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 68, NUMBER 10 ***CONTENTS*** **D15 NOVEMBER 2003**

RAPID COMMUNICATIONS

Quasinormal modes prefer supersymmetry? *(3 pages)* . . . . . 101501(R)
Yi Ling and Hongbao Zhang
No-horizon theorem for vacuum gravity with spacelike G_1 isometry groups *(5 pages)* . . . . . 101502(R)
Sérgio M. C. V. Gonçalves
Monopoles, antimonopoles, and vortex rings *(4 pages)* . . . . . 101701(R)
Burkhard Kleihaus, Jutta Kunz, and Yasha Shnir

ARTICLES

Coincidence and coherent data analysis methods for gravitational wave bursts in a network of interferometric detectors *(18 pages)* 102001
Nicolas Arnaud, Matteo Barsuglia, Marie-Anne Bizouard, Violette Brisson, Fabien Cavalier, Michel Davier, Patrice Hello, Stephane Kreckelbergh, and Edward K. Porter
Noise characterization for LISA *(10 pages)* 102002
Julien Sylvestre and Massimo Tinto
An effective search method for gravitational ringing of black holes *(12 pages)* 102003
Hiroyuki Nakano, Hirotaka Takahashi, Hideyuki Tagoshi, and Misao Sasaki
Selective readout and back-action reduction for wideband acoustic gravitational wave detectors *(6 pages)* . . . 102004
Michele Bonaldi, Massimo Cerdonio, Livia Conti, Michel Pinard, Giovanni A. Prodi, Luca Taffarello, and Jean Pierre Zendri
Optimal generalization of power filters for gravitational wave bursts from single to multiple detectors *(13 pages)* 102005
Julien Sylvestre
Flux of atmospheric muons: Comparison between AIRES simulations and CAPRICE98 data *(12 pages)* 103001
P. Hansen, P. Carlson, E. Mocchiutti, S. J. Sciutto, and M. Boezio
Pulsar kicks from a dark-matter sterile neutrino *(5 pages)* 103002
George M. Fuller, Alexander Kusenko, Irina Mocioiu, and Silvia Pascoli
Small-scale clumps in the galactic halo and dark matter annihilation *(19 pages)* 103003
Veniamin Berezinsky, Vyacheslav Dokuchaev, and Yury Eroshenko
Propagation of ultrahigh energy protons in regular extragalactic magnetic fields *(11 pages)* 103004
Todor Stanev, David Seckel, and Ralph Engel
Cosmological effects of a class of fluid dark energy models *(5 pages)* 103501
Daniela Carturan and Fabio Finelli
Past attractor in inhomogeneous cosmology *(22 pages)* 103502
Claes Uggla, Henk van Elst, John Wainwright, and George F. R. Ellis
How long before the end of inflation were observable perturbations produced? *(6 pages)* 103503
Andrew R. Liddle and Samuel M. Leach

Copyright 2003 by The American Physical Society

(Continued)

0556-2821(20031115)68:10;1-D

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 68, NUMBER 10** **D15 NOVEMBER 2003**

Inflationary flow equations *(4 pages)* 103504
Andrew R. Liddle
Cosmological and astrophysical limits on brane fluctuations *(11 pages)* 103505
J. A. R. Cembranos, A. Dobado, and A. L. Maroto
Scaling in numerical simulations of domain walls *(7 pages)* 103506
Theodore Garagounis and Mark Hindmarsh
Minimal supersymmetric standard model flat direction as a curvaton *(7 pages)* 103507
Kari Enqvist, Asko Jokinen, Shinta Kasuya, and Anupam Mazumdar
Big bang nucleosynthesis and Λ_{QCD} *(13 pages)* 103508
James P. Kneller and Gail C. McLaughlin
Spatial variation of the fine-structure parameter and the cosmic microwave background *(16 pages)* 103509
Kris Sigurdson, Andriy Kurylov, and Marc Kamionkowski
Constraints on the mass spectrum of primordial black holes and braneworld parameters from the high-energy diffuse photon background *(15 pages)* 103510
Yuuiti Sendouda, Shigehiro Nagataki, and Katsuhiko Sato
An inflation model with large variations in the spectral index *(5 pages)* 103511
Bo Feng, Mingzhe Li, Ren-Jie Zhang, and Xinmin Zhang
Exactly solvable model for cosmological perturbations in dilatonic brane worlds *(17 pages)* 103512
Kazuya Koyama and Keitaro Takahashi
Cosmological constant and gravitational theory on a D-brane *(6 pages)* 103513
Tetsuya Shiromizu, Kazuya Koyama, and Takashi Torii
How generic is cosmic string formation in supersymmetric grand unified theories *(20 pages)* 103514
Rachel Jeannerot, Jonathan Rocher, and Mairi Sakellariadou
Conserved cosmological perturbations *(10 pages)* 103515
David H. Lyth and David Wands
Cold dark matter isocurvature perturbation in the curvaton scenario *(11 pages)* 103516
David H. Lyth and David Wands
Parametric amplification of metric fluctuations through a bouncing phase *(16 pages)* 103517
Jérôme Martin and Patrick Peter
Next-generation test of cosmic inflation *(10 pages)* 103518
Benjamin Gold and Andreas Albrecht
Phantom cosmologies *(10 pages)* 103519
Mariusz P. Dąbrowski, Tomasz Stachowiak, and Marek Szydłowski
Braneworld cosmological models with anisotropy *(9 pages)* 103520
Antonio Campos, Roy Maartens, David Matravers, and Carlos F. Sopuerta
Variations on the seventh route to relativity *(20 pages)* 104001
Edward Anderson
Stability of circular orbits of particles moving around black holes surrounded by axially symmetric structures *(9 pages)* 104002
Patricio S. Letelier
Adaptive event horizon tracking and critical phenomena in binary black hole coalescence *(13 pages)* 104003
Scott A. Caveny and Richard A. Matzner
Nonperturbative summation over 3D discrete topologies *(16 pages)* 104004
Laurent Freidel and David Louapre
Complete solution of 2D superfield supergravity from graded Poisson-sigma models, and the super point particle *(23 pages)* 104005
L. Bergamin and W. Kummer
Diffeomorphism invariance and black hole entropy *(14 pages)* 104006
Chao-Guang Huang, Han-Ying Guo, and Xiaoning Wu

(Continued)

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 68, NUMBER 10** **D15 NOVEMBER 2003**

Thin-shell limit of branes in the presence of Gauss-Bonnet interactions *(12 pages)* 104007
Carlos Barceló, Cristiano Germani, and Carlos F. Sopuerta
Simple background-independent Hamiltonian quantum model *(12 pages)* 104008
Daniele Colosi and Carlo Rovelli
Tracking black holes in numerical relativity *(12 pages)* 104009
Scott A. Caveny, Matthew Anderson, and Richard A. Matzner
Extremal limits of the *C* metric: Nariai, Bertotti-Robinson, and anti-Nariai *C* metrics *(19 pages)* 104010
Óscar J. C. Dias and José P. S. Lemos
Black hole entropy associated with the supersymmetric sigma model *(4 pages)* 104011
M. C. B. Abdalla, A. A. Bytsenko, and M. E. X. Guimarães
Chern-Simons modification of general relativity *(10 pages)* 104012
R. Jackiw and S.-Y. Pi
Gauge-invariant Hamiltonian dynamics of cylindrical gravitational waves *(16 pages)* 104013
Ioannis Kouletsis, Petr Hájíček, and Jiří Bičák
Stationary Einstein-Maxwell fields in arbitrary dimensions *(12 pages)* 104014
Daisuke Ida and Yuki Uchida
Spatial and null infinity via advanced and retarded conformal factors *(11 pages)* 104015
Sean A. Hayward
Canonical theory of spherically symmetric spacetimes with cross-streaming null dusts *(15 pages)* 104016
Jiří Bičák and Petr Hájíček
Late-time dynamics of brane gas cosmology *(11 pages)* 104017
Antonio Campos
Gravitational memory effect in ''boosted'' black hole perturbation theory *(10 pages)* 104018
Reinaldo J. Gleiser and Alfredo E. Domínguez
Unruh-DeWitt-type monopole detector in (3+1)-dimensional space-time *(11 pages)* 104019
Shih-Yuin Lin
Gravitational waves from axisymmetrically oscillating neutron stars in general relativistic simulations *(14 pages)* 104020
Masaru Shibata and Yu-ichirou Sekiguchi
Generating G_2 cosmologies with a perfect fluid in dilaton gravity *(5 pages)* 104021
Stoytcho S. Yazadjiev
General relativistic interaction of massless fields in cylindrical waves *(12 pages)* 104022
N. R. Sibgatullin, A A. García, and V. S. Manko
Three-dimensional gravity with torsion as a Chern-Simons gauge theory *(6 pages)* 104023
M. Blagojević and M. Vasilić
Relativistic models for binary neutron stars with arbitrary spins *(19 pages)* 104024
Pedro Marronetti and Stuart L. Shapiro
Updated limits on TeV-scale gravity from the absence of neutrino cosmic ray showers mediated by black holes *(6 pages)* 104025
Luis A. Anchordoqui, Jonathan L. Feng, Haim Goldberg, and Alfred D. Shapere
Rotating black hole solution in a generalized topological 3D gravity with torsion *(7 pages)* 104026
Eckehard W. Mielke and Alí A. Rincón Maggiolo
Classical confinement of test particles in higher-dimensional models: Stability criteria and a new energy condition *(9 pages)* 104027
Sanjeev S. Seahra
Relativistic static thin disks: The counterrotating model *(8 pages)* 104028
Guillermo A. González and Omar A. Espitia
Post-Newtonian Maclaurin spheroids to arbitrary order *(18 pages)* 104029
David Petroff

(Continued)

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 68, NUMBER 10** **D15 NOVEMBER 2003**

Dynamical horizons and their properties *(25 pages)* 104030
Abhay Ashtekar and Badri Krishnan
Inverse approach to Einstein's equations for nonconducting fluids *(7 pages)* 104031
Mustapha Ishak and Kayll Lake
Spin polarization and color superconductivity in quark matter *(16 pages)* 105001
E. Nakano, T. Maruyama, and T. Tatsumi
Localized anomalies in orbifold gauge theories *(17 pages)* 105002
G. v. Gersdorff and M. Quirós
Nonperturbative late time asymptotics for the heat kernel in gravity theory *(11 pages)* 105003
A. O. Barvinsky, Yu. V. Gusev, V. F. Mukhanov, and D. V. Nesterov
Orientifold D-string in the source of the Kerr spinning particle *(6 pages)* 105004
Alexander Burinskii
Fermion production in time-dependent fields *(16 pages)* 105005
Dennis D. Dietrich
Drum vortons in high density QCD *(11 pages)* 105006
Kirk B. W. Buckley, Max A. Metlitski, and Ariel R. Zhitnitsky
Bose-Einstein condensation in the canonical ensemble *(6 pages)* 105007
D. J. Bedingham
Dyons in $\mathcal{N}=4$ gauged supergravity *(9 pages)* 105008
D. H. Correa, A. D. Medina, E. F. Moreno, and F. A. Schaposnik
Supersymmetric solutions of minimal gauged supergravity in five dimensions *(13 pages)* 105009
Jerome P. Gauntlett and Jan B. Gutowski
Quantum weak energy inequalities for the Dirac field in flat spacetime *(6 pages)* 105010
C. J. Fewster and B. Mistry
Writhe of center vortices and topological charge: An explicit example *(15 pages)* 105011
Falk Bruckmann and Michael Engelhardt
Spacetime noncommutativity and antisymmetric tensor dynamics in the early Universe *(10 pages)* 105012
Elisabetta Di Grezia, Giampiero Esposito, Agostino Funel, Gianpiero Mangano, and Gennaro Miele
Translational groups as generators of gauge transformations *(12 pages)* 105013
Tomy Scaria
Nonequilibrium evolution of correlation functions: A canonical approach *(27 pages)* 105014
Supratim Sengupta, F. C. Khanna, and Sang Pyo Kim
Existence of finite-energy lumps in classical field theories *(3 pages)* 105015
Roman V. Buniy and Thomas W. Kephart
Worldvolume supersymmetries for branes in plane waves *(14 pages)* 106001
Daniel Z. Freedman, Kostas Skenderis, and Marika Taylor
Type IIB solutions with interpolating supersymmetries *(12 pages)* 106002
Andrew R. Frey and Mariana Graña
Open and closed strings from unstable D-branes *(12 pages)* 106003
Ashoke Sen
Intersecting D-branes in a type IIB plane wave background *(16 pages)* 106004
Kyung-Seok Cha, Bum-Hoon Lee, and Hyun Seok Yang
Optical activity from extra dimensions *(4 pages)* 106005
Avijit K. Ganguly and R. Parthasarathy
Superstar in noncommutative superspace via covariant quantization of the superparticle *(9 pages)* 106006
Itzhak Bars, Cemsinan Deliduman, Andrea Pasqua, and Bruno Zumino
Intersecting D3-branes and holography *(24 pages)* 106007
Neil R. Constable, Johanna Erdmenger, Zachary Guralnik, and Ingo Kirsch

(Continued)

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 68, NUMBER 10** **D15 NOVEMBER 2003**

BRIEF REPORTS

String imprints from a preinflationary era *(4 pages)* 107301
P. P. Avelino and C. J. A. P. Martins

COMMENTS

Comment on ''Measurement of quantum states of neutrons in the Earth's gravitational field'' *(3 pages)* 108701
Johan Hansson, David Olevik, Christian Türk, and Hanna Wiklund

Reply to ''Comment on 'Measurement of quantum states of neutrons in the Earth's gravitational field' '' *(3 pages)* 108702
V. V. Nesvizhevsky, A. K. Petoukhov, H. G. Börner, K. V. Protasov, A. Yu. Voronin, A. Westphal, S. Baessler, H. Abele, and A. M. Gagarski

Cumulative Author Index i