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 69, NUMBER 2 *CONTENTS* **D15 JANUARY 2004**

Physical Review D Editorial Policies and Practices iii
Physical Review D Information for Contributors vii

RAPID COMMUNICATIONS

Some constraints on inflation models with power-law potentials *(4 pages)* . . . . . 021301(R)
S. A. Pavluchenko
Minimal no-radiation approximation to Einstein's field equations *(4 pages)* . . . . . 021501(R)
Gerhard Schäfer and Achamveedu Gopakumar
Shear-free gravitational collapse is strongly censored *(5 pages)* . . . . . 021502(R)
Sérgio M. C. V. Gonçalves
No naked singularities in homogeneous, spherically symmetric bubble spacetimes? *(5 pages)* . . . . . 021901(R)
Olivier Sarbach and Luis Lehner

ARTICLES

Operating LISA as a Sagnac interferometer *(6 pages)* 022001
Daniel A. Shaddock
Strong gravitational lensing and localization of merging massive black hole binaries with LISA *(7 pages)* . . . 022002
Naoki Seto
Radiation and evolution of a small relativistic dipole in QED *(21 pages)* 022003
B. Blok
Neutrino signatures of the supernova: Gamma ray burst relationship *(6 pages)* 023001
Soebur Razzaque, Peter Mészáros, and Eli Waxman
Weak field limit of Reissner-Nordström black hole lensing *(4 pages)* 023002
Mauro Sereno
Large angle cosmic microwave background fluctuations from cosmic strings with a cosmological constant *(7 pages)* 023003
M. Landriau and E. P. S. Shellard
Large scale structure and the generalized Chaplygin gas as dark energy *(7 pages)* 023004
Tuomas Multamäki, Marc Manera, and Enrique Gaztañaga
Photoneutrino process in astrophysical systems *(19 pages)* 023005
Sharada Iyer Dutta, Saša Ratković, and Madappa Prakash
Models of quintessence coupled to the electromagnetic field and the cosmological evolution of alpha *(12 pages)* 023501
E. J. Copeland, N. J. Nunes, and M. Pospelov
More examples of structure formation in the Lemaître-Tolman model *(26 pages)* 023502
Andrzej Krasiński and Charles Hellaby



Copyright 2004 by The American Physical Society



(Continued)

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 69, NUMBER 2** **D15 JANUARY 2004**

Damping of tensor modes in cosmology *(6 pages)* 023503
Steven Weinberg
Chern-Simons production during preheating in hybrid inflation models *(24 pages)* 023504
Juan García-Bellido, Margarita García Pérez, and Antonio González-Arroyo
New mechanism for generating density perturbations from inflation *(6 pages)* 023505
Gia Dvali, Andrei Gruzinov, and Matias Zaldarriaga
Stability of FRW cosmology with a generalized Chaplygin gas *(10 pages)* 023506
Marek Szydłowski and Wojciech Czaja
Real-time perturbation theory in de Sitter space *(8 pages)* 023507
Kevin Goldstein and David A. Lowe
WMAP and supergravity inflationary models *(6 pages)* 023508
M.C. Bento, N. M. C. Santos, and A. A. Sen
Constraining the helium abundance with CMB data *(10 pages)* 023509
Roberto Trotta and Steen H. Hansen
Dilaton and moduli fields in D-term inflation *(9 pages)* 023510
Tatsuo Kobayashi and Osamu Seto
One-loop vacuum energy and RG flow induced by double-trace operators in AdS/CFT and dS/CFT correspondence *(11 pages)* 023511
Shin'ichi Nojiri and Sergei D. Odintsov
Partially ionizing the universe by decaying particles *(5 pages)* 023512
S. Kasuya, M. Kawasaki, and Naoshi Sugiyama
Cosmological anti–de Sitter space-times and time-dependent AdS/CFT correspondence *(21 pages)* 023513
Mirjam Cvetič, Shin'ichi Nojiri, and Sergei D. Odintsov
Correlated hybrid fluctuations from inflation with thermal dissipation *(10 pages)* 023514
Wolung Lee and Li-Zhi Fang
Weak gravity in the Dvali-Gabadadze-Porrati braneworld model *(6 pages)* 024001
Takahiro Tanaka
Covariant gravitational equations on a brane world with a Gauss-Bonnet term *(11 pages)* 024002
Kei-ichi Maeda and Takashi Torii
Post-Newtonian quasirigid body *(8 pages)* 024003
Chongming Xu, Jin-he Tao, and Xuejun Wu
Effective action for scalar fields and generalized zeta-function regularization *(9 pages)* 024004
Guido Cognola and Sergio Zerbini
Gauge dependence of effective gravitational field. II. Pointlike measuring device *(13 pages)* 024005
Taras S. Gribouk, Kirill A. Kazakov, and Petr I. Pronin
Quasiequilibrium binary black hole sequences for puncture data derived from helical Killing vector conditions *(7 pages)* 024006
Wolfgang Tichy and Bernd Brügmann
Causal inheritance in plane wave quotients *(12 pages)* 024007
Veronika E. Hubeny, Mukund Rangamani, and Simon F. Ross
Gravitational waves from a pulsar kick caused by neutrino conversions *(8 pages)* 024008
Lee C. Loveridge
Randall-Sundrum model in the presence of a brane bulk viscosity *(8 pages)* 024009
I. Brevik and A. Hallanger
Radionic nonuniform black strings *(8 pages)* 024010
Takashi Tamaki, Sugumi Kanno, and Jiro Soda
Can the ''brick wall'' model present the same results in different coordinate representations? *(6 pages)* 024011
Jiliang Jing
Impact of densitized lapse slicings on evolutions of a wobbling black hole *(10 pages)* 024012
Ulrich Sperhake, Kenneth L. Smith, Bernard Kelly, Pablo Laguna, and Deirdre Shoemaker

(Continued)

PHYSICAL REVIEW D THIRD SERIES, VOLUME 69, NUMBER 2 D15 JANUARY 2004

Generalized plane-fronted gravitational waves in any dimension *(7 pages)* 024013
Yuri N. Obukhov
On the status of highly entropic objects *(5 pages)* 024014
Donald Marolf and Rafael D. Sorkin
$SL(2,\mathbb{C})$ gravity with a complex vierbein and its noncommutative extension *(8 pages)* 024015
Ali H. Chamseddine
Teukolsky evolution of particle orbits around Kerr black holes in the time domain: Elliptic and inclined orbits *(5 pages)* 024016
Gaurav Khanna
Universality of spontaneous chiral symmetry breaking in gauge theories *(19 pages)* 025001
Holger Gies and Christof Wetterich
Resultant parameters of effective theory *(13 pages)* 025002
A. Vereshagin and V. Vereshagin
Nonperturbative approach for a time-dependent quantum mechanical system *(4 pages)* 025003
Hyeong-Chan Kim and Jae Hyung Yee
Renormalization-group analysis of the generalized sine-Gordon model and of the Coulomb gas for $d \geqslant 3$ dimensions *(17 pages)* 025004
I. Nándori, U. D. Jentschura, K. Sailer, and G. Soff
Kinks in the Hartree approximation *(19 pages)* 025005
Mischa Sallé
Quantum dynamics and thermalization for out-of-equilibrium ϕ^4 theory *(36 pages)* 025006
S. Juchem, W. Cassing, and C. Greiner
Bogomol'nyi-Prasad-Sommerfield multiwalls in five-dimensional supergravity *(21 pages)* 025007
Minoru Eto, Shigeo Fujita, Masashi Naganuma, and Norisuke Sakai
Superfield covariant analysis of the divergence structure of noncommutative supersymmetric QED_4 *(15 pages)* 025008
A. F. Ferrari, H. O. Girotti, M. Gomes, A. Yu. Petrov, A. A. Ribeiro, V. O. Rivelles, and A. J. da Silva
One-loop corrections to the metastable vacuum decay *(13 pages)* 025009
Jürgen Baacke and George Lavrelashvili
Spinning pulsating string solitons in $AdS_5 \times S^5$ *(6 pages)* 026001
A. Khan and A. L. Larsen
Properties of nonextremal enhançons *(9 pages)* 026002
Apostolos Dimitriadis and Simon F. Ross
Chiral rings and Gliozzi-Scherk-Olive projection in orbifolds *(7 pages)* 026003
Sunggeun Lee and Sang-Jin Sin
Brane in 6D with an increasing gravitational trapping potential *(5 pages)* 026004
Merab Gogberashvili and Douglas Singleton
Decay of type 0 Neveu-Schwarz 5-branes to nothing *(5 pages)* 026005
Yosuke Imamura
Phases of $\mathcal{N}=1$ $USp(2N_c)$ gauge theories with flavors *(29 pages)* 026006
Changhyun Ahn, Bo Feng, and Yutaka Ookouchi
Boundary action of $N=2$ super-Liouville theory *(8 pages)* 026007
Changrim Ahn and Masayoshi Yamamoto
Toward an open-closed string theoretical description of a rolling tachyon *(5 pages)* 026008
Kazuki Ohmori

BRIEF REPORTS

Gravity fall of light: An outline of a general relativity test *(4 pages)* 027101
Eduardo Díaz-Miguel

(Continued)

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 69, NUMBER 2** **D15 JANUARY 2004**

Growth rate of large-scale structure as a powerful probe of dark energy *(4 pages)* 027301
Asantha Cooray, Dragan Huterer, and Daniel Baumann

Exact soluble two-dimensional charged wormhole *(4 pages)* 027501
Ji Young Han, Won Tae Kim, and Hee Ju Yee

Black hole formation in perfect fluid collapse *(4 pages)* 027502
Rituparno Goswami and Pankaj S. Joshi

Kinematical bound in asymptotically translationally invariant space-times *(4 pages)* 027503
Tetsuya Shiromizu, Daisuke Ida, and Shinya Tomizawa

Experimental limits for low-frequency space-time fluctuations from ultrastable optical resonators *(4 pages)* 027504
S. Schiller, C. Lämmerzahl, H. Müller, C. Braxmaier, S. Herrmann, and A. Peters

Coalescence remnant of spinning binary black holes *(4 pages)* 027505
J. Baker, M. Campanelli, C. O. Lousto, and R. Takahashi

Reexamination of the ^{187}Re bound on the variation of fundamental couplings *(4 pages)* 027701
Keith A. Olive, Maxim Pospelov, Yong-Zhong Qian, Gérard Manhès, Elisabeth Vangioni-Flam, Alain Coc, and Michel Cassé

ERRATA

Erratum: Supernova and neutron-star limits on large extra dimensions reexamined [Phys. Rev. D **67**, 125008 (2003)] *(1 page)* . . . . . 029901(E)
Steen Hannestad and Georg G. Raffelt

Cumulative Author Index xi