

**Zeitschrift:** Helvetica Physica Acta

**Band:** 66 (1993)

## Inhaltsverzeichnis

### Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

### Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

### Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

**Download PDF:** 07.08.2025

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**

# HELVETICA PHYSICA ACTA

VOLUMEN 66, 1993

CONTENTS – INHALTSVERZEICHNIS – TABLE DES MATIÈRES

*Fascicle 1*

15. 2. 1993

Moore, D. J.: Time dependence in quantum mechanics – Floquet theory and the Berry phase . . . . .	3
Gough, J., and Pulé, J. V.: The spherical model and Bose-Einstein condensation . .	17
Stoll, E. P.: Restoration of Scanning Tunneling Images Distorted by Time-Dependent Effects of the Piezo Driver and the Nonlinear Feedback System . . . . .	53
Robert, M., Reaney, I. and Stadelmann, P.: Domain Wall in Thin Films of Ferroelectric BZT . . . . .	55
Gantner, G., Oelhafen, P., Boyen, H.-G., and Rink, K.: Time Resolved Photo-electron Spectroscopy during microsecond Laser Melting of Surfaces . . . . .	57
Francz, G., Kania, P., and Oelhafen, P.: Photoemission study of the diamond/silicon interface and surface evolution of diamond grown on Si(100) by microwave plasma CVD . . . . .	59
Berthold, L., Hesse, D., Sum, R., Lang, H. P., Haefke, H., and Güntherodt, H.-J.: Structure and growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films on $\text{Mg}_2\text{TiO}_4(001)$ . – Part I. Growth conditions and film structure . . . . .	61
Sum, R., Lang, H. P., Haefke, H., Güntherodt, H.-J., Berthold, L., and Hesse, D.: Structure and growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films on $\text{Mg}_2\text{TiO}_4(001)$ . – Part II. Orientation and growth morphology . . . . .	63
Lang, H. P., and Güntherodt, H.-J.: Surface structure of cleaved $\text{Bi}_2\text{Sr}_{2.2}\text{M}_{0.8}\text{Cu}_2\text{O}_{8+\delta}$ single crystals ( $\text{M} = \text{Ca}, \text{La}$ ) imaged by STM . . . . .	65
Castro, H., Holguin, E., Loude, J. F., Berger, H., and Rinderer, L.: Magnetic Shielding and Flux Penetration in $(\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta})_{1-x}\text{Ag}_x$ Sintered Tubes . . . . .	67
Yasuda, T., Takano, S., and Rinderer, L.: Temperature Dependence of Anisotropic Resistivity in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+y}$ as a Function of Oxygen Content . . . . .	69
Santini, P., Amoretti, G., Blaise, A., and Caciuffo, R.: Inverse Method for the Crystal Field in $\text{MT}_2\text{X}_2$ Compounds ( $\text{M} = \text{Pr}, \text{U}; \text{T} = \text{transition metal}; \text{X} = \text{Si}, \text{Ge}$ ) .	71
Mendik, M., and Wachter, P.: Brillouin Scattering in UTe Single Crystals . . . . .	73
Gröbli, J. C., Vaterlaus, A., Guarisco, D., Hepp, H., Meier, F., Yashin, Y., Mamaev, Y., Yavich, B., and Kochnev, I.: Spin-Polarized Photoemission from $\text{In}_x\text{Ga}_{1-x}\text{As}/\text{GaAs}$ .	75
Pázmándi, F., Domański, Z., and Erdös, P.: Correlations in the Quantum Ising Spin-Glass in a Transverse Field . . . . .	77
Jundt, D. H., Gutmann, R., and Günter, P.: Epitaxial $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$ layers for pyroelectric detectors . . . . .	79
Fluck, D., Günter, P., Fleuster, M., and Buchal, Ch.: Blue light second harmonic generation in ion-implanted $\text{KNbO}_3$ waveguides . . . . .	81

Oehler, O., Meier, S., Lutzinger, D., and Wieland, J.: Thermal control of an ultrasonic resonator . . . . .	83
Ohle, F., and Eckelmann, H.: Low-Dimensional Modeling of Taylor-Couette Flow .	85
Hiltbrand, E. M., Binzoni, T., and McKinnon, G.: Assessment of simultaneous lipids suppression and lactate edition on a whole body MRI system . . . . .	87
Frochaux, E.: Relativistic corrections to the Schrödinger equation deduced from the quantum field theory . . . . .	89
Vollmer, J., and Breymann, W.: Scaling Law and Pruning in 2D Maps . . . . .	91
Reimann, P., and Talkner, P.: New Analogies between the Noisy Feigenbaum Scenario and Critical Phenomena . . . . .	93
Payandeh, B., and Robert, M.: Renormalization Group Theory of Transport Properties of Disordered Systems . . . . .	95
Droz, M., and Frachebourg, L.: Turing Structures in Cellular Automata Models of Reaction-Diffusion Systems . . . . .	97
Elmer, F. J.: Self-Organized Criticality in the Weakly Driven Frenkel-Kontorova Model . . . . .	99
Canning, A., and Robert, M.: Monte Carlo Study on the CM2 of the Field-induced Interface in the Two-dimensional Ising Model . . . . .	101
Breymann, W.: Why does Linear Response Theory Work in Systems with Highly Nonlinear Dynamics . . . . .	103

*Fascicle 2*  
30. 3. 1993

Pordt, A.: Renormalization theory for hierarchical models . . . . .	105
Broidioi, M., and Verbeure, A.: The plasmon in the one component plasma . . . . .	155
Ruelle, D.: Analytic completion for dynamical zeta functions . . . . .	181
Mohamed, A., Parisse, B., and Outassourt, A.: Asymptotique de la largeur de la première bande de l'opérateur de Dirac avec potentiel périodique . . . . .	192
Gérard, C.: Distortion analyticity for $N$ – particle Hamiltonians . . . . .	216

*Fascicle 3*  
28. 5. 1993

Peng, H., and Luo, L.: New concepts in quantum gravity . . . . .	227
Poliatzky, N.: Normalization of scattering states, scattering phase shifts and Levinson's theorem . . . . .	241
Kunz, H.: Adiabatic charge transport and topological invariants for electrons in a quasi-periodic potential and a magnetic field . . . . .	264

*Fascicle 4*

16. 7. 1993

Ilinski, K. N., Motovilov, A. K., and Uzdin, V. M.: The effective cluster hamiltonian for adsorbed atoms . . . . .	337
Huang, Y.-S.: Einstein's relativistic time-dilation: A critical analysis and a suggested experiment . . . . .	346
Sassoli de Bianchi, M.: Conditional time delay in scattering theory . . . . .	361
Gallay, Th., and Wanders, G.: Massless fermion emission on 1 + 1 dimensional curved space-times . . . . .	378
Amaoua, N., Holguin, E., and Rinderer, L.: Propagation de phases normales dans les supraconducteurs . . . . .	405
Cossy-Favre, A., Dutoit, B., Holguin, E., Landau, I., and Rinderer, L.: Current induced resistive states in superconducting films . . . . .	407
Barbiellini, B., Magnin, J., and Peter, M.: The effect of Fermi Surface geometry on the superconductivity given by spin fluctuations in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ . . . . .	409
Bisang, U., and Bilgram, J. H.: The fractal Dimension of Xenon Dendrites . . . . .	411
Schwarz, U. D., Bohonek, J., Haefke, H., Sager, W., Steiger, R., and Güntherodt, H.-J.: Atomic Force Microscopy used for the Characterization of Precipitated Colloidal Particles . . . . .	413
Lüthi, R., Haefke, H., Meyer, K.-P., Meyer, E., Howald, L., Rüetschi, M., Overney, R. M., and Güntherodt, H.-J.: Investigation on ferroelectric domains and domain walls with scanning force microscopy . . . . .	415
Grioni, M., Malterre, D., Weibel, P., Dardel, B., and Baer, Y.: Probing Low-Energy Scales with High-Energy Spectroscopies in Heavy-Fermion Materials . . . . .	417
Dardel, B., Malterre, D., Grioni, M., Weibel, P., and Baer, Y.: Non-Fermi liquid behaviour from photoemission spectroscopy of one-dimensional organic conductor $(\text{TMTSF})_2\text{PF}_6$ . . . . .	419
Patrini, M., Marabelli, F., Onda, N., and Von Känel, H.: Spectroscopic ellipsometry of FeSi Films . . . . .	421
Guarisco, D., Frank, S., Hepp, H., and Meier, F.: Magnetooptical Kerr Effect Measurements with Picosecond Resolution . . . . .	423
Küpfer, M., Bosshard, Ch., Flörsheimer, M., Borer, T., Günter, P., Tang, Q., and Zahir, S.: Investigation of chromophore orientation of 2-docosylamino-5-nitropyridine and derivatives by nonlinear optical techniques . . . . .	425
Suter, D., and Blasberg, T.: Absolute Sign Determination of Nuclear Quadrupole Couplings by Laser-Radiofrequency Double Resonance . . . . .	427
Gubler, L., Möbius, E., and Bochsler, P.: Development of an isochronous Time-of-Flight Mass Spectrometer for Determination of Space Plasma Parameters . . . . .	429
Neukomm, R., and Bochsler, P.: How to detect plasmoids in the solar corona? . . . . .	431
Oehler, O., Egli, P., Nizzola, P., Schneibel, H. P., Uebersax, M., and Würgler, C.: Paramagnetic oxygen detection with an ultrasonic resonator . . . . .	433
Gerth, G., Grosse, S., Krohn, M., and Haefke, H.: Fractal Analysis of Development of Twin Domains in Thin Films . . . . .	435
Allet, M., Bodek, K., Hajdas, W., Jarczyk, L., Kistryn, St., Lang, J., Müller, R., Navert, S., Naviliat-Cuncic, O., Smyrski, J., Sromicki, J., Strzalkowski, A., and Zejma, J.: Cross Section and Analyzing Power $A_y$ for the $D(\vec{p}, pp)n$ Break-up Reaction at 65 MeV in the QFS Configuration . . . . .	437

Werthmüller, A., Jacot-Guillarmod, R., Mulhauser, F., Piller, C., Schaller, L. A., Schellenberg, L., and Schneuwly, H.: Muon Capture Ratios A(H/Ne) in Gaseous Mixtures of H <sub>2</sub> + Ne . . . . .	439
Berger, C., Czapek, G., Diggelmann, U., Furlan, M., Gabutti, A., Janos, S., Moser, U., Pretzl, K., and Schmiemann, K.: Principles of superheated superconducting granules as a detector for dark matter and neutrinos . . . . .	441
Berger, C., Czapek, G., Diggelmann, U., Flammer, I., Frei, D., Furlan, M., Gabutti, A., Janos, S., Moser, U., Pretzl, K., Schmiemann, K., Perret-Gallix, S., van den Brandt, B., Konter, J. A. and Mango, S.: Test of a Superheated Superconducting Granule Detector with nuclear recoil measurements . . . . .	443
Wurz, P., Bochsler, P., Ghielmetti, A. G., Shelley, E. G., Herrero, F., and Smith, M. F.: Remote Imaging of Ion Distributions Using Low Energy Neutral Atoms . . . . .	445
Regez, N., Breyman, W., and Thomas, H.: Quantum Phase Space of Two-Spin Systems . . . . .	447
Stoll, E. P.: Marginal Dependence of the Ba Site Dipole-Field from Cu d-Electron Anisotropies in Antiferromagnetic YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6</sub> . . . . .	449
Guerreiro, J., and Kunz, M.: Le spectre de la Phyllotaxie . . . . .	451

*Fascicle 5*  
31. 8. 1993

Keller, G.: The perturbative construction of Symanzik's improved action for Φ <sub>4</sub> and QED <sub>4</sub> . . . . .	453
Moore, D. J.: Quantum logic requires weak modularity . . . . .	471
Grigore, D. R.: Statistics in the propositional formulation of quantum mechanics .	477
Feldman, J., Magnen, J., Rivasseau, V., and Trubowitz, E.: Ward identities and a perturbative analysis of a U(1) goldstone boson in a many fermion system . . . .	498
Brandhuber, A., Langer, M., Schweda, M., Sorella, S. P., Emery, S., and Piguet, O.: Symmetries of the Chern-Simons theory in the axial gauge . . . . .	551

*Fascicle 6*  
29. 9. 1993

Frochaux, E.: The bound-states in quantum field theory: Review of some analytic problems raised by the variational perturbation method . . . . .	567
Heusler, M., Straumann, N., and Zhou, Z.: Selfgravitating solutions of the skyrme model and their stability . . . . .	614
Bietenholz, W.: Goldstone bosons in a finite volume: The partition function to three loops . . . . .	633

*Fascicle 7/8*  
17. 1. 1994

Horwitz, L. P., and Piron, C.: The unstable system and irreversible motion in quantum theory . . . . .	693
Barut, A. O., and Xu, B.: Non-spreading coherent states riding on Kepler orbits .	712

Simonius, M.: Measurement in quantum mechanics: From probabilities to objective events . . . . .	721
Kulshreshtha, U., Kulshreshtha, D. S., and Müller-Kirsten, H. J. W.: Hamiltonian and BRSTformulations of the Schwinger model . . . . .	737
Kulshreshtha, U., Kulshreshtha, D. S., and Müller-Kirsten, H. J. W.: Gauge-invariant O(N) non-linear sigma model(s) and gauge-invariant Klein-Gordon theory: Wess-Zumino terms and hamiltonian and BRSTformulations . . . . .	752
Barut, A. O., Moore, D. J., and Piron, C.: The Cartan formalism in field theory . . . . .	795
Klopp, F.: Localization for semiclassical continuous Random Schrödinger operators II: the Random displacement model . . . . .	810
Barbiellini, B., Weger, M., and Peter, M.: Strong-coupling equations for superconductivity with a radial-momentum dependent potential . . . . .	842
Tsirelson, B. S.: A new framework for old Bell inequalities . . . . .	858
Field, J. H.: On the tests of relativistic time dilation in the CERN muon storage ring . . . . .	875
Gutmannsbauer, W., Haefke, H., Rüetschi, M., Güntherodt, H.-J., Staub, J., and Bange, K.: Surface morphology and roughness of $\text{TiO}_2$ thin films investigated with scanning force microscopy . . . . .	877
Weibel, P., Grioni, M., Malterre, D., Dardel, B., and Baer, Y.: Resonant inverse photoemission of cerium valence fluctuators . . . . .	879
Castro, H., Holguin, E., and Rinderer, L.: Time dependence of flux penetration into $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_7$ tubes . . . . .	881
Sum, R., Lüthi, R., Lang, H. P., and Güntherodt, H.-J.: Single crystal substrates for thin film growth of $\text{HT}_c\text{SC}$ studied by scanning force microscopy . . . . .	883
Pliska, T., Jundt, D. H., Fluck, D., Günter, P., Fleuster, M., and Buchal, Ch.: Low temperature annealing of Ion-implanted $\text{KNbO}_3$ waveguides . . . . .	885
Höbel, M., Rička, J., Wüthrich, M., and Binkert, T.: A distributed temperature sensor based on multiphoton counting . . . . .	887
Egolf, P. W., and Manz, H.: A macroscopic theory of melting and solidification: nonlinear thermal diffusion . . . . .	889
Bassi, M., and Bühler, F.: Scattering of interstellar helium atoms in the earth's atmosphere . . . . .	891
Enderle, Th., Amstutz, I., Meixner, A. J., and Zschokke-Gränacher, I.: Verhalten von Flüssigkristall-Monolayern an der Grenzfläche Wasser-Luft . . . . .	893
Thalmann, Y.-A., Huot, O., Jacot-Guilarmod, R., Mulhauser, F., Piller, C., Schaller, L. A., Schellenberg, L., Schneuwly, H., and Werthmüller, A.: Muon capture ratio $A(\text{Ar},\text{Ne})$ in gaseous mixtures Ar + Ne . . . . .	895
Stampfli, P., and Bennemann, K. H.: Theory of the femtosecond dynamics of the laser-induced lattice instability of Si and GaAs . . . . .	897
Henkel, M.: Local scale invariance in strongly anisotropic critical systems . . . . .	899
Sandtner, J.: Can a system at Curie temperature remain nonreciprocal even for signals ensuing from especially treated thermal noise? . . . . .	901
Regez, N., Weigert, S., and Thomas, H.: Zeros of Husimi functions for two-spin systems . . . . .	903
Vollmer, J.: Primary pruned region for a 2D map . . . . .	905
Weigert, S.: Squeezing energy locally out of the vacuum . . . . .	907