NEWSPAPER 77

PHYSICAL REVIEW LETTERS

Contents

VOLUME 77, NUMBER 19 4 November 1996

General Physics

Asymptotic Behavior of N-Soliton Trains of the Nonlinear Schrödinger Equation 3943
V. S. Gerdjikov, D. J. Kaup, I. M. Uzunov, and E. G. Evstatiev

Ising Model with a Boundary Magnetic Field on a Random Surface 3947
Sean M. Carroll, Miguel E. Ortiz, and Washington Taylor IV

Gravitation and Astrophysics

Real-Time History of the Cosmological Electroweak Phase Transition 3951
H. Kurki-Suonio and M. Laine

Elementary Particles and Fields

Nonfactorizable QCD and Electroweak Corrections to the Hadronic $\boldsymbol{Z}$ Boson Decay Rate 3955
Andrzej Czarnecki and Johann H. Kühn

Structure Analysis of the $f_J(1710)$ in the Radiative Decay $J/\psi \to \gamma K^+ K^-$ 3959
J. Z. Bai *et al.* BES Collaboration

Nuclear Physics

Relativistic Hartree-Bogoliubov Description of the Neutron Halo in ^{11}Li 3963
J. Meng and P. Ring

New Region of Deformation: The Neutron-Rich Sulfur Isotopes 3967
H. Scheit, T. Glasmacher, B. A. Brown, J. A. Brown, P. D. Cottle, P. G. Hansen, R. Harkewicz, M. Hellström, R. W. Ibbotson, J. K. Jewell, K. W. Kemper, D. J. Morrissey, M. Steiner, P. Thirolf, and M. Thoennessen

Atomic, Molecular, and Optical Physics

Demonstration of a Two Species Noble Gas Maser 3971
R. E. Stoner, M. A. Rosenberry, J. T. Wright, T. E. Chupp, E. R. Oteiza, and R. L. Walsworth

Experimental Evidence for Circular Dichroism in the Double Photoionization of Helium 3975
J. Viefhaus, L. Avaldi, G. Snell, M. Wiedenhöft, R. Hentges, A. Rüdel, F. Schäfers, D. Menke, U. Heinzmann, A. Engelns, J. Berakdar, H. Klar, and U. Becker

Single Molecule Dynamics Studied by Polarization Modulation 3979
T. Ha, Th. Enderle, D. S. Chemla, P. R. Selvin, and S. Weiss

Observation of Negative Ion Resonances in Amorphous Ice via Low-Energy (5–40 eV) Electron-Stimulated Production of Molecular Hydrogen 3983
Greg A. Kimmel and Thomas M. Orlando

Energy-Loss-Straggling Experiments with Relativistic Heavy Ions in Solids 3987
C. Scheidenberger, H. Geissel, H. H. Mikkelsen, F. Nickel, S. Czajkowski, H. Folger, H. Irnich, G. Münzenberg, W. Schwab, Th. Stöhlker, T. Suzuki, and B. Voss

Radiative Cooling of C_{60} 3991
J. U. Andersen, C. Brink, P. Hvelplund, M. O. Larsson, B. Bech Nielsen, and H. Shen

Ultranarrow Spectral Lines via Quantum Interference 3995
Peng Zhou and S. Swain

(Continued on Third Cover)

CODEN: PRLTAO 77 (19), 3943–4108 (4 November 1996)

19

Generic Structure of Multilevel Quantum Beats 3999
C. Leichtle, I. Sh. Averbukh, and W. P. Schleich

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, Etc.
Universal Critical Behavior in Two-Dimensional Coupled Map Lattices 4003
Philippe Marcq, Hugues Chaté, and Paul Manneville
Stabilization, Selection, and Tracking of Unstable Patterns by Fourier Space Techniques 4007
R. Martin, A. J. Scroggie, G.-L. Oppo, and W. J. Firth
Investigation of Black-Gray Soliton Interaction 4011
Dmitri Foursa and Philippe Emplit
Global Instability in Fully Nonlinear Systems 4015
A. Couairon and J. M. Chomaz

Condensed Matter: Structure, Etc.
Correlation of Charged Fluids Separated by a Wall 4019
Marcelo Lozada-Cassou and Jiang Yu
Polarization Effects, Network Dynamics, and the Infrared Spectrum of Amorphous SiO_2 4023
Mark Wilson, Paul A. Madden, Mahin Hemmati, and C. Austen Angell
Incommensurate Intermodulation of an Organic Intergrowth Compound Observed by Neutron Scattering 4027
R. Lefort, J. Etrillard, B. Toudic, F. Guillaume, T. Breczewski, and P. Bourges
Observation of Moving Dislocation Kinks and Unpinning 4031
H. R. Kolar, J. C. H. Spence, and H. Alexander
Is the Fast Process at the Glass Transition Mainly due to Long Wavelength Excitations? 4035
U. Buchenau, A. Wischnewski, D. Richter, and B. Frick
Critical Behavior of the Restricted Primitive Model 4039
J. M. Caillol, D. Levesque, and J. J. Weis
High-Resolution Measurements of Rotons in ^4He 4043
K. H. Andersen, J. Bossy, J. C. Cook, O. G. Randl, and J.-L. Ragazzoni
Structural Transition in Large-Lattice-Mismatch Heteroepitaxy 4046
Y. Chen and J. Washburn
Numerical Simulation of Three-Dimensional Dendritic Growth 4050
Alain Karma and Wouter-Jan Rappel

Condensed Matter: Electronic Properties, Etc.
Observation of Spin-Charge Separation in One-Dimensional $SrCuO_2$ 4054
C. Kim, A. Y. Matsuura, Z.-X. Shen, N. Motoyama, H. Eisaki, S. Uchida, T. Tohyama, and S. Maekawa
Hopping Conduction and Metal-Insulator Transition in Isotopically Enriched Neutron-Transmutation-Doped ^{70}Ge:Ga ... 4058
K. M. Itoh, E. E. Haller, J. W. Beeman, W. L. Hansen, J. Emes, L. A. Reichertz, E. Kreysa, T. Shutt, A. Cummings, W. Stockwell, B. Sadoulet, J. Muto, J. W. Farmer, and V. I. Ozhogin
Generation and Relaxation of Coherent Majority Plasmons 4062
G. C. Cho, T. Dekorsy, H. J. Bakker, R. Hövel, and H. Kurz
Electronic Structure Calculations for $YBa_2Cu_3O_7$ within the Slave Boson Formalism 4066
M. Biagini
Low-Temperature Anomaly in the Josephson Critical Current of Junctions in *d*-Wave Superconductors 4070
Yu. S. Barash, H. Burkhardt, and D. Rainer
Star-Shaped Local Density of States around Vortices in a Type-II Superconductor 4074
Nobuhiko Hayashi, Masanori Ichioka, and Kazushige Machida
Dynamic Matching of Vortex Lattice in Superconducting Multilayers 4078
A. Gurevich, E. Kadyrov, and D. C. Larbalestier
Energy Gap in Superconducting Fullerides: Optical and Tunneling Studies 4082
Daniel Koller, Michael C. Martin, László Mihály, György Mihály, Gábor Oszlányi, Gabriel Baumgartner, and László Forró

(Continued on Preceding Page)

Contents (Continued)

Magnetic Raman Scattering from 1D Antiferromagnets 4086
Rajiv R. P. Singh, Peter Prelovšek, and B. Sriram Shastry
Pseudogap and Charge Dynamics in CuO_2 Planes in YBCO 4090
D. N. Basov, R. Liang, B. Dabrowski, D. A. Bonn, W. N. Hardy, and T. Timusk

Cross-Disciplinary Physics
Nonequilibrium Critical Dynamics of a Three Species Monomer-Monomer Model 4094
Kevin E. Bassler and Dana A. Browne
Stochastic Resonance in a Neuronal Network from Mammalian Brain 4098
Bruce J. Gluckman, Theoden I. Netoff, Emily J. Neel, William L. Ditto, Mark L. Spano, and Steven J. Schiff
Propulsion of Microorganisms by Surface Distortions 4102
Howard A. Stone and Aravinthan D. T. Samuel

Comments
Comment on "Phonons in Glasses: Numerical Simulations and Phenomenological Theory" 4105
S. R. Elliott
Caprion, Jund, and Jullien Reply 4106
Didier Caprion, Philippe Jund, and Rémi Jullien

Errata
Prediction on the Ultrahigh Energy Neutrino-Nucleon Cross Section from New Structure Function Data at Small x [Phys. Rev. Lett. **74**, 1508 (1995)] 4107
George M. Frichter, Douglas W. McKay, and John P. Ralston
Effect of Free Surfaces on the Glass Transition Temperature of Thin Polymer Films [Phys. Rev. Lett. **77**, 2002 (1996)] 4108
J. A. Forrest, K. Dalnoki-Veress, J. R. Stevens, and J. R. Dutcher

Cumulative Author Index i