

PHYSICAL REVIEW D

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

PERIODICALS

Postmaster send address changes to:

APS Subscription Services
P.O. Box 41
Annapolis Junction, MD 20701

THIRD SERIES, VOLUME 102, NUMBER 10

CONTENTS

D15 NOVEMBER 2020

The Table of Contents is a total listing of Parts A and B.

Part A consists of articles 100001–104020, and Part B articles 104021–109903(E)

PART A

EDITORIALS

- Editorial: Promoting Inclusive and Respectful Communications (2 pages) 100001
Michael Thoennessen

RAPID COMMUNICATIONS

- Gravitomagnetic resonance in the field of a gravitational wave (5 pages) 101501(R)
Matteo Luca Ruggiero and Antonello Ortolan
- Gravitational radiation condition at infinity with a positive cosmological constant (8 pages) 101502(R)
Francisco Fernández-Álvarez and José M. M. Senovilla
- Black hole zeroth law in higher curvature gravity (5 pages) 101503(R)
Rajes Ghosh and Sudipta Sarkar
- Synchronized gravitational atoms from mergers of bosonic stars (6 pages) 101504(R)
Nicolas Sanchis-Gual, Miguel Zilhão, Carlos Herdeiro, Fabrizio Di Giovanni, José A. Font, and Eugen Radu
- Proof of a momentum/complexity correspondence (6 pages) 101901(R)
J. L. F. Barbón, J. Martín-García, and M. Sasieta
- Deep learning black hole metrics from shear viscosity (7 pages) 101902(R)
Yu-Kun Yan, Shao-Feng Wu, Xian-Hui Ge, and Yu Tian

ARTICLES

- Ultralight vector dark matter search with auxiliary length channels of gravitational wave detectors (6 pages) 102001
Yuta Michimura, Tomohiro Fujita, Soichiro Morisaki, Hiromasa Nakatsuka, and Ippei Obata
- Optimal detuning for quantum filter cavities (8 pages) 102002
Chris Whittle, Kentaro Komori, Dhruva Ganapathy, Lee McCuller, Lisa Barsotti,
Nergis Mavalvala, and Matthew Evans
- Demonstration of an amplitude filter cavity at gravitational-wave frequencies (7 pages) 102003
Kentaro Komori, Dhruva Ganapathy, Chris Whittle, Lee McCuller, Lisa Barsotti,
Nergis Mavalvala, and Matthew Evans
- Searching for anisotropy in the distribution of binary black hole mergers (11 pages) 102004
Ethan Payne, Sharan Banagiri, Paul D. Lasky, and Eric Thrane
- Detecting a stochastic gravitational-wave background in the presence of correlated magnetic noise (14 pages) 102005
Patrick M. Meyers, Katarina Martinovic, Nelson Christensen, and Mairi Sakellariadou



Copyright 2020 American Physical Society

(Continued)



2470-0010(20201115)102:10;1-P



This paper was highlighted in the APS publication *Physics* (physics.aps.org).

By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. D **90**, 020001 (2014).

Cosmogenic activation of silicon (21 pages)	102006
R. Saldanha, R. Thomas, R. H. M. Tsang, A. E. Chavarria, R. Bunker, J. L. Burnett, S. R. Elliott, A. Matalon, P. Mitra, A. Piers, P. Privitera, K. Ramanathan, and R. Smida	
Charm contribution to ultrahigh-energy neutrinos from newborn magnetars (13 pages)	103001
Jose Alonso Carpio, Kohta Murase, Mary Hall Reno, Ina Sarcevic, and Anna Stasto	
LISA sources from young massive and open stellar clusters (13 pages)	103002
Sambaran Banerjee	
Effect of the crust on neutron star empirical relations (16 pages)	103003
Márcio Ferreira and Constança Providência	
Elastic and inelastic scattering of cosmic rays on sub-GeV dark matter (14 pages)	103004
Gang Guo, Yue-Lin Sming Tsai, Meng-Ru Wu, and Qiang Yuan	
Probing dark matter with future CMB measurements (10 pages)	103005
Junsong Cang, Yu Gao, and Yin-Zhe Ma	
Turbulent magnetic-field amplification in the first 10 milliseconds after a binary neutron star merger: Comparing high-resolution and large-eddy simulations (15 pages)	103006
Ricard Aguilera-Miret, Daniele Viganò, Federico Carrasco, Borja Miñano, and Carlos Palenzuela	
Uncertainties implicit to the use of the force-field solutions to the Parker transport equation in analyses of observed cosmic ray antiproton intensities (11 pages)	103007
N. Eugene Engelbrecht and Valeria Di Felice	
Supermassive gravitinos and giant primordial black holes (11 pages)	103008
Krzysztof A. Meissner and Hermann Nicolai	
Testing the Keplerian disk hypothesis using x-ray reflection spectroscopy (9 pages)	103009
Ashutosh Tripathi, Biao Zhou, Askar B. Abdikamalov, Dmitry Ayzenberg, Cosimo Bambi, and Sourabh Nampalliwar	
Investigating the detection of dark matter subhalos as extended sources with <i>Fermi</i> -LAT (12 pages)	103010
Mattia Di Mauro, Martin Stref, and Francesca Calore	
Total energy in supernova neutrinos and the tidal deformability and binding energy of neutron stars (8 pages)	103011
Brendan Reed and C. J. Horowitz	
Relaxation times for Bose-Einstein condensation in axion miniclusters (9 pages)	103012
Kay Kirkpatrick, Anthony E. Mirasola, and Chanda Prescod-Weinstein	
Investigating the <i>Fermi</i> Large Area Telescope sensitivity of detecting the characteristics of the Galactic center excess (20 pages)	103013
Mattia Di Mauro	
Identification of gamma-ray burst precursors in <i>Fermi</i> -GBM bursts (12 pages)	103014
Paul Coppin, Krijn D. de Vries, and Nick van Eijndhoven	
Fast neutrino flavor conversion, ejecta properties, and nucleosynthesis in newly-formed hypermassive remnants of neutron-star mergers (22 pages)	103015
Manu George, Meng-Ru Wu, Irene Tamborra, Ricard Ardevol-Pulpillo, and Hans-Thomas Janka	
Novel aspects of cosmic ray diffusion in synthetic magnetic turbulence (20 pages)	103016
Andrej Dundovic, Oreste Pezzi, Pasquale Blasi, Carmelo Evoli, and William H. Matthaeus	
Fast oscillations, collisionless relaxation, and spurious evolution of supernova neutrino flavor (16 pages)	103017
Lucas Johns, Hiroki Nagakura, George M. Fuller, and Adam Burrows	
Imprints of axion superradiance in the CMB (10 pages)	103018
Diego Blas and Samuel J. Witte	
Antideuterons and antihelium nuclei from annihilating dark matter (9 pages)	103019
Ilias Cholis, Tim Linden, and Dan Hooper	
Gravitational-wave selection effects using neural-network classifiers (7 pages)	103020
Davide Gerosa, Geraint Pratten, and Alberto Vecchio	
Estimating the nuclear saturation parameter via low-mass neutron star asteroseismology (11 pages)	103021
Hajime Sotani	
Extreme dark matter tests with extreme mass ratio inspirals (9 pages)	103022
Otto A. Hannuksela, Kenny C. Y. Ng, and Tjonnie G. F. Li	

(Continued)



Gravitational wave background from extreme mass ratio inspirals (<i>19 pages</i>)	103023
Matteo Bonetti and Alberto Sesana	
Source properties of the lowest signal-to-noise-ratio binary black hole detections (<i>14 pages</i>)	103024
Yiwen Huang, Carl-Johan Haster, Javier Roulet, Salvatore Vitale, Aaron Zimmerman, Tejaswi Venumadhav, Barak Zackay, Liang Dai, and Matias Zaldarriaga	
Gravitational waves from primordial magnetic fields via photon-graviton conversion (<i>9 pages</i>)	103501
Tomohiro Fujita, Kohei Kamada, and Yuichiro Nakai	
Constraining early dark energy with large-scale structure (<i>27 pages</i>)	103502
Mikhail M. Ivanov, Evan McDonough, J. Colin Hill, Marko Simonović, Michael W. Toomey, Stephon Alexander, and Matias Zaldarriaga	
Dark D-brane cosmology: From background evolution to cosmological perturbations (<i>22 pages</i>)	103503
Carsten van de Bruck and Elsa M. Teixeira	
Nonlinear 3D cosmic web simulation with heavy-tailed generative adversarial networks (<i>18 pages</i>)	103504
Richard M. Feder, Philippe Berger, and George Stein	
UV sensitive one-loop matter power spectrum in degenerate higher-order scalar-tensor theories (<i>15 pages</i>)	103505
Shin'ichi Hirano, Tsutomu Kobayashi, Daisuke Yamauchi, and Shuichiro Yokoyama	
 New interpretable statistics for large-scale structure analysis and generation (<i>22 pages</i>)	103506
E. Allys, T. Marchand, J.-F. Cardoso, F. Villaescusa-Navarro, S. Ho, and S. Mallat	
Flow-based likelihoods for non-Gaussian inference (<i>26 pages</i>)	103507
Ana Diaz Rivero and Cora Dvorkin	
Revisiting magnetogenesis during inflation (<i>22 pages</i>)	103508
Alireza Talebian, Amin Nassiri-Rad, and Hassan Firouzjahi	
Parameter estimation for the cosmic microwave background with Bayesian neural networks (<i>23 pages</i>)	103509
Héctor J. Hortúa, Riccardo Volpi, Dimitri Marinelli, and Luigi Malagò	
Note on initial conditions for small-field inflation (<i>12 pages</i>)	103510
Ignatios Antoniadis, Auttakit Chatrabhuti, Hiroshi Isono, and Spyros Sypsas	
Accounting for the time evolution of the equation of state parameter during reheating (<i>12 pages</i>)	103511
Pankaj Saha, Sampurn Anand, and L. Sriramkumar	
Constraints on primordial black holes from big bang nucleosynthesis revisited (<i>16 pages</i>)	103512
Celeste Keith, Dan Hooper, Nikita Blinov, and Samuel D. McDermott	
QCD axions and CMB anisotropy (<i>22 pages</i>)	103513
Satoshi Iso, Kiyoharu Kawana, and Kengo Shimada	
Bubble wall correlations in cosmological phase transitions (<i>29 pages</i>)	103514
Ariel Mégevand and Federico Agustín Membrilla	
Natural inflation, strong dynamics, and the role of generalized anomalies (<i>15 pages</i>)	103515
Mohamed M. Anber and Stephen Baker	
Irreducible background of gravitational waves from a cosmic defect network: Update and comparison of numerical techniques (<i>25 pages</i>)	103516
Daniel G. Figueroa, Mark Hindmarsh, Joanes Lizarraga, and Jon Urrestilla	
Kinetic dominance and psi series in the Hamilton-Jacobi formulation of inflaton models (<i>18 pages</i>)	103517
Elena Medina and Luis Martínez Alonso	
Structure formation in a Dirac-Milne universe: Comparison with the standard cosmological model (<i>11 pages</i>)	103518
Giovanni Manfredi, Jean-Louis Rouet, Bruce N. Miller, and Gabriel Chardin	
Triple unification of inflation, dark energy, and dark matter in two-scalar-field cosmology (<i>15 pages</i>)	103519
Paulo M. Sá	
Gravitational and electromagnetic radiation from binary black holes with electric and magnetic charges: Circular orbits on a cone (<i>13 pages</i>)	103520
Lang Liu, Øyvind Christiansen, Zong-Kuan Guo, Rong-Gen Cai, and Sang Pyo Kim	
Warm bounce in loop quantum cosmology and the prediction for the duration of inflation (<i>17 pages</i>)	103521
L. N. Barboza, L. L. Graef, and Rudnei O. Ramos	
Runaway potentials in warm inflation satisfying the swampland conjectures (<i>14 pages</i>)	103522
Suratna Das and Rudnei O. Ramos	

(Continued)



CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 102, NUMBER 10

D15 NOVEMBER 2020

Black hole metamorphosis and stabilization by memory burden (24 pages)	103523
Gia Dvali, Lukas Eisemann, Marco Michel, and Sebastian Zell	
Cosmic acceleration and growth of structure in massive gravity (15 pages)	103524
Michael Kenna-Allison, A. Emir Gümrukçüoğlu, and Kazuya Koyama	
Is there an early Universe solution to Hubble tension? (6 pages)	103525
C. Krishnan, E. Ó Colgáin, Ruchika, A. A. Sen, M. M. Sheikh-Jabbari, and T. Yang	
Cosmological constraints on nonadiabatic dark energy perturbations (17 pages)	103526
Rubén Arjona, Juan García-Bellido, and Savvas Nesseris	
Primordial black holes and gravitational waves from resonant amplification during inflation (15 pages)	103527
Zihan Zhou, Jie Jiang, Yi-Fu Cai, Misao Sasaki, and Shi Pi	
Helical magnetic fields from Riemann coupling (13 pages)	103528
Ashu Kushwaha and S. Shankaranarayanan	
Dark energy in multifractional spacetimes (17 pages)	103529
Gianluca Calcagni and Antonio De Felice	
Testing one-loop galaxy bias: Power spectrum (29 pages)	103530
Alexander Eggemeier, Román Scoccimarro, Martin Crocce, Andrea Pezzotta, and Ariel G. Sánchez	
Constraining neutrino masses with weak-lensing multiscale peak counts (17 pages)	103531
Virginia Ajani, Austin Peel, Valeria Pettorino, Jean-Luc Starck, Zack Li, and Jia Liu	
Pico-charged particles from dark matter decay explain the 511 keV line and the XENON1T signal (10 pages)	103532
Y. Farzan and M. Rajaei	
Modeling dark photon oscillations in our inhomogeneous Universe (26 pages)	103533
Andrea Caputo, Hongwan Liu, Siddharth Mishra-Sharma, and Joshua T. Ruderman	
 Relativistic radiation hydrodynamics in a reference-metric formulation (15 pages)	104001
Thomas W. Baumgarte and Stuart L. Shapiro	
Three body first post-Newtonian effects on the secular dynamics of a compact binary near a spinning supermassive black hole (12 pages)	104002
Yun Fang and Qing-Guo Huang	
Probing massive scalar and vector fields with binary pulsars (12 pages)	104003
Brian C. Seymour and Kent Yagi	
Can a nonextremal black hole be a particle accelerator? (9 pages)	104004
O. B. Zaslavskii	
Tidal driving of inertial modes of Maclaurin spheroids (22 pages)	104005
Eric Poisson and Cyann Buisson	
Eccentric-orbit extreme-mass-ratio-inspiral radiation. II. 1PN correction to leading-logarithm and subleading-logarithm flux sequences and the entire perturbative 4PN flux (35 pages)	104006
Christopher Munna and Charles R. Evans	
Computation of displacement and spin gravitational memory in numerical relativity (20 pages)	104007
Keefe Mitman, Jordan Moxon, Mark A. Scheel, Saul A. Teukolsky, Michael Boyle, Nils Deppe, Lawrence E. Kidder, and William Throwe	
Black holes with a supertranslation field and the Israel theorem (5 pages)	104008
Mikhail Z. Iofa	
Geometry outside of acoustic black holes in $(2 + 1)$ -dimensional spacetime (14 pages)	104009
Qing-Bing Wang and Xian-Hui Ge	
Confusing dark matter particle properties with modifications to general relativity (10 pages)	104010
Armando A. Roque and J. Barranco	
Novel dual relation and constant in Hawking-Page phase transitions (5 pages)	104011
Shao-Wen Wei, Yu-Xiao Liu, and Robert B. Mann	
Structure and stability of traversable thin-shell wormholes in Palatini $f(\mathcal{R})$ gravity (11 pages)	104012
Francisco S. N. Lobo, Gonzalo J. Olmo, Emanuele Orazi, Diego Rubiera-Garcia, and Azmat Rustam	
Microstructure of charged AdS black hole via $P - V$ criticality (7 pages)	104013
Amin Dehyadegari, Ahmad Sheykhi, and Shao-Wen Wei	

(Continued)



This paper was highlighted in the APS publication *Physics* (physics.aps.org).

By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. D **90**, 020001 (2014).

Increasing the accuracy of binary neutron star simulations with an improved vacuum treatment (16 pages)	104014
Amit Poudel, Wolfgang Tichy, Bernd Brügmann, and Tim Dietrich	
Existence and stability of static spherical fluid shells in a Schwarzschild-Rindler-anti-de Sitter metric (10 pages)	104015
G. Alestas, G. V. Kraniotis, and L. Perivolaropoulos	
Kinetic gravity braiding wormhole geometries (11 pages)	104016
Roman Korolev, Francisco S. N. Lobo, and Sergey V. Sushkov	
Gravitational radiation from birefringent matter dynamics (25 pages)	104017
Nils Alex	
Third RIT binary black hole simulations catalog (41 pages)	104018
James Healy and Carlos O. Lousto	
Spherically symmetric and static solutions in $f(R)$ gravity coupled with electromagnetic fields (10 pages)	104019
Roger A. Hurtado and Robel Arenas	
Rapid parameter estimation of gravitational waves from binary neutron star coalescence using focused reduced order quadrature (17 pages)	104020
Soichiro Morisaki and Vivien Raymond	

PART B

Domain walls and other defects in Eddington-inspired Born-Infeld gravity (9 pages)	104021
P. P. Avelino and L. Sousa	
Magnetic ergostars, jet formation, and gamma-ray bursts: Ergoregions versus horizons (8 pages)	104022
Milton Ruiz, Antonios Tsokaros, Stuart L. Shapiro, Kyle C. Nelli, and Sam Qunell	
Enhancing the sensitivity of transient gravitational wave searches with Gaussian mixture models (10 pages)	104023
V. Gayathri, Dixeena Lopez, Pranjal R. S., Ik Siong Heng, Archana Pai, and Chris Messenger	
Jackiw-Teitelboim gravity and the models of a Hawking-Page transition for 2D black holes (10 pages)	104024
Arindam Lala, Hemant Rathi, and Dibakar Roychowdhury	
Constraints on the deformation scale of a geometry in the cotangent bundle (10 pages)	104025
J. J. Relancio and S. Liberati	
Nonlinear perturbations of higher dimensional anti-de Sitter spacetime (20 pages)	104026
Dhanya S. Menon and Vardarajan Suneeta	
Black hole scalarization induced by the spin: $2 + 1$ time evolution (9 pages)	104027
Daniela D. Doneva, Lucas G. Collodel, Christian J. Krüger, and Stoytcho S. Yazadjiev	
Some global, analytical, and topological properties of regular black holes (12 pages)	104028
Pedro Bargueño	
Deflection angle of a light ray reflected by a general marginally unstable photon sphere in a strong deflection limit (10 pages)	104029
Naoki Tsukamoto	
Reissner-Nordström perturbation framework with gravitational wave applications (19 pages)	104030
Justin Y. J. Burton and Thomas Osburn	
Quasinormal modes and stability of firewalls (19 pages)	104031
Ryan McManus, Emanuele Berti, David E. Kaplan, and Surjeet Rajendran	
Shadow, quasinormal modes, and quasiperiodic oscillations of rotating Kaluza-Klein black holes (16 pages)	104032
M. Ghasemi-Nodehi, Mustapha Azreg-Aïnou, Kimet Jusufi, and Mubasher Jamil	
Electrically charged black holes in linear and nonlinear electrodynamics: Geodesic analysis and scalar absorption (11 pages)	104033
Marco A. A. Paula, Luiz C. S. Leite, and Luís C. B. Crispino	
Scalar tachyonic instabilities in gravitational backgrounds: Existence and growth rate (18 pages)	104034
L. Perivolaropoulos and F. Skara	
Testing horizon topology with electromagnetic observations (16 pages)	104035
Sourabh Nampalliwar, Arthur G. Suvorov, and Kostas D. Kokkotas	

(Continued)



Exact formulas for spherical photon orbits around Kerr black holes (<i>6 pages</i>)	104036
Aydin Tavlayan and Bayram Tekin	
Stability of the Cauchy horizon in accelerating black-hole spacetimes (<i>7 pages</i>)	104037
Kyriakos Destounis, Rodrigo D. B. Fontana, and Filipe C. Mena	
Novel exact magnetic black hole solution in four-dimensional extended scalar-tensor-Gauss-Bonnet theory (<i>13 pages</i>)	104038
Pedro Cañate and Santiago Esteban Perez Bergliaffa	
Does the cosmological constant stay hidden? (<i>7 pages</i>)	104039
Oliver F. Piattella	
Scalar perturbations of a single-horizon regular black hole (<i>11 pages</i>)	104040
Ramin G. Daghighi, Michael D. Green, Jodin C. Morey, and Gabor Kunstatter	
Maximum observable blueshift from circular equatorial Kerr orbiters (<i>22 pages</i>)	104041
Delilah E. A. Gates, Shahar Hadar, and Alexandru Lupasasca	
Unification of a bounce with a viable dark energy era in Gauss-Bonnet gravity (<i>14 pages</i>)	104042
S. D. Odintsov, V. K. Oikonomou, F. P. Fronimos, and K. V. Fasoulakos	
BMS-like symmetries in cosmology (<i>22 pages</i>)	104043
Béatrice Bonga and Kartik Prabhu	
New test on general relativity and $f(T)$ torsional gravity from galaxy-galaxy weak lensing surveys (<i>8 pages</i>)	104044
Zhaoting Chen, Wentao Luo, Yi-Fu Cai, and Emmanuel N. Saridakis	
Radiative stability and observational constraints on dark energy and modified gravity (<i>11 pages</i>)	104045
J. Noller and A. Nicola	
Constant mean curvature surfaces and area-charge inequality for a spheroidal electrically counterpoised dust spacetime (<i>9 pages</i>)	104046
Andrés Aceña	
Gravitational wave peak luminosity model for precessing binary black holes (<i>7 pages</i>)	104047
Afura Taylor and Vijay Varma	
General gravitational Lagrangian with deformed covariance (<i>13 pages</i>)	104048
Rhiannon Cuttell and Mairi Sakellariadou	
Snell's law for the Schwarzschild black hole (<i>8 pages</i>)	104049
X. H. Zheng and J. X. Zheng	
Comparison of momentum transport models for numerical relativity (<i>15 pages</i>)	104050
Matthew D. Duez, Alexander Knight, Francois Foucart, Milad Haddadi, Jerred Jesse, François Hébert, Lawrence E. Kidder, Harald P. Pfeiffer, and Mark A. Scheel	
Dynamical analysis of null geodesics in brane-world spacetimes (<i>12 pages</i>)	104051
W. S. Klën and C. Molina	
Physical Hamiltonian for mimetic gravity (<i>16 pages</i>)	104052
Marco de Cesare and Viqar Husain	
Sparsity-based recovery of Galactic-binary gravitational waves (<i>19 pages</i>)	104053
A. Blelly, H. Moutarde, and J. Bobin	
Geodesic structure of the Euler-Heisenberg static black hole (<i>14 pages</i>)	104054
Daniel Amaro and Alfredo Macías	
Quasinormal modes of massive vector fields on the Kerr spacetime (<i>15 pages</i>)	104055
Jake Percival and Sam R. Dolan	
New perspective on thermodynamics of spacetime: The emergence of unimodular gravity and the equivalence of entropies (<i>11 pages</i>)	104056
A. Alonso-Serrano and M. Liška	
Gravitational-wave parameter estimation with autoregressive neural network flows (<i>16 pages</i>)	104057
Stephen R. Green, Christine Simpson, and Jonathan Gair	
Polytropic stars in bootstrapped Newtonian gravity (<i>14 pages</i>)	104058
Roberto Casadio and Octavian Micu	
Generalized Birkhoff theorem in the Poincaré gauge gravity theory (<i>18 pages</i>)	104059
Yuri N. Obukhov	

(Continued)



Galaxy morphology rules out astrophysically relevant Hu-Sawicki $f(R)$ gravity (16 pages)	104060
Harry Desmond and Pedro G. Ferreira	
Pairs of surface wave packets with zero-sum energy in the Hawking radiation analog (6 pages)	104061
Anirban Guha, Eyal Heifetz, and Akanksha Gupta	
Dynamics of test particles around a Bardeen black hole surrounded by perfect fluid dark matter (16 pages)	104062
Bakhtiyor Narzilloev, Javlon Rayimbaev, Sanjar Shaymatov, Ahmadjon Abdujabbarov, Bobomurat Ahmedov, and Cosimo Bambi	
PPN rotation curves in static distributions with spherical symmetry (19 pages)	104063
Henrique Matheus Gauy and Javier Ramos-Caro	
Gödel-type solutions in cubic Galileon gravity (9 pages)	104064
J. R. Nascimento, A. Yu. Petrov, P. Porfírio, and A. F. Santos	
Schwarzschild-Tangherlini metric from scattering amplitudes (12 pages)	104065
Gustav Uhre Jakobsen	
Generalized SU(2) Proca theory reconstructed and beyond (21 pages)	104066
Alexander Gallego Cadavid, Yeinzon Rodríguez, and L. Gabriel Gómez	
Parity and CP operations for Majorana neutrinos (12 pages)	105001
Kazuo Fujikawa	
Second law of thermodynamics for relativistic fluids formulated with relative entropy (15 pages)	105002
Neil Dowling, Stefan Floerchinger, and Tobias Haas	
Analog Hawking effect: A master equation (21 pages)	105003
F. Belgiorno, S. L. Cacciatori, and A. Viganò	
Analog Hawking effect: BEC and surface waves (15 pages)	105004
F. Belgiorno, S. L. Cacciatori, A. Farahat, and A. Viganò	
Correlations between a Hawking particle and its partner in a $1 + 1D$ Bose-Einstein condensate analog black hole (12 pages)	105005
Richard A. Dudley, Alessandro Fabbri, Paul R. Anderson, and Roberto Balbinot	
Fluctuation-dissipation relation for open quantum systems in a nonequilibrium steady state (10 pages)	105006
Jen-Tsung Hsiang and Bei-Lok Hu	
Incompressible topological solitons (12 pages)	105007
C. Adam, C. Naya, K. Oles, T. Romanczukiewicz, J. Sanchez-Guillen, and A. Wereszczynski	
Matter-gravity coupling for fuzzy geometry and the Landau-Hall problem (11 pages)	105008
V. P. Nair	
Effective field theory for acoustic and pseudoacoustic phonons in solids (9 pages)	105009
Angelo Esposito, Emma Geoffray, and Tom Melia	
Revisiting modular symmetry in magnetized torus and orbifold compactifications (16 pages)	105010
Shota Kikuchi, Tatsuo Kobayashi, Shintaro Takada, Takuya H. Tatsuishi, and Hikaru Uchida	
Shift symmetries, soft limits, and the double copy beyond leading order (19 pages)	105011
Mariana Carrillo González, Riccardo Penco, and Mark Trodden	
Four-loop singularities of the massless fermion propagator in quenched three-dimensional QED (9 pages)	105012
A. F. Pikelner, V. P. Gusynin, A. V. Kotikov, and S. Teber	
Confluent conformal blocks and the Teukolsky master equation (16 pages)	105013
Bruno Carneiro da Cunha and João Paulo Cavalcante	
Electromagnetic field correlators and the Casimir effect for planar boundaries in AdS spacetime with application in braneworlds (24 pages)	105014
A. A. Saharian, A. S. Kotanjyan, and H. G. Sargsyan	
Soft factors from classical scattering on the Reissner-Nordström spacetime (30 pages)	105015
Karan Fernandes and Arpita Mitra	
Uniformly accelerated classical sources as limits of Unruh-DeWitt detectors (11 pages)	105016
Gabriel Cozzella, Stephen A. Fulling, André G. S. Landulfo, and George E. A. Matsas	
λ -point anomaly in view of the seven-loop hypergeometric resummation for the critical exponent ν of the $O(2)$ ϕ^4 model (6 pages)	105017
Abouzeid M. Shalaby	

(Continued)



Topological structure of a Nambu monopole in two-Higgs-doublet models: Fiber bundle, Dirac's quantization, and a dyon (21 pages)	105018
Minoru Eto, Yu Hamada, and Muneto Nitta	
Phases of unitary matrix models and lattice QCD ₂ (10 pages)	105019
Jorge G. Russo	
Dirac oscillator in a spinning cosmic string spacetime in external magnetic fields: Investigation of the energy spectrum and the connection with condensed matter physics (13 pages)	105020
Márcio M. Cunha, Henrique S. Dias, and Edilberto O. Silva	
Higgs-confinement phase transitions with fundamental representation matter (35 pages)	105021
Aleksy Cherman, Theodore Jacobson, Srimoyee Sen, and Laurence G. Yaffe	
Upper bound on cross sections inside black holes and complexity growth rate (12 pages)	106001
Run-Qiu Yang	
Bekenstein bound from the Pauli principle (10 pages)	106002
G. Acquaviva, A. Iorio, and L. Smaldone	
Numerical analysis of spin foam dynamics and the flatness problem (12 pages)	106003
Pietro Donà, Francesco Gozzini, and Giorgio Sarno	
Correlation functions of composite Ramond fields in deformed D1-D5 orbifold SCFT ₂ (18 pages)	106004
A. A. Lima, G. M. Sotkov, and M. Stanishkov	
Vilkovisky unique effective action in quantum gravity (13 pages)	106006
Breno L. Giacchini, Tibério de Paula Netto, and Ilya L. Shapiro	
Holographic mutual information and critical exponents of the strongly coupled plasma (15 pages)	106007
Hajar Ebrahim and Gol-Mohammad Nafisi	
First law of holographic complexity (14 pages)	106008
S. Sedigheh Hashemi, Ghadir Jafari, and Ali Naseh	
Three-dimensional super-Yang-Mills theory on the lattice and dual black branes (11 pages)	106009
Simon Catterall, Joel Giedt, Raghav G. Jha, David Schaich, and Toby Wiseman	
Operators of quantum-reduced loop gravity from the perspective of full loop quantum gravity (20 pages)	106010
Ilkka Mäkinen	
Geometric approach to 3D interfaces at strong coupling (36 pages)	106011
Markus Dierigl, Jonathan J. Heckman, Thomas B. Rochais, and Ethan Torres	
Geometric unification of Higgs bundle vacua (34 pages)	106012
Mirjam Cvetič, Jonathan J. Heckman, Thomas B. Rochais, Ethan Torres, and Gianluca Zoccarato	
Rotating black holes in AdS spacetime, extremality, and chaos (23 pages)	106013
Avik Banerjee, Arnab Kundu, and Rohan R. Poojary	
Effective LQC model for $k = +1$ isotropic cosmologies from spatial discretizations (14 pages)	106014
Klaus Liegener and Stefan Andreas Weigl	
$\mathcal{N} = 4$ super-Schwarzian derivative via nonlinear realizations (6 pages)	106015
Anton Galajinsky and Sergey Krivonos	
Kaluza-Klein spectrometry from exceptional field theory (29 pages)	106016
Emanuel Malek and Henning Samtleben	
New chiral gravity (8 pages)	106017
Luca Ciambelli, Stéphane Detournay, and Antoine Somerhausen	
Light scalar modes from holographic deformations (8 pages)	106018
Yusuf Buyukdag	
Unitarity from a smooth horizon? (14 pages)	106019
Raphael Bousso and Marija Tomašević	
Out of equilibrium chiral vortical effect in holography (17 pages)	106020
Sergio Morales-Tejera and Karl Landsteiner	
Gravity-induced entanglement in optomechanical systems (12 pages)	106021
Akira Matsumura and Kazuhiro Yamamoto	
Nonintegrability of $L^{a,b,c}$ quiver gauge theories (9 pages)	106022
Konstantinos S. Rigatos	

(Continued)



CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 102, NUMBER 10

D15 NOVEMBER 2020

Loop quantum gravity, signature change, and the no-boundary proposal (<i>13 pages</i>)	106023
Martin Bojowald and Suddhasattwa Brahma	
Effective loop quantum gravity framework for vacuum spherically symmetric spacetimes (<i>15 pages</i>)	106024
Jarod George Kelly, Robert Santacruz, and Edward Wilson-Ewing	
Conformal primary basis for Dirac spinors (<i>12 pages</i>)	106025
Lorenzo Iacobacci and Wolfgang Mück	

COMMENTS

Comment on “Brans-Dicke scalar field cosmological model in Lyra’s geometry” (<i>5 pages</i>)	108301
Anil Kumar Yadav	
Reply to “Comment on ‘Brans-Dicke scalar field cosmological model in Lyra’s geometry’ ” (<i>7 pages</i>)	108302
Dinesh Chandra Maurya and Rashid Zia	

ERRATA

Publisher’s Note: Plethora of relativistic charged spheres: The full spectrum of Guilfoyle’s static, electrically charged spherical solutions [Phys. Rev. D 95 , 104040 (2017)] (<i>1 pages</i>)	109901
José P. S. Lemos and Vilson T. Zanchin	
Publisher’s Note: Detectable MeV neutrinos from black hole neutrino-dominated accretion flows [Phys. Rev. D 93 , 123004 (2016)] (<i>1 pages</i>)	109902
Tong Liu, Bing Zhang, Ye Li, Ren-Yi Ma, and Li Xue	
Erratum: Baryonic effects on CMB lensing and neutrino mass constraints [Phys. Rev. D 101 , 063534 (2020)] (<i>3 pages</i>)	109903
Eegene Chung, Simon Foreman, and Alexander van Engelen	



This paper was highlighted in the APS publication *Physics* (physics.aps.org).

By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. D **90**, 020001 (2014).