PHYSICAL REVIEW LETTERS

Contents

VOLUME 78, NUMBER 12 24 March 1997

General Physics

Quantifying Entanglement 2275
V. Vedral, M. B. Plenio, M. A. Rippin, and P. L. Knight

The Spectral Form Factor Is Not Self-Averaging 2280
R. E. Prange

Gravitation and Astrophysics

Impossibility of the Cylindrically Symmetric Einstein-Straus Model 2284
José M. M. Senovilla and Raül Vera

Cosmic Strings and the String Dilaton 2288
Thibault Damour and Alexander Vilenkin

High Energy Neutrinos from Cosmological Gamma-Ray Burst Fireballs 2292
Eli Waxman and John Bahcall

Searching for the Mikheyev-Smirnov-Wolfenstein Enhancement 2296
James M. Gelb, Waikwok Kwong, and S. P. Rosen

Elementary Particles and Fields

B-Factory Physics from Effective Supersymmetry 2300
Andrew G. Cohen, David B. Kaplan, François Lepeintre, and Ann E. Nelson

Observation of Two Excited Charmed Baryons Decaying into $\Lambda_c^+ \pi^\pm$ 2304
G. Brandenburg *et al.* (CLEO Collaboration)

Nuclear Physics

Elliptical Flow: A Signature for Early Pressure in Ultrarelativistic Nucleus-Nucleus Collisions 2309
Heinz Sorge

Nuclear Matter Distributions in ^{6}He and ^{8}He from Small Angle *p*-He Scattering in Inverse Kinematics at Intermediate Energy 2313
G. D. Alkhazov, M. N. Andronenko, A. V. Dobrovolsky, P. Egelhof, G. E. Gavrilov, H. Geissel, H. Irnich, A. V. Khanzadeev, G. A. Korolev, A. A. Lobodenko, G. Münzenberg, M. Mutterer, S. R. Neumaier, F. Nickel, W. Schwab, D. M. Seliverstov, T. Suzuki, J. P. Theobald, N. A. Timofeev, A. A. Vorobyov, and V. I. Yatsoura

$L = 1$ Excitation in the Halo Nucleus ^{11}Li 2317
A. A. Korsheninnikov, E. A. Kuzmin, E. Yu. Nikolskii, O. V. Bochkarev, S. Fukuda, S. A. Goncharov, S. Ito, T. Kobayashi, S. Momota, B. G. Novatskii, A. A. Ogloblin, A. Ozawa, V. Pribora, I. Tanihata, and K. Yoshida

Systematic Description of Yrast Superdeformed Bands in Even-Even Nuclei of the Mass-190 Region 2321
Yang Sun, Jing-ye Zhang, and Mike Guidry

Atomic, Molecular, and Optical Physics

Accurate Modified Configuration Interaction Calculations for Many Electron Systems Made Easy 2325
S. P. Goldman

State-Selective Depletion Spectroscopy of Negative Ions: First Observation of the ^4P State in Ca^- and Sr^- 2329
P. Kristensen, C. A. Brodie, U. V. Pedersen, V. V. Petrunin, and T. Andersen

(Continued on Third Cover)

CODEN: PRLTAO 78 (12), 2275–2501 (24 March 1997)

Light-Induced Molecular Potentials 2333
Christof Wunderlich, Esther Kobler, Hartmut Figger, and Theodor W. Hänsch
Thermionic Emission and Fragmentation of C_{60} 2337
K. Hansen and O. Echt
Doubly Resonant Bragg Simultons via Second-Harmonic Generation 2341
Claudio Conti, Stefano Trillo, and Gaetano Assanto

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, Etc.
Determining the Information Flow of Dynamical Systems from Continuous Probability Distributions 2345
Gustavo Deco, Christian Schittenkopf, and Bernd Schürmann
$1/r$ Dynamics in External Fields: 2D or 3D? 2349
Jan von Milczewski, David Farrelly, and T. Uzer
Frequency Entrainment in Optically Injected Semiconductor Lasers 2353
P. M. Varangis, A. Gavrielides, T. Erneux, V. Kovanis, and L. F. Lester
Analytic Stability Theory for Faraday Waves and the Observation of the Harmonic Surface Response 2357
H. W. Müller, H. Wittmer, C. Wagner, J. Albers, and K. Knorr
Exact Two Vortices Solution of Navier-Stokes Equations 2361
O. Agullo and A. D. Verga

Plasma and Beam Physics
Experimental Observation of Cyclotron Superradiance under Group Synchronism Conditions 2365
N. S. Ginzburg, I. V. Zotova, A. S. Sergeev, I. V. Konoplev, A. D. R. Phelps, A. W. Cross, S. J. Cooke, V. G. Shpak, M. I. Yalandin, S. A. Shunailov, and M. R. Ulmaskulov
Nonlinear Landau Damping in Collisionless Plasma and Inviscid Fluid 2369
M. B. Isichenko
Time- and Space-Resolved Density Evolution of the Plasma Waveguide 2373
T. R. Clark and H. M. Milchberg
Internal Transport Barrier for Electrons in JT-60U Reversed Shear Discharges 2377
T. Fujita, S. Ide, H. Shirai, M. Kikuchi, O. Naito, Y. Koide, S. Takeji, H. Kubo, and S. Ishida

Condensed Matter: Structure, Etc.
Role of the Step Density in Reflection High-Energy Electron Diffraction: Questioning the Step Density Model 2381
U. Korte and P. A. Maksym
Harmonic Dynamics in Supercooled Liquids: The Case of Water 2385
Francesco Sciortino and Piero Tartaglia
Scaling Behavior of Anisotropic Organic Thin Films Grown in High Vacuum 2389
F. Biscarini, P. Samorí, O. Greco, and R. Zamboni
Catalytic Growth of Single-Wall Carbon Nanotubes: An *Ab Initio* Study 2393
Young Hee Lee, Seong Gon Kim, and David Tománek
Phase Diagram of $BaTiO_3$ 2397
T. Ishidate, S. Abe, H. Takahashi, and N. Môri
Boson Peak and High Frequency Modes in Amorphous Silica 2401
Bertrand Guillot and Yves Guissani
Low-Temperature Anomalies in Strong and Fragile Glass Formers 2405
A. P. Sokolov, R. Calemczuk, B. Salce, A. Kisliuk, D. Quitmann, and E. Duval
Liquid-Liquid Phase Transition: Evidence from Simulations 2409
Stephen Harrington, Rong Zhang, Peter H. Poole, Francesco Sciortino, and H. Eugene Stanley
Lattice-Dynamical Study of the α-β Phase Transition of Quartz: Soft-Mode Behavior and Elastic Anomalies 2413
Mikhail B. Smirnov and Andrei P. Mirgorodsky
Smectic Phase in a Colloidal Suspension of Semiflexible Virus Particles 2417
Zvonimir Dogic and Seth Fraden

(Continued on Preceding Page)

Observation of Self-Organized Criticality Near the Superfluid Transition in ^{4}He 2421
W. A. Moeur, P. K. Day, F-C. Liu, S. T. P. Boyd, M. J. Adriaans, and R. V. Duncan
Nanoscale Investigation of Wetting Dynamics with a Surface Force Apparatus 2425
Jérôme Crassous, Elisabeth Charlaix, and Jean-Luc Loubet

Condensed Matter: Electronic Properties, Etc.
Chiral Metal as a Heisenberg Ferromagnet 2429
H. Mathur
Two Meyer-Neldel Rules in Porous Silicon 2433
Y. Lubianiker and I. Balberg
Interfacial Defects in SiO_2 Revealed by Photon Stimulated Tunneling of Electrons 2437
V. V. Afanas'ev and A. Stesmans
Band Alignment in $Si_{1-y}C_y/Si(001)$ and $Si_{1-x}Ge_x/Si_{1-y}C_y/Si(001)$ Quantum Wells by Photoluminescence under Applied [100] and [110] Uniaxial Stress 2441
D. C. Houghton, G. C. Aers, N. L. Rowell, K. Brunner, W. Winter, and K. Eberl
Inelastic Quantum Magnetotransport in a Highly Correlated Two-Dimensional Electron Liquid 2445
Yuri P. Monarkha, Shin-ichiro Ito, Keiya Shirahama, and Kimitoshi Kono
Fluctuations of Conductance Peak Spacings in the Coulomb Blockade Regime: Role of Electron-Electron Interaction 2449
Ya. M. Blanter, A. D. Mirlin, and B. A. Muzykantskii
Spin-Excitation-Instability-Induced Quantum Phase Transitions in Double-Layer Quantum Hall Systems 2453
Lian Zheng, R. J. Radtke, and S. Das Sarma
Effective Actions for Spin Ladders 2457
S. Dell'Aringa, E. Ercolessi, G. Morandi, P. Pieri, and M. Roncaglia
Electronic Raman Scattering of Overdoped $Tl_2Ba_2CuO_{6+\delta}$ in High Magnetic Fields 2461
G. Blumberg, Moonsoo Kang, and M. V. Klein
Populated Domain Walls 2465
Chetan Nayak and Frank Wilczek
Electron-Hole Transport in Capacitively Coupled 1D Arrays of Small Tunnel Junctions 2469
M. Matters, J. J. Versluys, and J. E. Mooij
Density Profiles in Random Quantum Spin Chains 2473
Ferenc Iglói and Heiko Rieger
Counterion-Induced Attraction between Rigid Polyelectrolytes 2477
Niels Grønbech-Jensen, Robert J. Mashl, Robijn F. Bruinsma, and William M. Gelbart
Electronic Sputtering of Thin Conductors by Neutralization of Slow Highly Charged Ions 2481
T. Schenkel, M. A. Briere, H. Schmidt-Böcking, K. Bethge, and D. H. Schneider

Cross-Disciplinary Physics
Experimental Studies of Bubble Dynamics in a Slowly Driven Monolayer Foam 2485
Michael Dennin and Charles M. Knobler
Multiarmed Spirals in Excitable Media 2489
Bakthier Vasiev, Florian Siegert, and Cornelis Weijer

Comments
Comment on "Cauchy Relation in Dense H_2O Ice VII" 2493
V. V. Brazhkin and A. G. Lyapin
Comment on "Al NMR Local Probe of Local Moments Induced by an Al impurity in High-T_c Cuprate $La_{1.85}Sr_{0.15}CuO_4$" 2494
H. Alloul, J. Bobroff, and P. Mendels
Ishida, Kitaoka, and Asayama Reply 2495
K. Ishida, Y. Kitaoka, and K. Asayama

(Continued on Preceding Page)

Contents (Continued)

Errata

Shear-Induced Sponge-to-Lamellar Transition in a Hyperswollen Lyotropic System [Phys. Rev. Lett. **77**, 4390 (1996)] 2496
Jun Yamamoto and Hajime Tanaka

Gauge and Yukawa Coupling Unification in Models with Gauge-Mediated Supersymmetry Breaking [Phys. Rev. Lett. **78**, 1002 (1997)] 2497
Jonathan A. Bagger, Konstantin T. Matchev, Damien M. Pierce, and Ren-Jie Zhang