PHYSICAL REVIEW LETTERS

Contents

VOLUME 79, NUMBER 15 13 October 1997

General Physics

Ladder Proof of Nonlocality without Inequalities: Theoretical and Experimental Results 2755
D. Boschi, S. Branca, F. De Martini, and L. Hardy

Equivalence of Irreversible Entropy Production in Driven Systems: An Elementary Chaotic Map Approach 2759
Jürgen Vollmer, Tamás Tél, and Wolfgang Breymann

Elementary Particles and Fields

New High Order Relations between Physical Observables in Perturbative QCD 2763
S. Groote, J. G. Körner, A. A. Pivovarov, and K. Schilcher

Postmodern Technicolor 2767
Thomas Appelquist, John Terning, and L. C. R. Wijewardhana

Nuclear Physics

Elastic Scattering of Halo Nuclei 2771
R. C. Johnson, J. S. Al-Khalili, and J.A. Tostevin

Ψ'/Ψ Ratio in Nucleus-Nucleus Collisions: A Measure for the Chiral Symmetry Restoration Temperature? 2775
Heinz Sorge, Edward Shuryak, and Ismail Zahed

Atomic, Molecular, and Optical Physics

Measurement of the Pure Rotational Quasibound Spectrum of HeH^+ in a Laboratory Plasma by Direct Laser Absorption 2779
Zhuan Liu and Paul B. Davies

Photorecombination of Highly Charged, Few-Electron Ions: Importance of Radiation Damping and Absence of Resonance Interference 2783
T. W. Gorczyca and N. R. Badnell

Deflection of Neutral Molecules using the Nonresonant Dipole Force 2787
H. Stapelfeldt, Hirofumi Sakai, E. Constant, and P. B. Corkum

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, Etc.

Dynamics of a Ring of Pulse-Coupled Oscillators: Group Theoretic Approach 2791
P. C. Bressloff, S. Coombes, and B. de Souza

Pinning Control of Spatiotemporal Chaos 2795
R. O. Grigoriev, M. C. Cross, and H. G. Schuster

Measurement of the Spatial Coherence Buildup in a Discharge Pumped Table-Top Soft X-Ray Laser 2799
M. C. Marconi, J. L. A. Chilla, C. H. Moreno, B. R. Benware, and J. J. Rocca

Colliding Waves in a Model Excitable Medium: Preservation, Annihilation, and Bifurcation 2803
M. Argentina, P. Coullet, and L. Mahadevan

Self-Similar Energy Decay in Magnetohydrodynamic Turbulence 2807
S. Galtier, H. Politano, and A. Pouquet

(Continued on Third Cover)

CODEN: PRLTAO 79 (15), 2755–2922 (13 October 1997)

Plasma and Beam Physics

Theory of Solitary Holes in Coasting Beams 2811
H. Schamel

Long-Time Behavior of Nonlinear Landau Damping 2815
Giovanni Manfredi

Cs-Xe dc Gas Discharge as a Fast Highly Nonlinear Volumetric Medium for Microwaves 2819
N. A. Bogatov, M. S. Gitlin, D. A. Dikan, and G. A. Luchinin

Condensed Matter: Structure, Etc.

Quasielastic Scattering of Synchrotron Radiation by Time Domain Interferometry 2823
A. Q. R. Baron, H. Franz, A. Meyer, R. Rüffer, A. I. Chumakov, E. Burkel, and W. Petry

Dynamical Heterogeneities in a Supercooled Lennard-Jones Liquid 2827
Walter Kob, Claudio Donati, Steven J. Plimpton, Peter H. Poole, and Sharon C. Glotzer

Incoherent Tunneling in Glasses at Very Low Temperatures 2831
C. Enss and S. Hunklinger

Formation Mechanism of Nanotubes in GaN 2835
Z. Liliental-Weber, Y. Chen, S. Ruvimov, and J. Washburn

Anomalous Deep Inelastic Neutron Scattering from Liquid H_2O-D_2O: Evidence of Nuclear Quantum Entanglement ... 2839
C. A. Chatzidimitriou-Dreismann, T. Abdul Redah, R. M. F. Streffer, and J. Mayers

Rate Theory for Correlated Processes: Double Jumps in Adatom Diffusion 2843
Joachim Jacobsen, Karsten W. Jacobsen, and James P. Sethna

Quasi-One-Dimensional Phase Transitions in Nanopores: Pore-Pore Correlation Effects 2847
Ravi Radhakrishnan and Keith E. Gubbins

Initial H_2O-induced Oxidation of Si(100)$-(2\times1)$ 2851
Marcus K. Weldon, Boris B. Stefanov, Krishnan Raghavachari, and Y. J. Chabal

Condensed Matter: Electronic Properties, Etc.

Anisotropic Polaron Motion in Polyaniline Studied by Muon Spin Relaxation 2855
F. L. Pratt, S. J. Blundell, W. Hayes, K. Nagamine, K. Ishida, and A. P. Monkman

Surface Charge Ordering Transition: α Phase of Sn/Ge(111) 2859
J. M. Carpinelli, H. H. Weitering, M. Bartkowiak, R. Stumpf, and E. W. Plummer

Jellium Model of Metallic Nanocohesion 2863
C. A. Stafford, D. Baeriswyl, and J. Bürki

Universal Linear Density of States for Tunneling into the Two-Dimensional Electron Gas in a Magnetic Field 2867
H. B. Chan, P. I. Glicofridis, R. C. Ashoori, and M. R. Melloch

Superconducting Vortex with Antiferromagnetic Core 2871
Daniel P. Arovas, A. J. Berlinsky, C. Kallin, and Shou-Cheng Zhang

Measurement of the Fundamental Length Scales in the Vortex State of $YBa_2Cu_3O_{6.60}$ 2875
J. E. Sonier, J. H. Brewer, R. F. Kiefl, D. A. Bonn, S. R. Dunsiger, W. N. Hardy, Ruixing Liang, W. A. MacFarlane, R. I. Miller, T. M. Riseman, D. R. Noakes, C. E. Stronach, and M. F. White, Jr.

What Does the Field Dependence of the Thermal Conductivity of the Heavy Fermion Superconductor UPt_3 Tell Us about the Symmetry of the Order Parameter? 2879
M. Houssa and M. Ausloos

Field-Induced Gap in $S = 1/2$ Antiferromagnetic Chains 2883
Masaki Oshikawa and Ian Affleck

Low Temperature Phase of Asymmetric Spin Glass Model in Two Dimensions 2887
T. Shirakura and F. Matsubara

Vibrational Relaxation of H_2 ($v = 1, J = 1$) on Pd(111) 2891
M. Gostein, E. Watts, and G. O. Sitz

(Continued on Preceding Page)

Cross-Disciplinary Physics

Driven Ratchets with Disordered Tracks 2895
Thomas Harms and Reinhard Lipowsky
Direct Measurement of the Penetration of Free Chains into a Tethered Chain Layer 2899
Lay-Theng Lee and Michael S. Kent
Nonuniversal Scaling and Conformational Crossover of Polymer Chains in an Electrophoretic Deposition 2903
Grace M. Foo and R. B. Pandey
Wave Pattern Selection in an Excitable System 2907
Kyoung J. Lee
Multistability in Coupled Oscillator Systems with Time Delay 2911
Seunghwan Kim, Seon Hee Park, and C. S. Ryu
Computable Functions, Quantum Measurements, and Quantum Dynamics 2915
M. A. Nielsen

Comments

Comment on "Coupling to Dipole Forbidden Modes: CO on Pt(111) Studied by Infrared Spectroscopy" 2919
P. Jakob
Comment on "Theoretical Prediction of the Structure of Insulating YH_3" 2920
T. J. Udovic, Q. Huang, and J. J. Rush
Kelly, Dekker, and Stumpf Reply 2921
P. J. Kelly, J. P. Dekker, and R. Stumpf

Errata

Quantum Phase Transition of ^{3}He in Aerogel at a Nonzero Pressure [Phys. Rev. Lett. **79**, 253 (1997)] 2922
K. Matsumoto, J. V. Porto, L. Pollack, E. N. Smith, T. L. Ho, and J. M. Parpia