals 1924
Jean-Christophe Géminard, Robert Hołyst, and Patrick Oswald

Crossover from Independent to Cooperative Segmental Dynamics in Polymers: Experimental Realization in Poly(Vinyl Chloride) 1928
J. Colmenero, A. Arbe, G. Coddens, B. Frick, C. Mijangos, and H. Reinecke

Size, Shape, and Low Energy Electronic Structure of Carbon Nanotubes 1932
C. L. Kane and E. J. Mele

Evidence for "Partial" (Sublattice) Amorphization in $Co(OH)_2$ 1936
Jeffrey H. Nguyen, Michael B. Kruger, and Raymond Jeanloz

Local Scale Invariance and Strongly Anisotropic Equilibrium Critical Systems 1940
Malte Henkel

Coupling to Dipole-Forbidden Modes: CO on Pt(111) Studied by Infrared Spectroscopy 1944
U. Engström and R. Ryberg

Condensed Matter: Electronic Properties, Etc.

Highly Anisotropic Pressure Dependence of the Fermi Surface of CeSb 1948
M. Takashita, H. Aoki, T. Matsumoto, C. J. Haworth, T. Terashima, A. Uesawa, and T. Suzuki

Self-Similar Magnetoresistance of a Semiconductor Sinai Billiard 1952
R. P. Taylor, R. Newbury, A. S. Sachrajda, Y. Feng, P. T. Coleridge, C. Dettmann, Ningjia Zhu, Hong Guo, A. Delage, P. J. Kelly, and Z. Wasilewski

Chaos, Interactions, and Nonequilibrium Effects in the Tunneling Resonance Spectra of Ultrasmall Metallic Particles 1956
Oded Agam, Ned S. Wingreen, Boris L. Altshuler, D. C. Ralph, and M. Tinkham

Uniaxial Strain Dependence of T_c in $YBa_2Cu_3O_7$: Internal Strain Induced Intralayer Charge Transfer 1960
W. E. Pickett

Stability of Elastic Glass Phases in Random Field *XY* Magnets and Vortex Lattices in Type-II Superconductors 1964
Daniel S. Fisher

Observation of a Field-Driven Structural Phase Transition in the Flux Line Lattice in $ErNi_2B_2C$ 1968
M. R. Eskildsen, P. L. Gammel, B. P. Barber, U. Yaron, A. P. Ramirez, D. A. Huse, D. J. Bishop, C. Bolle, C. M. Lieber, S. Oxx, S. Sridhar, N. H. Andersen, K. Mortensen, and P. C. Canfield

(Continued on Preceding Page)

Contents (Continued)

Interlayer Phase Coherence in the Vortex State of $Bi_2Sr_2CaCu_2O_{8+\delta}$ Probed by Josephson Plasma Resonance 1972
Yuji Matsuda, Marat B. Gaifullin, Ken-ichi Kumagai, Makoto Kosugi, and Kazuto Hirata

Anisotropy of Heat Conduction in $YBa_2Cu_3O_{6.9}$: A Probe of Chain Superconductivity 1976
Robert Gagnon, Song Pu, Brett Ellman, and Louis Taillefer

Optical Study of the $Sr_{14-x}Ca_xCu_{24}O_{41}$ System: Evidence for Hole-Doped Cu_2O_3 Ladders 1980
T. Osafune, N. Motoyama, H. Eisaki, and S. Uchida

Magnetization Plateaus in Spin Chains: "Haldane Gap" for Half-Integer Spins 1984
Masaki Oshikawa, Masanori Yamanaka, and Ian Affleck

Quantum Spin Glass on the Bethe Lattice 1988
T. K. Kopeć and K. D. Usadel

NMR Study of Carrier Doping Effects on Spin Gaps in the Spin Ladder $Sr_{14-x}A_xCu_{24}O_{41}$ (A = Ca, Y, and La) 1992
Ken-ichi Kumagai, Sigenori Tsuji, Masatsune Kato, and Yoji Koike

Phase Diagram of the Two-Channel Kondo Lattice 1996
Mark Jarrell, Hanbin Pang, and D. L. Cox

Magnetoresistance in the Two-Channel Anderson Lattice 2000
F. B. Anders, Mark Jarrell, and D. L. Cox

Observation of a Transversal Nonlinear Magneto-Optical Effect in Thin Magnetic Garnet Films 2004
V. V. Pavlov, R. V. Pisarev, A. Kirilyuk, and Th. Rasing

Cross-Disciplinary Physics

Solid-State Polymerization of Acetylene under Pressure: *Ab Initio* Simulation 2008
M. Bernasconi, G. L. Chiarotti, P. Focher, M. Parrinello, and E. Tosatti

Motion of Scroll Wave Filaments in the Complex Ginzburg-Landau Equation 2012
Michael Gabbay, Edward Ott, and Parvez N. Guzdar

Dipole Active Vibrational Motion in the Physisorption Well 2016
K. Svensson and S. Andersson

Rheology of Soft Glassy Materials 2020
Peter Sollich, François Lequeux, Pascal Hébraud, and Michael E. Cates

Dynamics of Adaptation and Evolutionary Branching 2024
Stefan A. H. Geritz, J. A. J. Metz, Éva Kisdi, and Géza Meszéna

Comments

Comment on "Density-Polarization-Functional Theory and Long-Range Correlation in Dielectrics" 2028
Richard M. Martin and Gerardo Ortiz

Polarization Dependence of the Exchange Energy 2029
X. Gonze, Ph. Ghosez, and R. W. Godby

Resta Replies 2030
Raffaele Resta

Errata

Purification of Noisy Entanglement and Faithful Teleportation via Noisy Channels [Phys. Rev. Lett. **76,** 722 (1996)] ... 2031
Charles H. Bennett, Gilles Brassard, Sandu Popescu, Benjamin Schumacher, John A. Smolin, and William K. Wootters

Fully Differential Cross Sections for Double Photoionization of He Measured by Recoil Ion Momentum Spectroscopy [Phys. Rev. Lett. **77**, 1024 (1996)] 2031
R. Dörner, J. M. Feagin, C. L. Cocke, H. Bräuning, O. Jagutzki, M. Jung, E. P. Kanter, H. Khemliche, S. Kravis, V. Mergel, M. H. Prior, H. Schmidt-Böcking, L. Spielberger, J. Ullrich, M. Unversagt, and T. Vogt