

PHYSICAL REVIEW D

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 1550-7998)

PERIODICALS
Postmaster send address changes to:
PHYSICAL REVIEW D
APS Subscription Services
Suite 1N01
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 73, NUMBER 8

CONTENTS

D15 APRIL 2006

ARTICLES

Exotic models are no longer required to explain the Centauro events (<i>10 pages</i>)	082001
V. Kopenkin and Y. Fujimoto	
RICE limits on the diffuse ultrahigh energy neutrino flux (<i>19 pages</i>)	082002
I. Kravchenko, C. Cooley, S. Hussain, D. Seckel, P. Wahrlich, J. Adams, S. Churchwell, P. Harris, S. Seunarine, A. Bean, D. Besson, S. Graham, S. Holt, D. Marfatia, D. McKay, J. Meyers, J. Ralston, R. Schiel, H. Swift, J. Ledford, and K. Ratzlaff	
Redshift sensitivities of dark energy surveys (<i>10 pages</i>)	083001
Fergus Simpson and Sarah Bridle	
Interacting vectorlike dark energy, the first and second cosmological coincidence problems (<i>10 pages</i>)	083002
Hao Wei and Rong-Gen Cai	
Acceptances for space-based and ground-based fluorescence detectors, and inference of the neutrino-nucleon cross-section above 10^{19} eV (<i>32 pages</i>)	083003
Sergio Palomares-Ruiz, Andrei Irimia, and Thomas J. Weiler	
Analytical formulas for gravitational lensing (<i>9 pages</i>)	083004
Paolo Amore and Santiago Arceo	
Spacetime structure of an evaporating black hole in quantum gravity (<i>10 pages</i>)	083005
A. Bonanno and M. Reuter	
Tomographic approach to resolving the distribution of LISA Galactic binaries (<i>12 pages</i>)	083006
Soumya D. Mohanty and Rajesh K. Nayak	
Angular trispectrum of CMB temperature anisotropy from primordial non-Gaussianity with the full radiation transfer function (<i>5 pages</i>)	083007
Noriyuki Kogo and Eiichiro Komatsu	
Secondary gamma rays from ultrahigh energy cosmic rays produced in magnetized environments (<i>6 pages</i>)	083008
Eric Armengaud, Günter Sigl, and Francesco Miniati	
Diffuse neutrino flux from supernovae: Upper limit on the electron neutrino component from the nonobservation of antineutrinos at SuperKamiokande (<i>5 pages</i>)	083009
Cecilia Lunardini	
Global properties of charged dilatonic Gauss-Bonnet black holes (<i>7 pages</i>)	083010
M. Melis and S. Mignemi	
Inhomogeneous big bang nucleosynthesis revisited (<i>6 pages</i>)	083501
Juan F. Lara, Toshitaka Kajino, and Grant J. Mathews	
Dark energy anisotropic stress and large scale structure formation (<i>12 pages</i>)	083502
Tomi Koivisto and David F. Mota	
Inflation and accelerated expansion tensor-vector-scalar cosmological solutions (<i>8 pages</i>)	083503
Luz Maria Diaz-Rivera, Lado Samushia, and Bharat Ratra	
Clustering of primordial black holes: Basic results (<i>13 pages</i>)	083504
James R. Chisholm	



Copyright 2006 by The American Physical Society

(Continued)



CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 73, NUMBER 8

D15 APRIL 2006

Dynamical backreaction of relic gravitons (23 pages)	083505
Massimo Giovannini	
Observational constraints on the acceleration of the Universe (6 pages)	083506
Yungui Gong and Anzhong Wang	
Asymptotic states of the bounce geometry (8 pages)	083507
Raphael Bousso and Ben Freivogel	
Graceful entrance to braneworld inflation (11 pages)	083508
James E. Lidsey and David J. Mulryne	
Superacceleration as the signature of a dark sector interaction (9 pages)	083509
Subinoy Das, Pier Stefano Corasaniti, and Justin Khoury	
Dark energy, scalar-tensor gravity, and large extra dimensions (18 pages)	083510
Kimmo Kainulainen and Daniel Sunhede	
Prospects for direct detection of primordial gravitational waves (10 pages)	083511
Sirichai Chongchitnan and George Efstathiou	
Inflation from D3-brane motion in the background of D5-branes (10 pages)	083512
Sudhakar Panda, M. Sami, Shinji Tsujikawa, and John Ward	
Number of negative modes of the oscillating bounces (4 pages)	083513
George Lavrelashvili	
Dynamics and non-Gaussianity in the weak-dissipative warm inflation scenario (5 pages)	083514
S. Gupta	
Cosmology of mass-varying neutrinos driven by quintessence: Theory and observations (15 pages)	083515
A.W. Brookfield, C. van de Bruck, D.F. Mota, and D. Tocchini-Valentini	
Constraints on the coupled quintessence from cosmic microwave background anisotropy and matter power spectrum (12 pages)	083516
Seokcheon Lee, Guo-Chin Liu, and Kin-Wang Ng	
Matter power spectrum in $f(R)$ gravity (5 pages)	083517
Tomi Koivisto	
Observational constraints on a variable dark energy model (9 pages)	083518
M. Sadegh Movahed and Sohrab Rahvar	
Inhomogeneous alternative to dark energy? (8 pages)	083519
Håvard Alnes, Morad Amarzguoui, and Øyvind Grøn	
Cosmology with high-redshift galaxy survey: Neutrino mass and inflation (22 pages)	083520
Masahiro Takada, Eiichiro Komatsu, and Toshifumi Futamase	
Nonlinear perturbations in multiple-field inflation (11 pages)	083521
G.I. Rigopoulos, E.P. Shellard, and B.J. van Tent	
Large non-Gaussianity in multiple-field inflation (19 pages)	083522
G.I. Rigopoulos, E.P. Shellard, and B.J. van Tent	
Consistency equation hierarchy in single-field inflation models (5 pages)	083523
Marina Cortês and Andrew R. Liddle	
Shape of high order correlation functions in CMB anisotropy maps (26 pages)	083524
Tristan Brunier and Francis Bernardeau	
Big bang nucleosynthesis constraints on scalar-tensor theories of gravity (18 pages)	083525
Alain Coc, Keith A. Olive, Jean-Philippe Uzan, and Elisabeth Vangioni	
Dark energy evolution and the curvature of the universe from recent observations (11 pages)	083526
Kazuhide Ichikawa and Tomo Takahashi	
Attractor solutions for general hessence dark energy (7 pages)	083527
M. Alimohammadi and H. Mohseni Sadjadi	
Interacting dark energy and the cosmic coincidence problem (8 pages)	083528
Micheal S. Berger and Hamed Shojaei	
R -modes of accreting hyperon stars as persistent sources of gravitational waves (14 pages)	084001
Mohit Nayyar and Benjamin J. Owen	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 73, NUMBER 8

D15 APRIL 2006

Scalar hairy black holes and scalarons in the isolated horizons formalism (12 pages)	084002
Alejandro Corichi, Ulises Nucamendi, and Marcelo Salgado	
Helicity-rotation-gravity coupling for gravitational waves (11 pages)	084003
Jairzinho Ramos and Bahram Mashhoon	
Trace anomaly on a quantum spacetime manifold (11 pages)	084004
Euro Spallucci, Anaïs Smailagic, and Piero Nicolini	
Massive particles in acoustic space-times: Emergent inertia and passive gravity (15 pages)	084005
Mordehai Milgrom	
Evaporation induced traversability of the Einstein-Rosen wormhole (11 pages)	084006
S. Krasnikov	
Dark energy in modified Gauss-Bonnet gravity: Late-time acceleration and the hierarchy problem (16 pages)	084007
Guido Cognola, Emilio Elizalde, Shin'ichi Nojiri, Sergei D. Odintsov, and Sergio Zerbini	
High-energy effects on the spectrum of the inflationary gravitational wave background in braneworld cosmology (16 pages)	084008
Takashi Hiramatsu	
Thermodynamics of de Sitter black holes: Thermal cosmological constant (11 pages)	084009
Y. Sekiwa	
Coupling of radial and axial nonradial oscillations of compact stars: Gravitational waves from first-order differential rotation (23 pages)	084010
Andrea Passamonti, Marco Bruni, Leonardo Gualtieri, Alessandro Nagar, and Carlos F. Sopuerta	
Cauchy-perturbative matching reexamined: Tests in spherical symmetry (14 pages)	084011
Burkhard Zink, Enrique Pazos, Peter Diener, and Manuel Tiglio	
Second Randall-Sundrum brane world scenario with a nonminimally coupled bulk scalar field (12 pages)	084012
K. Farakos and P. Pasipoularides	
Black rings, boosted strings, and Gregory-Laflamme instability (14 pages)	084013
Jordan L. Hovdebo and Robert C. Myers	
More on wormholes supported by small amounts of exotic matter (5 pages)	084014
Peter K. Kuhfittig	
Features of gravity–Yang-Mills hierarchies in d dimensions (13 pages)	084015
Eugen Radu, Cristian Stelea, and D.H. Tchrakian	
Fermions in the Ashtekar-Barbero connection formalism for arbitrary values of the Immirzi parameter (14 pages)	084016
Simone Mercuri	
Two-dimensional approach to relativistic positioning systems (12 pages)	084017
Bartolomé Coll, Joan Josep Ferrando, and Juan Antonio Morales	
Gravitational wave detectors based on matter wave interferometers (MIGO) are no better than laser interferometers (LIGO) (14 pages)	084018
Albert Roura, Dieter R. Brill, B.L. Hu, Charles W. Misner, and William D. Phillips	
BPS black holes, quantum attractor flows, and automorphic forms (9 pages)	084019
Murat Gunaydin, Andrew Neitzke, Boris Pioline, and Andrew Waldron	
Quantum Gowdy T^3 model: A unitary description (17 pages)	084020
Alejandro Corichi, Jerónimo Cortez, and Guillermo A. Mena Marugán	
Taub-NUT/bolt black holes in Gauss-Bonnet-Maxwell gravity (11 pages)	084021
M.H. Dehghani and S.H. Hendi	
Localization of 4D gravity on pure geometrical thick branes (7 pages)	084022
Nandini Barbosa-Cendejas and Alfredo Herrera-Aguilar	
Kerr metric in Bondi-Sachs form (6 pages)	084023
Nigel T. Bishop and Liebrecht R. Venter	
Confronting braneworld cosmology with supernova data and baryon oscillations (10 pages)	084024
Ujjaini Alam and Varun Sahni	
Conformally related massless fields in dS, AdS and Minkowski spaces (7 pages)	084025
E. Huguet, J. Queva, and J. Renaud	
Energy in the Einstein-aether theory (10 pages)	084026
Christopher Eling	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 73, NUMBER 8

D15 APRIL 2006

Dynamics of coset dimensional reduction (16 pages)	084027
Josef L. Karthausser and P.M. Saffin	
Anomalies, Chern-Simons terms and chiral delocalization in extra dimensions (25 pages)	085001
Christopher T. Hill	
Equivalent Hermitian Hamiltonian for the non-Hermitian $-x^4$ potential (4 pages)	085002
H.F. Jones and J. Mateo	
Instanton-inspired model of QCD phase transitions and bubble dynamics (13 pages)	085003
Chuang-Ryong Ji, Gungwon Kang, and Jungjai Lee	
Local Casimir energies for a thin spherical shell (9 pages)	085004
Inés Cervero-Peláez, Kimball A. Milton, and Jeffrey Wagner	
Geometric approach to condensates in holographic QCD (9 pages)	085005
Johannes Hirn, Nuria Rius, and Verónica Sanz	
Boundary localized symmetry breaking and topological defects (13 pages)	085006
R Holman and Matthew R Martin	
Fermion generations, masses, and mixings in a 6D brane model (8 pages)	085007
Silvestre Aguilar and Douglas Singleton	
Non-Abelian vortices on a cylinder: Duality between vortices and walls (18 pages)	085008
Minoru Eto, Toshiaki Fujimori, Youichi Isozumi, Muneto Nitta, Keisuke Ohashi, Kazutoshi Ohta, and Norisuke Sakai	
Quark mass thresholds in QCD thermodynamics (13 pages)	085009
Mikko Laine and York Schröder	
Dynamics of chiral primaries in $AdS_3 \times S^3 \times T^4$ (13 pages)	085010
Aristomenis Donos and Antal Jevicki	
Newton-Hooke algebras, nonrelativistic branes, and generalized pp-wave metrics (6 pages)	085011
Jan Brugués, Joaquim Gomis, and Kiyoshi Kamimura	
Creation of defects with core condensation (9 pages)	085012
Nuno D. Antunes, Pedro Gandra, Ray J. Rivers, and A. Swarup	
Properties of the vector meson nonet at large N_c beyond the chiral limit (9 pages)	085013
Stefan Leupold	
Hyper-Kähler geometry and dualization (6 pages)	085014
S. Bellucci, S. Krivonos, and A. Shcherbakov	
Fermionic open string in a constant B -field background (6 pages)	086001
Jian Jing	
Transfer of metric fluctuations when extra dimensions bounce or stabilize (13 pages)	086002
Thorsten J. Battefeld, Subodh P. Patil, and Robert H. Brandenberger	
Local bulk operators in AdS/CFT correspondence: A boundary view of horizons and locality (14 pages)	086003
Alex Hamilton, Daniel Kabat, Gilad Lifschytz, and David A. Lowe	
Dimensional mutation and spacelike singularities (8 pages)	086004
Eva Silverstein	
Towards the string dual of $\mathcal{N} = 1$ supersymmetric QCD-like theories (35 pages)	086005
Roberto Casero, Carlos Núñez, and Angel Paredes	
The $AdS_5 \times S^5$ superstring worldsheet S matrix and crossing symmetry (10 pages)	086006
Romuald A. Janik	
Dilaton dynamics from production of tensionless membranes (15 pages)	086007
Sera Cremonini and Scott Watson	
Noncritical superstring-black hole transition (5 pages)	086008
Andrei Parnachev and David A. Sahakyan	
Cosmological solutions of low-energy heterotic M theory (19 pages)	086009
Edmund J. Copeland, James Ellison, Jonathan Roberts, and Andre Lukas	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 73, NUMBER 8

D15 APRIL 2006

BRIEF REPORTS

High-energy effective theory for orbifold branes (<i>4 pages</i>)	087301
Tetsuya Shiromizu, Shunsuke Fujii, Claudia de Rham, and Hirotaka Yoshino	
Hubble imaging excludes cosmic string lens (<i>2 pages</i>)	087302
Eric Agol, Craig J. Hogan, and Richard M. Plotkin	
Torsion induces gravity (<i>4 pages</i>)	087501
Rodrigo Aros and Mauricio Contreras	
Covariance of time-ordered products implies local commutativity of fields (<i>3 pages</i>)	087701
O.W. Greenberg	
Modified dispersion relations and black hole physics (<i>4 pages</i>)	087702
Yi Ling, Bo Hu, and Xiang Li	

ERRATA

Erratum: Casimir effect for gauge scalars: The Kalb-Ramond case [Phys. Rev. D 72 , 105012 (2005)] (<i>1 page</i>)	089901(E)
F.A. Barone, L.M. De Moraes, and J.A. Helay��l-Neto	
Erratum: Entropy of a Kerr-de Sitter black hole due to arbitrary spin fields [Phys. Rev. D 69 , 044019 (2004)] (<i>1 page</i>)	089902(E)
Shuang-Qing Wu and Mu-Lin Yan	
Erratum: Dark-matter electric and magnetic dipole moments [Phys. Rev. D 70 , 083501 (2004)] (<i>2 pages</i>)	089903(E)
Kris Sigurdson, Michael Doran, Andriy Kurylov, Robert R. Caldwell, and Marc Kamionkowski	
Erratum: Observational constraints on cosmic string production during brane inflation [Phys. Rev. D 68 , 23506 (2003)] (<i>1 page</i>)	089904(E)
Levon Pogosian, S.-H. Henry Tye, Ira Wasserman, and Mark Wyman	
Erratum: Bounds on cosmic strings from WMAP and SDSS [Phys. Rev. D 72 , 23513 (2005)] (<i>1 page</i>)	089905(E)
Mark Wyman, Levon Pogosian, and Ira Wasserman	