



Representation of a proposed nano-oscillator capable of gigahertz oscillations; both sealed and "presealed" versions are depicted. In the device, an inner carbon nanotube (yellow) oscillates inside a larger tube under the influence of the van der Waals force between them; the sealing would help to prevent contamination. See article 055504.

PHYSICAL REVIEW LETTERS

Contents

Articles published 1 February–7 February 2003

VOLUME 90, NUMBER 5

7 FEBRUARY 2003

General Physics

Classical Correlations and Entanglement in Quantum Measurements	050401
V. Vedral	
When is Quantum Decoherence Dynamics Classical?	050402
Jiangbin Gong and Paul Brumer	
Off-Diagonal Geometric Phase for Mixed States	050403
Stefan Filipp and Erik Sjöqvist	
Dynamical Instability in a Trimeric Chain of Interacting Bose-Einstein Condensates	050404
P. Buonsante, R. Franzosi, and V. Penna	

Elementary Particles and Fields

$B^0 \rightarrow D^{*-} a_1^+$: Chirality Tests and Resolving an Ambiguity in the CP Violation Parameter $2\beta + \gamma$	051801
Michael Gronau, Dan Pirjol, and Daniel Wyler	
b - τ Unification and Large Atmospheric Mixing: A Case for a Noncanonical Seesaw Mechanism	051802
Borut Bajc, Goran Senjanović, and Francesco Vissani	

Nuclear Physics

Q^2 Dependence of Nuclear Transparency for Exclusive ρ^0 Production	052501
A. Airapetian <i>et al.</i> (HERMES Collaboration)	

Atomic, Molecular, and Optical Physics

Experiments with a 3D Double Optical Lattice	053001
Harald Ellmann, Johan Jersblad, and Anders Kastberg	
Above Threshold Ionization in Tightly Focused, Strongly Relativistic Laser Fields	053002
A. Maltsev and T. Ditmire	
Complete Two-Electron Spectra in Double Photoionization: The Rare Gases Ar, Kr, and Xe	053003
J.H.D. Eland, O. Vieuxmaire, T. Kinugawa, P. Lablanquie, R.I. Hall, and F. Penent	
Tuning p -Wave Interactions in an Ultracold Fermi Gas of Atoms	053201
C.A. Regal, C. Ticknor, J.L. Bohn, and D.S. Jin	
Recombination of Three Ultracold Fermionic Atoms	053202
H. Suno, B.D. Esry, and Chris H. Greene	
Cluster Growing Process and a Sequence of Magic Numbers	053401
Ilia A. Solov'yov, Andrey V. Solov'yov, Walter Greiner, Andrey Koshelev, and Andrey Shutovich	

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Temporal Shaping of Femtosecond Solitary Pulses in Photoionized Media	053901
Hélène Ward and Luc Bergé	

(Continued on Third Cover)

Contents (Continued)

Band-Gap Structure of Waveguide Arrays and Excitation of Floquet-Bloch Solitons	053902
D. Mandelik, H.S. Eisenberg, Y. Silberberg, R. Morandotti, and J.S. Aitchison	
New Type of Polariton in a Piezoelectric Superlattice	053903
Yong-yuan Zhu, Xue-jin Zhang, Yan-qing Lu, Yan-feng Chen, Shi-ning Zhu, and Nai-ben Ming	
Observation of Vector Vortex Lattices in Polarization States of an Isotropic Microcavity Laser	053904
Y.F. Chen, K.F. Huang, H.C. Lai, and Y.P. Lan	
Signatures of Quantum Stability in a Classically Chaotic System	054101
S. Schlunk, M.B. d'Arcy, S.A. Gardiner, D. Cassettari, R.M. Godun, and G.S. Summy	
Coherent Regimes of Globally Coupled Dynamical Systems	054102
Silvia De Monte, Francesco d'Ovidio, and Erik Mosekilde	
Parametrically Driven Dark Solitons	054103
I. V. Barashenkov, S.R. Woodford, and E. V. Zemlyanaya	
Shadowing High-Dimensional Hamiltonian Systems: The Gravitational N -body Problem	054104
Wayne B. Hayes	
Reconnection of Colliding Vortex Rings	054501
Philippe Chatelain, Demosthenes Kivotides, and Anthony Leonard	
Plasma and Beam Physics	
Barriers for Transport in Turbulent Plasmas	055001
Vincenzo Carbone, Fabio Lepreti, and Pierluigi Veltri	
Backscattering of an Intense Laser Beam by an Electron	055002
Fei He, Y.Y. Lau, Donald P. Umstadter, and Richard Kowalczyk	
Decharging of Complex Plasmas: First Kinetic Observations	055003
A.V. Ivlev, M. Kretschmer, M. Zuzic, G.E. Morfill, H. Rothermel, H.M. Thomas, V.E. Fortov, V.I. Molotkov, A.P. Nefedov, A.M. Lipaev, O.F. Petrov, Yu.M. Baturin, A.I. Ivanov, and J. Goree	
Dynamics of a Supersonic Plume Moving along a Magnetized Plasma	055004
F.S. Tsung, G.J. Morales, and J.N. Leboeuf	
Condensed Matter: Structure, etc.	
Light Transport through the Band-Edge States of Fibonacci Quasicrystals	055501
Luca Dal Negro, Claudio J. Oton, Zeno Gaburro, Lorenzo Pavesi, Patrick Johnson, Ad Lagendijk, Roberto Righini, Marcello Colocci, and Diederik S. Wiersma	
Hydrogenated Silicon Fullerenes: Effects of H on the Stability of Metal-Encapsulated Silicon Clusters	055502
Vijay Kumar and Yoshiyuki Kawazoe	
Scaling Relations for Implantation of Size-Selected Au, Ag, and Si Clusters into Graphite	055503
S. Pratontep, P. Preece, C. Xirouchaki, R.E. Palmer, C.F. Sanz-Navarro, S.D. Kenny, and R. Smith	
Molecular-Dynamics Simulations of Carbon Nanotubes as Gigahertz Oscillators	055504
S.B. Legoas, V.R. Coluci, S.F. Braga, P.Z. Coura, S.O. Dantas, and D.S. Galvão	
Mechanisms of Radiation-Induced Viscous Flow: Role of Point Defects	055505
S.G. Mayr, Y. Ashkenazy, K. Albe, and R.S. Averbach	
Direct Imaging of $\text{Sc}_2\text{@C}_{84}$ Molecules Encapsulated Inside Single-Wall Carbon Nanotubes by High Resolution Electron Microscopy with Atomic Sensitivity	055506
K. Suenaga, T. Okazaki, C.-R. Wang, S. Bandow, H. Shinohara, and S. Iijima	
Photorefractivity in Nanostructured Tin-Silicate Glass Ceramics: A Radiation-Induced Nanocluster Size Effect	055507
N. Chiodini, A. Paleari, and G. Spinolo	
Infrared-Phonon-Polariton Resonance of the Nonlinear Susceptibility in GaAs	055508
T. Dekorsy, V.A. Yakovlev, W. Seidel, M. Helm, and F. Keilmann	
C_{60} Molecular Bearings	055509
K. Miura, S. Kamiya, and N. Sasaki	
Dispersive Phonon Linewidths: The E_2 Phonons of ZnO	055510
J. Serrano, F.J. Manjón, A.H. Romero, F. Widulle, R. Lauck, and M. Cardona	
Relation between Thermodynamics and Kinetics of Glass-Forming Liquids	055701
Hajime Tanaka	

(Continued on Preceding Page)

Contents (Continued)

Adatom Kinetics On and Below the Surface: The Existence of a New Diffusion Channel	056101
Jörg Neugebauer, Tosja K. Zywietz, Matthias Scheffler, John E. Northrup, Huajie Chen, and R.M. Feenstra	
Potential-Induced Strain Relaxation in Au Mono- and Bilayer Films on Pt(111) Electrode Surfaces	056102
E. Sibert, F. Ozanam, F. Maroun, O.M. Magnussen, and R.J. Behm	
Irreversibility and Polymer Adsorption	056103
Ben O'Shaughnessy and Dimitrios Vavylonis	
New $(\sqrt{3} \times \sqrt{3})R30^\circ$ Phase of Pb on Ge(111) and Its Consequence for the Melting Transition	056104
M.F. Reedijk, J. Arsic, D. Kaminski, P. Poodt, J.W. M van Kessel, W.J. Szweryn, H. Knops, and E. Vlieg	
Condensed Matter: Electronic Properties, etc.	
Linear Response Calculations of Lattice Dynamics in Strongly Correlated Systems	056401
S. Y. Savrasov and G. Kotliar	
Anomalous Temperature Dependence of the Dephasing Time in Mesoscopic Kondo Wires	056801
Félicien Schopfer, Christopher Bäuerle, Wilfried Rabaud, and Laurent Saminadayar	
Quantum Ratchet Effect for Vortices	056802
J. B. Majer, J. Peguiron, M. Grifoni, M. Tsveld, and J. E. Mooij	
Observation of Spin-Polarized Surface States on Ultrathin bct Mn(001) Films by Spin-Polarized Scanning Tunneling Spectroscopy	056803
T. K. Yamada, M. M. J. Bischoff, G. M. M. Heijnen, T. Mizoguchi, and H. van Kempen	
Real-Space Observation of Drift States in a Two-Dimensional Electron System at High Magnetic Fields	056804
M. Morgenstern, J. Klijn, Chr. Meyer, and R. Wiesendanger	
Spin Susceptibility of an Ultra-Low-Density Two-Dimensional Electron System	056805
J. Zhu, H. L. Stormer, L. N. Pfeiffer, K. W. Baldwin, and K. W. West	
Resistivity of Dilute 2D Electrons in an Undoped GaAs Heterostructure	056806
M. P. Lilly, J. L. Reno, J. A. Simmons, I. B. Spielman, J. P. Eisenstein, L. N. Pfeiffer, K. W. West, E. H. Hwang, and S. Das Sarma	
Low-Temperature Specific Heat of the Heavy-Fermion Superconductor $\text{PrOs}_4\text{Sb}_{12}$	057001
R. Vollmer, A. Faißt, C. Pfeiderer, H. v. Löhneysen, E. D. Bauer, P.-C. Ho, V. Zapf, and M. B. Maple	
Berry Phase in Magnetic Superconductors	057002
Shuichi Murakami and Naoto Nagaosa	
Heavy Quasiparticles in the Ferromagnetic Superconductor ZrZn_2	057003
S. J. C. Yates, G. Santi, S. M. Hayden, P. J. Meeson, and S. B. Dugdale	
Magnetic-Field Dependence of the Maximum Supercurrent of $\text{La}_{2-x}\text{Ce}_x\text{CuO}_{4-y}$ Interferometers: Evidence for a Predominant $d_{x^2-y^2}$ Superconducting Order Parameter	057004
B. Chesca, K. Ehrhardt, M. Möhle, R. Straub, D. Koelle, R. Kleiner, and A. Tsukada	
Magnetic Ground State of Pure and Doped CeFe_2	057201
L. Paolasini, B. Ouladdiaf, N. Bernhoeft, J.-P. Sanchez, P. Vulliet, G. H. Lander, and P. Canfield	
Optical Properties of Gold Nanorings	057401
J. Aizpurua, P. Hanarp, D. S. Sutherland, M. Käll, Garnett W. Bryant, and F. J. García de Abajo	
Spin-Dependent Electron-Hole Capture Kinetics in Luminescent Conjugated Polymers	057402
Stoyan Karabunarliev and Eric R. Bittner	
Theoretical Study of the Optical Manipulation of Semiconductor Nanoparticles under an Excitonic Resonance Condition	057403
Takuya Iida and Hajime Ishihara	
Ultrafast Carrier Dynamics in Single-Wall Carbon Nanotubes	057404
J.-S. Lauret, C. Voisin, G. Cassabois, C. Delalande, Ph. Roussignol, O. Jost, and L. Capes	
Interdisciplinary Physics: Biological Physics, Quantum Information, etc.	
Optimal Remote State Preparation	057901
Dominic W. Berry and Barry C. Sanders	
Secure Quantum Key Distribution with an Uncharacterized Source	057902
Masato Koashi and John Preskill	
A Wave Traveling over a Hopf Instability Shapes the Cochlear Tuning Curve	058101
Marcelo O. Magnasco	

(Continued on Preceding Page)

Contents (Continued)

New Interpretation of Local Dynamics of Poly(Dimethyl Siloxane) Observed by Quasielastic Neutron Scattering	058301
Valeria Arrighi, Fabio Ganazzoli, Chuhong Zhang, and Simona Gagliardi	
Direct Observation of the Transition from Free to Constrained Single-Segment Motion in Entangled Polymer Melts	058302
A. Wischniewski, M. Monkenbusch, L. Willner, D. Richter, and G. Kali	
Stochastic Resonance in Geomagnetic Polarity Reversals	058501
Giuseppe Consolini and Paola De Michelis	
Scale-Free Networks Are Ultrasmall	058701
Reuven Cohen and Shlomo Havlin	
Comments	
Reevaluation of the Crossover from Elastic to Capillary Surface Waves on Soft Gels	059601
Yuriy A. Kosevich, Keunho Ahn, and Mahn Won Kim	
Monroy and Langevin Reply	059602
Francisco Monroy and Dominique Langevin	
Comment on “Symmetrical Temperature-Chaos Effect with Positive and Negative Temperature Shifts in a Spin Glass”	059701
Ludovic Berthier and Jean-Philippe Bouchaud	
Jönsson, Yoshino, and Nordblad Reply	059702
P.E. Jönsson, H. Yoshino, and P. Nordblad	
Comment on “Universal Intermediate Phases of Dilute Electronic and Molecular Glasses”	059703
T.G. Castner	
Phillips Replies	059704
J.C. Phillips	
Comment on “Magnetic Relaxation of Interacting Co Clusters: Crossover from Two- to Three-Dimensional Lattices”	059705
Mikkel F. Hansen and Steen Mørup	
Luis <i>et al.</i> Reply	059706
F. Luis, F. Petroff, J.M. Torres, L.M. García, J. Bartolomé, J. Carrey, and A. Vaurès	
Errata	
Erratum: Dalitz Analysis of $D^0 \rightarrow K_S^0 \pi^+ \pi^-$ [Phys. Rev. Lett. 89 , 251802 (2002)]	059901
H. Muramatsu <i>et al.</i> (CLEO Collaboration)	
Cumulative Author Index	i