

PHYSICAL REVIEW D

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 0556-2821)

PERIODICALS
Postmaster send address changes to:
American Institute of Physics
Suite 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 63, NUMBER 10

CONTENTS

15 MAY 2001

RAPID COMMUNICATIONS

- Radiometer effect in space missions to test the equivalence principle (3 pages) 101101(R)
A. M. Nobili, D. Bramanti, G. Comandi, R. Toncelli, E. Polacco, and G. Catastini

ARTICLES

- Aperture synthesis for gravitational-wave data analysis: Deterministic sources (18 pages) 102001
Lee Samuel Finn
- Determination of Ω_b from big bang nucleosynthesis in the presence of regions of antimatter (8 pages) 103001
Elina Sihvola
- Comparing and combining the Saskatoon, QMAP, and COBE CMB maps (11 pages) 103002
Yongzhong Xu, Max Tegmark, Angelica de Oliveira-Costa, Mark J. Devlin, Thomas Herbig,
Amber D. Miller, C. Barth Netterfield, and Lyman Page
- Potential weakly interacting massive particle signature for the caustic ring halo model (5 pages) 103003
Anne M. Green
- Probing the gravitational well: No supernova explosion in spherical symmetry with general relativistic
Boltzmann neutrino transport (13 pages) 103004
Matthias Liebendörfer, Anthony Mezzacappa, Friedrich-Karl Thielemann, O. E. Bronson Messer,
W. Raphael Hix, and Stephen W. Bruenn
- Covariance of the mixmaster chaoticity (5 pages) 103501
Giovanni Imponente and Giovanni Montani
- Radiative decay of a massive particle and the nonthermal process in primordial nucleosynthesis
(7 pages) 103502
Masahiro Kawasaki, Kazunori Kohri, and Takeo Moroi
- Development of equilibrium after preheating (14 pages) 103503
Gary Felder and Lev Kofman
- Genesis of cosmological tracker fields (4 pages) 103504
Vinod B. Johri
- Inflationary solutions in the brane world and their geometrical interpretation (13 pages) 103505
Justin Khoury, Paul J. Steinhardt, and Daniel Waldram
- Cosmological evolution of a brane universe in a type 0 string background (9 pages) 103506
E. Papantonopoulos and I. Pappa
- Relativistic theories of interacting fields and fluids (13 pages) 103507
Esteban Calzetta and Marc Thibeault
- Quintessence dissipative superattractor cosmology (10 pages) 103508
Luis P. Chimento, Alejandro S. Jakubi, and Norberto A. Zuccalá
- Affinity for scalar fields to dissipate (15 pages) 103509
Arjun Berera and Rudnei O. Ramos



Essentials of k -essence (13 pages)	103510
C. Armendariz-Picon, V. Mukhanov, and Paul J. Steinhardt	
Large extra dimensions and cosmological problems (6 pages)	103511
Glenn D. Starkman, Dejan Stojkovic, and Mark Trodden	
Generating non-Gaussian maps with a given power spectrum and bispectrum (10 pages)	103512
Carlo R. Contaldi and João Magueijo	
Dynamics of superconducting strings with chiral currents (6 pages)	103513
J. J. Blanco-Pillado, Ken D. Olum, and Alexander Vilenkin	
Natural chaotic inflation in supergravity and leptogenesis (8 pages)	103514
M. Kawasaki, Masahide Yamaguchi, and T. Yanagida	
Preheating—cosmic magnetic dynamo? (13 pages)	103515
Bruce A. Bassett, Giuseppe Pollifrone, Shinji Tsujikawa, and Fermin Viniegra	
Nonlinear electrodynamics can generate a closed spacelike path for photons (5 pages)	103516
M. Novello, J. M. Salim, V. A. De Lorenci, and E. Elbaz	
Noise kernel in stochastic gravity and stress energy bitensor of quantum fields in curved spacetimes (16 pages)	104001
Nicholas G. Phillips and B. L. Hu	
Angular momentum in general relativity: The definition at null infinity includes the spatial definition as a special case (13 pages)	104002
Anthony Rizzi	
Conservative general relativistic radiation hydrodynamics in spherical symmetry and comoving coordinates (14 pages)	104003
Matthias Liebendörfer, Anthony Mezzacappa, and Friedrich-Karl Thielemann	
Electromagnetic Thirring problems (18 pages)	104004
Markus King and Herbert Pfister	
One-loop corrected thermodynamics of the extremal and nonextremal spinning Banados-Teitelboim-Zanelli black hole (12 pages)	104005
A. J. M. Medved and G. Kunstatter	
Simple excision of a black hole in 3+1 numerical relativity (6 pages)	104006
Miguel Alcubierre and Bernd Brügmann	
Effective one-body approach to the relativistic two-body problem (9 pages)	104007
Plamen P. Fiziev and Ivan T. Todorov	
Generalized second law of black hole thermodynamics and quantum information theory (5 pages)	104008
A. Hosoya, A. Carlini, and T. Shimomura	
Four-dimensional conformal supergravity from AdS space (10 pages)	104009
Vijay Balasubramanian, Eric Gimon, Djordje Minic, and Joachim Rahmfeld	
Fermions without vierbeins in curved space-time (11 pages)	104010
H. Arthur Weldon	
Evidence for a continuum limit in causal set dynamics (15 pages)	104011
D. P. Rideout and R. D. Sorkin	
Evolution of cosmological models in the brane-world scenario (14 pages)	104012
Antonio Campos and Carlos F. Sopuerta	
Rotational perturbations in Neveu-Schwarz–Neveu-Schwarz string cosmology (10 pages)	104013
Chiang-Mei Chen, T. Harko, and M. K. Mak	
On closed rotating worlds (4 pages)	104014
Thoralf Chrobok, Yuri N. Obukhov, and Mike Scherfner	
Self-adjoint wave equations for dynamical perturbations of self-gravitating fields (19 pages)	104015
O. Sarbach, M. Heusler, and O. Brodbeck	
Evaporation of a two-dimensional charged black hole (11 pages)	104016
Amos Ori	

Embedding variables in finite dimensional models (14 pages)	104017
M. Ambrus and P. Hájíček	
Quantization of maximally charged slowly moving black holes (10 pages)	104018
George Siopsis	
Hidden symmetry of the three-dimensional Einstein-Maxwell equations (5 pages)	104019
Daisuke Ida and Yoshiyuki Morisawa	
Toward a midisuperspace quantization of LeMaître-Tolman-Bondi collapse models (10 pages)	104020
Cenalo Vaz, Louis Witten, and T. P. Singh	
$N=3$ chiral supergravity compatible with the reality condition and higher N chiral Lagrangian density (7 pages)	104021
Motomu Tsuda	
Black holes on thick branes (12 pages)	104022
Roberto Emparan, Ruth Gregory, and Caroline Santos	
Looking for event horizons using UV-IR relations (12 pages)	104023
James P. Gregory and Simon F. Ross	
Znajek-Damour horizon boundary conditions with Born-Infeld electrodynamics (12 pages)	104024
Hongsu Kim, Hyun Kyu Lee, and Chul H. Lee	
Static solutions in the R^4 brane world (10 pages)	104025
Shinji Mukohyama	
Fermions, gauge theories, and the Sinc function representation for Feynman diagrams (9 pages)	105001
Dmitri Petrov, Richard Easther, Gerald Guralnik, Stephen Hahn, and Wei-Mun Wang	
Renormalizability of the dynamical two-form (19 pages)	105002
Amitabha Lahiri	
Vacuum structure of twisted scalar field theories on $M^{D-1} \otimes S^1$ (15 pages)	105003
Hisaki Hatanaka, Seiho Matsumoto, Katsuhiko Ohnishi, and Makoto Sakamoto	
Hard thermal loop resummation of the thermodynamic potential (12 pages)	105004
André Peshier	
Covariant determination of mass scales in warped backgrounds (8 pages)	105005
Benjamín Grinstein, Detlef R. Nolte, and Witold Skiba	
Renormalization of composite operators (19 pages)	105006
J. Polonyi and K. Sailer	
Constrained standard model from a compact extra dimension (16 pages)	105007
Riccardo Barbieri, Lawrence J. Hall, and Yasunori Nomura	
Screened perturbation theory to three loops (17 pages)	105008
Jens O. Andersen, Eric Braaten, and Michael Strickland	
Six vertex model on a fishnet (8 pages)	105009
Charles B. Thorn	
Class of kinks in $SU(N) \times Z_2$ (6 pages)	105010
Tanmay Vachaspati	
Linear dilaton background and fully localized intersecting five-branes (8 pages)	105011
Kazutoshi Ohta and Takashi Yokono	
Model for $SU(3)$ vacuum degeneracy using light-cone coordinates (11 pages)	105012
Grégory Soyez	
Interference of spin-2 self-dual modes (8 pages)	105013
A. Ilha and C. Wotzasek	
Relational time in generally covariant quantum systems: Four models (15 pages)	105014
Rodolfo Gambini and Rafael A. Porto	
Induced Lorentz- and CPT -violating Chern-Simons term in QED: Fock-Schwinger proper time method (6 pages)	105015
J.-M. Chung and B. K. Chung	

Radion stabilization by brane matter (6 pages)	105016
Benjamín Grinstein, Detlef R. Nolte, and Witold Skiba	
Two-point stress-tensor correlator in $\mathcal{N}=1$, (2+1)-dimensional super Yang-Mills theory (8 pages)	105017
J. R. Hiller, S. Pinsky, and U. Trittman	
Massive Schwinger model and its confining aspects on curved space-time (8 pages)	105018
M. Alimohammadi and H. Mohseni Sadjadi	
Vacuum densities and zero-point energy for fields obeying Robin conditions on cylindrical surfaces (13 pages)	105019
August Romeo and Aram A. Saharian	
Topologically massive non-Abelian gauge theories: Constraints and deformations (9 pages)	105020
E. Harikumar, Amitabha Lahiri, and M. Sivakumar	
Vanishing of the cosmological constant in nonfactorizable geometry (7 pages)	105021
T. Padmanabhan and S. Shankaranarayanan	
Some issues in noncommutative solitons as D -branes (10 pages)	106001
S. P. de Alwis and A. T. Flournoy	
Remarks on the path integral representation of the boundary state of a D -brane (10 pages)	106002
Yong Zhang	
Fivebranes wrapped on associative three-cycles (9 pages)	106003
Bobby S. Acharya, Jerome P. Gauntlett, and Nakwoo Kim	
Boundary string field theory of the $D\overline{D}$ system (17 pages)	106004
Per Kraus and Finn Larsen	

BRIEF REPORTS

Resampled random processes in gravitational-wave data analysis (4 pages)	107101
A. Królak and Massimo Tinto	
Dissipative fluid in Brans-Dicke theory and late time acceleration (4 pages)	107501
A. A. Sen, S. Sen, and S. Sethi	

ERRATA

Erratum: General-relativistic theory of elastic deformable astronomical bodies [Phys. Rev. D 63 , 043002 (2001)] (1 page)	109901(E)
Chongming Xu, Xuejun Wu, and Michael Soffel	
Cumulative Author Index	i