

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 66, NUMBER 8

CONTENTS

15 OCTOBER 2002

RAPID COMMUNICATIONS

- Can the clustered dark matter and the smooth dark energy arise from the same scalar field? (4 pages) 081301(R)
T. Padmanabhan and T. Roy Choudhury
- TeV astrophysics constraints on Planck scale Lorentz violation (5 pages) 081302(R)
Ted Jacobson, Stefano Liberati, and David Mattingly

ARTICLES

- Testing general relativity with the BepiColombo radio science experiment (21 pages) 082001
Andrea Milani, David Vokrouhlický, Daniela Villani, Claudio Bonanno, and Alessandro Rossi
- Small angular scale CMB anisotropies from CBI and BIMA experiments: Early universe or local structures? (6 pages) 083001
Asantha Cooray and Alessandro Melchiorri
- Large scale magnetic fields and the number of cosmic ray sources above the Greisen-Zatsepin-Kuzmin cutoff (10 pages) 083002
Claudia Isola and Günter Sigl
- Effect of halo modeling on weakly interacting massive particle exclusion limits (9 pages) 083003
Anne M. Green
- Acceleration by oblique shocks at supernova remnants and cosmic ray spectra around the knee region (11 pages) 083004
K. Kobayakawa, Y. S. Honda, and T. Samura
- Supermassive black holes in scalar field galaxy halos (5 pages) 083005
L. Arturo Ureña-López and Andrew R. Liddle
- Detectability of neutralino clumps via atmospheric Cherenkov telescopes (16 pages) 083006
Argyro Tasitsiomi and Angela V. Olinto
- Weak lensing of the CMB: Cumulants of the probability distribution function (9 pages) 083007
Michael Kesden, Asantha Cooray, and Marc Kamionkowski
- Nonthermal dark matter via Affleck-Dine baryogenesis and its detection possibility (22 pages) 083501
Masaaki Fujii and K. Hamaguchi
- Single field inflation and non-Gaussianity (23 pages) 083502
Alejandro Gangui, Jérôme Martin, and Mairi Sakellariadou
- Adiabatic perturbations in pre-big bang models: Matching conditions and scale invariance (12 pages) 083503
Ruth Durrer and Filippo Vernizzi
- Quantum behavior of FRW radiation-filled universes (18 pages) 083504
Mariam Bouhmadi-López, Luis J. Garay, and Pedro F. González-Díaz
- Interacting dark matter disguised as warm dark matter (12 pages) 083505
Céline Boehm, Alain Riazuelo, Steen H. Hansen, and Richard Schaeffer



Radion and holographic brane gravity (15 pages)	083506
Sugumi Kanno and Jiro Soda	
Casimir energy in multiply connected static hyperbolic universes (7 pages)	083507
Daniel Müller, Helio V. Fagundes, and Reuven Opher	
Inflation: Flow, fixed points, and observables to arbitrary order in slow roll (10 pages)	083508
William H. Kinney	
Primordial black holes in braneworld cosmologies: Accretion after formation (6 pages)	083509
Raf Guedens, Dominic Clancy, and Andrew R. Liddle	
Minimal modifications of the primordial power spectrum from an adiabatic short distance cutoff (5 pages)	083510
Jens C. Niemeyer, Renaud Parentani, and David Campo	
Brane world cosmologies and statistical properties of gravitational lenses (6 pages)	083511
D. Jain, A. Dev, and J. S. Alcaniz	
Transdimensional physics and inflation (15 pages)	083512
Gian F. Giudice, Edward W. Kolb, Julien Lesgourgues, and Antonio Riotto	
Construction of nonsingular pre-big-bang and ekpyrotic cosmologies and the resulting density perturbations (20 pages)	083513
Shinji Tsujikawa, Robert Brandenberger, and Fabio Finelli	
Trans-Planckian physics and the spectrum of fluctuations in a bouncing universe (9 pages)	083514
Robert H. Brandenberger, Sergio E. Jorás, and Jérôme Martin	
Dark energy and matter evolution from lensing tomography (7 pages)	083515
Wayne Hu	
Tunneling in quantum cosmology: Numerical study of particle creation (14 pages)	083516
D. Levkov, C. Rebbi, and V. A. Rubakov	
One-parameter family of time-symmetric initial data for the radial infall of a particle into a Schwarzschild black hole (16 pages)	084001
Karl Martel and Eric Poisson	
Black hole radiation in the brane world and the recoil effect (12 pages)	084002
Valeri Frolov and Dejan Stojković	
Radion and large scale anisotropy on the brane (18 pages)	084003
Kazuya Koyama	
Cosmological constraints from evaporation of primordial black holes (11 pages)	084004
E. V. Bugaev and K. V. Konishchev	
Does a Nambu-Goto wall emit gravitational waves? Cylindrical Nambu-Goto wall as an example of gravitating nonspherical walls (14 pages)	084005
Kouji Nakamura	
Collapsing perfect fluid in self-similar five dimensional space-time and cosmic censorship (7 pages)	084006
S. G. Ghosh, S. B. Sarwe, and R. V. Saraykar	
Decay of a charged scalar field around a black hole: Quasinormal modes of RN, RNAdS, and dilaton black holes (5 pages)	084007
R. A. Konoplya	
Localizing gravity on a 't Hooft-Polyakov monopole in seven dimensions (13 pages)	084008
Ewald Roessl and Mikhail Shaposhnikov	
Cosmological perturbations in a generalized gravity including tachyonic condensation (5 pages)	084009
Jai-chan Hwang and Hyerim Noh	
Fate of singularities and horizons in higher derivative gravity (7 pages)	084010
Bob Holdom	
You cannot get through Szekeres wormholes: Regularity, topology, and causality in quasispherical Szekeres models (27 pages)	084011
Charles Hellaby and Andrzej Krasinski	

Slowly rotating charged fluid balls and their matching to an exterior domain (12 pages)	084012
Gyula Fodor, Zoltán Perjés, and Michael Bradley	
3+1 covariant suite of numerical relativity evolution systems (6 pages)	084013
C. Bona, T. Ledvinka, and C. Palenzuela	
Energy norms and the stability of the Einstein evolution equations (16 pages)	084014
Lee Lindblom and Mark A. Scheel	
Precompression of colliding neutron stars (5 pages)	084015
James R. Wilson	
Hexagon model for 3D Lorentzian quantum cosmology (15 pages)	084016
B. Dittrich and R. Loll	
Quantum dynamics of the polarized Gowdy T^3 model (12 pages)	084017
C. G. Torre	
Cosmological effects of radion oscillations (7 pages)	084018
L. Perivolaropoulos and C. Sourdis	
Black hole interaction energy (8 pages)	084019
Sergio Dain	
Eternal time machine in $(2+1)$ -dimensional anti-de Sitter space (6 pages)	084020
Simon DeDeo and J. Richard Gott III	
Relativistic shells: Dynamics, horizons, and shell crossing (11 pages)	084021
Sérgio M. C. V. Gonçalves	
Regularization parameters for the self-force in Schwarzschild spacetime: Scalar case (15 pages)	084022
Leor Barack and Amos Ori	
Leading quantum gravitational corrections to scalar QED (12 pages)	084023
N. E. J. Bjerrum-Bohr	
Locating boosted Kerr and Schwarzschild apparent horizons (15 pages)	084024
Mijan F. Huq, Matthew W. Choptuik, and Richard A. Matzner	
Gravitational waves from neutron stars with large toroidal B fields (6 pages)	084025
Curt Cutler	
Improved numerical stability of stationary black hole evolution calculations (15 pages)	084026
Hwei-Jang Yo, Thomas W. Baumgarte, and Stuart L. Shapiro	
Schwinger-Dyson analysis of dynamical symmetry breaking on a brane with bulk Yang-Mills theory (12 pages)	085001
Hiroyuki Abe and Tomohiro Inagaki	
Supersymmetric regularization, two-loop QCD amplitudes, and coupling shifts (25 pages)	085002
Z. Bern, A. De Freitas, L. Dixon, and H. L. Wong	
Spinning Q -balls (9 pages)	085003
Mikhail S. Volkov and Erik Wölnert	
Quark zero modes in intersecting center vortex gauge fields (12 pages)	085004
H. Reinhardt, O. Schröder, T. Tok, and V. Ch. Zhukovsky	
Liénard-Wiechert potentials of a non-Abelian Yang-Mills charge (11 pages)	085005
Özgür Sarioğlu	
Rotating toroidal branes in supermembrane and matrix theory (7 pages)	085006
M. Axenides, E. G. Floratos, and L. Perivolaropoulos	
Electromagnetic polarization effects due to axion-photon mixing (9 pages)	085007
Pankaj Jain, Sukanta Panda, and S. Sarala	
Conformal anomalies in noncommutative gauge theories (9 pages)	085008
Tadahito Nakajima	
Gauge symmetry breaking through the Hosotani mechanism in softly broken supersymmetric QCD (10 pages)	085009
Kazunori Takenaga	

Clash of discrete symmetries for the supersymmetric kink on a circle (10 pages)	085010
Alfred Scharff Goldhaber, Anton Rebhan, Peter van Nieuwenhuizen, and Robert Wimmer	
Long-lived oscillons from asymmetric bubbles: Existence and stability (9 pages)	085011
Artur B. Adib, Marcelo Gleiser, and Carlos A. S. Almeida	
Scaling properties of the perturbative Wilson loop in two-dimensional noncommutative Yang-Mills theory (10 pages)	085012
A. Bassetto, G. Nardelli, and A. Torrielli	
Perturbative computation in a generalized quantum field theory (9 pages)	085013
V. B. Bezerra, E. M. F. Curado, and M. A. Rego-Monteiro	
Chiral bag boundary conditions on the ball (13 pages)	085014
Giampiero Esposito and Klaus Kirsten	
Perturbative approach to higher derivative theories with fermions (10 pages)	085015
Tai-Chung Cheng, Pei-Ming Ho, and Mao-Chuang Yeh	
Hard-thermal-loop perturbation theory to two loops (37 pages)	085016
Jens O. Andersen, Eric Braaten, Emmanuel Petitgirard, and Michael Strickland	
Axial anomaly in $D=3+1$ light-cone QED (19 pages)	085017
M. E. Soussa and R. P. Woodard	
Duality for symmetric second rank tensors: The massive case (13 pages)	085018
H. Casini, R. Montemayor, and Luis F. Urrutia	
Polar perturbations of self-gravitating supermassive global monopoles (7 pages)	085019
Hiroshi Watabe and Takashi Torii	
(Borel) convergence of the variationally improved mass expansion and the $O(N)$ Gross-Neveu model mass gap (25 pages)	085020
J.-L. Kneur and D. Reynaud	
Cubic interactions in pp -wave light-cone string field theory (7 pages)	085021
Peter Lee, Sanefumi Moriyama, and Jongwon Park	
Giant graviton and quantum stability in the matrix model on a pp -wave background (9 pages)	085022
Katsuyuki Sugiyama and Kentaroh Yoshida	
Casimir effect in the Fulling-Rindler vacuum (15 pages)	085023
R. M. Avagyan, A. A. Saharian, and A. H. Yeranyan	
Rotational symmetry breaking in multimatrix models (11 pages)	085024
Graziano Vernizzi and John F. Wheeler	
Schrödinger representation for a scalar field on curved spacetime (9 pages)	085025
Alejandro Corichi, Jerónimo Cortez, and Hernando Quevedo	
AdS/CFT equivalence transformation (13 pages)	086001
S. Bellucci, E. Ivanov, and S. Krivonos	
The dual of nothing (9 pages)	086002
Vijay Balasubramanian and Simon F. Ross	
Penrose limits, worldvolume fluxes, and supersymmetry (4 pages)	086003
David Mateos	
Superstring interactions in a pp -wave background (17 pages)	086004
Marcus Spradlin and Anastasia Volovich	

BRIEF REPORTS

Reconstructing the equation of state of the tachyon (4 pages)	087301
Jian-gang Hao and Xin-zhou Li	
Uniqueness of self-similar asymptotically Friedmann-Robertson-Walker spacetime in Brans-Dicke theory (4 pages)	087501
Hideki Maeda, Jun-ichirou Koga, and Kei-ichi Maeda	

CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 66, NUMBER 8

15 OCTOBER 2002

Gauged fermionic Q -balls (<i>4 pages</i>)	087701
Thomas S. Levi and Marcelo Gleiser	
D-brane probes of G_2 holonomy manifolds (<i>4 pages</i>)	087901
Sergei Gukov and David Tong	

ERRATA

Erratum: Asymptotical AdS space from nonlinear gravitational models with stabilized extra dimensions [Phys. Rev. D 66 , 044014 (2002)] (<i>1 page</i>)	089901(E)
U. Günther, P. Moniz, and A. Zhuk	
Erratum: Equivalence of the self-dual model and Maxwell-Chern-Simons theory on arbitrary manifolds [Phys. Rev. D 59 , 065019 (1999)] (<i>1 page</i>)	089902(E)
Emil M. Prodanov and Siddhartha Sen	

Cumulative Author Index	i
-------------------------------	---