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 106, NUMBER 12 *CONTENTS* D15 DECEMBER 2022

The Table of Contents is a total listing of Parts A, B and C.
Part A consists of articles 121301–123517, Part B articles 123518–124043, and Part C articles 124044–129902(E)

PART A

LETTERS

Axion effects in the stability of hybrid stars *(6 pages)* L121301
Bruno S. Lopes, Ricardo L. S. Farias, Veronica Dexheimer, Aritra Bandyopadhyay, and Rudnei O. Ramos

Parasitic black holes: The swallowing of a fuzzy dark matter soliton *(7 pages)* L121302
Vitor Cardoso, Taishi Ikeda, Rodrigo Vicente, and Miguel Zilhão

Can general relativity play a role in galactic dynamics? *(7 pages)* L121501
Davide Astesiano and Matteo Luca Ruggiero

Stationary black holes and stars in the Brans-Dicke theory with $\Lambda > 0$ revisited *(6 pages)* L121502
Md Sabir Ali, Sourav Bhattacharya, and Shagun Kaushal

Anyonic spin-Hall effect on the black hole horizon *(6 pages)* L121503
L. Marsot, P.-M. Zhang, and P. A. Horvathy

New recursion relations for tree-level correlators in anti–de Sitter spacetime *(9 pages)* L121701
Connor Armstrong, Humberto Gomez, Renann Lipinski Jusinskas, Arthur Lipstein, and Jiajie Mei

Extending the nonrelativistic string AdS coset *(5 pages)* L121901
Andrea Fontanella and Juan Miguel Nieto García

Probing QCD critical point and induced gravitational wave by black hole physics *(8 pages)* L121902
Rong-Gen Cai, Song He, Li Li, and Yuan-Xu Wang

Higher derivative corrections and AdS_5 black holes *(7 pages)* L121903
Nikolay Bobev, Vasil Dimitrov, Valentin Reys, and Annelien Vekemans

ARTICLES

Efficient gravitational wave template bank generation with differentiable waveforms *(16 pages)* 122001
Adam Coogan, Thomas D. P. Edwards, Horng Sheng Chia, Richard N. George, Katherine Freese, Cody Messick, Christian N. Setzer, Christoph Weniger, and Aaron Zimmerman

Deep learning model based on a bidirectional gated recurrent unit for the detection of gravitational wave signals *(21 pages)* 122002
Yuewei Zhang, Haiguang Xu, Meilin Liu, Cheng Liu, Yuanyuan Zhao, and Jie Zhu

Determining the bubble nucleation efficiency of low-energy nuclear recoils in superheated C_3F_8 dark matter detectors *(18 pages)* 122003
B. Ali *et al.* (PICO Collaboration)

Self-calibration of LHAASO-KM2A electromagnetic particle detectors using single particles within extensive air showers *(15 pages)* 122004
F. Aharonian *et al.* (LHAASO Collaboration)

(Continued)

2470-0010(20221215)106:12*1;1-4

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**, 00001 (2014).

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 106, NUMBER 12** **D15 DECEMBER 2022**

Systematic errors due to quasiuniversal relations in binary neutron stars and their correction for unbiased model selection *(19 pages)* 123001
Rahul Kashyap, Arnab Dhani, and Bangalore Sathyaprakash

Universal relations for neutron star f-mode and g-mode oscillations *(23 pages)* 123002
Tianqi Zhao and James M. Lattimer

First gravitational-wave search for intermediate-mass black hole mergers with higher-order harmonics *(15 pages)* 123003
Koustav Chandra, Juan Calderón Bustillo, Archana Pai, and I. W. Harry

Comprehensive modulation potential for the solar modulation of Galactic cosmic rays *(11 pages)* 123004
Xiaojian Song, Xi Luo, Marius S. Potgieter, and Ming Zhang

Proton synchrotron, an explanation for possible extended VHE gamma-ray activity of TXS 0506 + 056 in 2017 *(6 pages)* 123005
Sunanda, Reetanjali Moharana, and Pratik Majumdar

Role of non-Gaussian quantum fluctuations in neutrino entanglement *(16 pages)* 123006
Denis Lacroix, A. B. Balantekin, Michael J. Cervia, Amol V. Patwardhan, and Pooja Siwach

Probing high-energy solar axion flux with a large scintillation neutrino detector *(15 pages)* 123007
Giuseppe Lucente, Newton Nath, Francesco Capozzi, Maurizio Giannotti, and Alessandro Mirizzi

Rocks, water, and noble liquids: Unfolding the flavor contents of supernova neutrinos *(14 pages)* 123008
Sebastian Baum, Francesco Capozzi, and Shunsaku Horiuchi

Intrinsic Fano factor of nuclear recoils for dark matter searches *(10 pages)* 123009
M. Matheny, A. Roberts, A. Srinivasan, and A. N. Villano

Uncovering a hidden black hole binary from secular eccentricity variations of a tertiary star *(9 pages)* 123010
Bin Liu, Daniel J. D'Orazio, Alejandro Vigna-Gómez, and Johan Samsing

Validating continuous gravitational-wave candidates from a semicoherent search using Doppler modulation and an effective point spread function *(24 pages)* 123011
Dana Jones, Ling Sun, Julian Carlin, Liam Dunn, Meg Millhouse, Hannah Middleton, Patrick Meyers, Patrick Clearwater, Deeksha Beniwal, Lucy Strang, Andrés Vargas, and Andrew Melatos

Diffuse supernova neutrino background in the standard and double collapse models *(10 pages)* 123012
Alexander Libanov and Andrey Sharofeev

Effects of energy-dependent scatterings on fast neutrino flavor conversions *(12 pages)* 123013
Chinami Kato and Hiroki Nagakura

Constraining parameters of low mass merging compact binary systems with Einstein Telescope alone *(22 pages)* 123014
Neha Singh and Tomasz Bulik

Removing degeneracy and multimodality in gravitational wave source parameters *(17 pages)* 123015
Javier Roulet, Seth Olsen, Jonathan Mushkin, Tousif Islam, Tejaswi Venumadhav, Barak Zackay, and Matias Zaldarriaga

Ultrahigh energy neutrinos from high-redshift electromagnetic cascades *(9 pages)* 123016
AmirFarzan Esmaeili, Antonio Capanema, Arman Esmaili, and Pasquale Dario Serpico

Features of the gamma-ray pulsar halo HESS J1831 − 098 *(9 pages)* 123017
Kun Fang, Shao-Qiang Xi, Li-Zhuo Bao, Xiao-Jun Bi, and En-Sheng Chen

Crossing the dark matter soliton core: A possible reversed orbital precession *(5 pages)* 123018
Man Ho Chan and Chak Man Lee

Betelgeuse constraints on coupling between axionlike particles and electrons *(9 pages)* 123019
Mengjiao Xiao, Pierluca Carenza, Maurizio Giannotti, Alessandro Mirizzi, Kerstin M. Perez, Oscar Straniero, and Brian W. Grefenstette

Search for primordial black hole dark matter with x-ray spectroscopic and imaging satellite experiments and prospects for future satellite missions *(11 pages)* 123020
Denys Malyshev, Emmanuel Moulin, and Andrea Santangelo

Indirect detection of low-mass dark matter through the π^0 and η windows *(8 pages)* 123021
J. G. Christy, Jason Kumar, and Arvind Rajaraman

Universal relations for rotating boson stars *(12 pages)* 123022
Christoph Adam, Jorge Castelo, Alberto García Martín-Caro, Miguel Huidobro, Ricardo Vázquez, and Andrzej Wereszczynski

(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**, 00001 (2014).

PHYSICAL REVIEW D THIRD SERIES, VOLUME 106, NUMBER 12 D15 DECEMBER 2022

Revisiting stellar orbits and the Sgr A* quadrupole moment *(12 pages)* 123023
Yael Alush and Nicholas C. Stone

Directed search for continuous gravitational waves from the possible kilonova remnant G4.8 + 6.2 *(7 pages)* 123024
Yu Liu and Yuan-Chuan Zou

Escape of cosmic rays from perpendicular shocks in the circumstellar magnetic field *(20 pages)* 123025
Shoma F. Kamijima and Yutaka Ohira

Warm dark matter constraints using Milky Way satellite observations and subhalo evolution modeling *(12 pages)* 123026
Ariane Dekker, Shin'ichiro Ando, Camila A. Correa, and Kenny C. Y. Ng

Tidal Love numbers of novel and admixed celestial objects *(10 pages)* 123027
Michael Collier, Djuna Croon, and Rebecca K. Leane

Approaches to composition independent energy reconstruction of cosmic rays based on the LHAASO-KM2A detector *(9 pages)* 123028
Hengying Zhang, Huihai He, and Cunfeng Feng

Signatures of anisotropic diffusion around PeVatrons in 100 TeV gamma-ray data *(7 pages)* 123029
G. Giacinti, T. Abounnasr, A. Neronov, and D. Semikoz

Resonant production of light sterile neutrinos in compact binary merger remnants *(16 pages)* 123030
Garðar Sigurðarson, Irene Tamborra, and Meng-Ru Wu

Probing the formation of double neutron star binaries around 1 mHz with LISA *(10 pages)* 123031
Lucy O. McNeill and Naoki Seto

Investigating the effect of Milky Way dwarf spheroidal galaxies extension on dark matter searches with Fermi-LAT data *(15 pages)* 123032
Mattia Di Mauro, Martin Stref, and Francesca Calore

Anisotropic diffusion cannot explain TeV halo observations *(12 pages)* 123033
Pedro De La Torre Luque, Ottavio Fornieri, and Tim Linden

Supernova neutrinos as a precise probe of nuclear neutron skin *(7 pages)* 123034
Xu-Run Huang and Lie-Wen Chen

Extracting stellar emissivity via a machine learning analysis of MSX and LAMOST catalog data *(13 pages)* 123035
Chuanxin Zhang, Tianjiao Li, Peng Jin, Yuan Yuan, Xiaoping Ouyang, Fabio Marchesoni, and Jiping Huang

Causal, stable first-order viscous relativistic hydrodynamics with ideal gas microphysics *(22 pages)* 123036
Alex Pandya, Elias R. Most, and Frans Pretorius

Impact of rotation on the multimessenger signatures of a hadron-quark phase transition in core-collapse supernovae *(15 pages)* 123037
Shuai Zha and Evan O'Connor

Cosmological constraints on the multiscalar field dark matter model *(23 pages)* 123501
L. O. Téllez-Tovar, Tonatiuh Matos, and J. Alberto Vázquez

Dark Energy Survey Year 3 results: Measurement of the baryon acoustic oscillations with three-dimensional clustering *(21 pages)* 123502
K. C. Chan *et al.* (DES Collaboration)

Brownian axionlike particles *(24 pages)* 123503
Shuyang Cao and Daniel Boyanovsky

Perturbation theory of large scale structure in the ΛCDM Universe: Exact time evolution and the two-loop power spectrum *(30 pages)* 123504
Matteo Fasiello, Tomohiro Fujita, and Zvonimir Vlah

White hole cosmology and Hawking radiation from quantum cosmological perturbations *(14 pages)* 123505
Hassan Firouzjahi and Alireza Talebian

Effective bias expansion for 21-cm cosmology in redshift space *(26 pages)* 123506
Wenzer Qin, Katelin Schutz, Aaron Smith, Enrico Garaldi, Rahul Kannan, Tracy R. Slatyer, and Mark Vogelsberger

Einselection, equilibrium, and cosmology *(19 pages)* 123507
Andreas Albrecht, Rose Baunach, and Andrew Arrasmith

Impact of radiation from primordial black holes on the 21-cm angular-power spectrum in the dark ages *(8 pages)* 123508
Yupeng Yang

(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**, 00001 (2014).

PHYSICAL REVIEW D THIRD SERIES, VOLUME 106, NUMBER 12 D15 DECEMBER 2022

Searching for dilaton fields in the Lyman-α forest *(22 pages)* 123509
Louis Hamaide, Hendrik Müller, and David J. E. Marsh

Modeling intrinsic galaxy alignment in the MICE simulation *(36 pages)* 123510
Kai Hoffmann, Lucas F. Secco, Jonathan Blazek, Martin Crocce, Pau Tallada-Crespí, Simon Samuroff, Judit Prat, Jorge Carretero, Pablo Fosalba, Enrique Gaztañaga, and Francisco J. Castander (DES Collaboration)

Probing primordial black holes with anisotropies in stochastic gravitational-wave background *(9 pages)* 123511
Sai Wang, Valeri Vardanyan, and Kazunori Kohri

Unveiling cosmological information on small scales with line intensity mapping *(10 pages)* 123512
Sarah Libanore, Caner Ünal, Debanjan Sarkar, and Ely D. Kovetz

Gravitational lensing in a universe with matter and a cosmological constant *(7 pages)* 123513
Pedro Bessa and Oliver F. Piattella

Spatial correlations of dark energy from quantum fluctuations during inflation *(49 pages)* 123514
Enis Belgacem and Tomislav Prokopec

Cosmic strings from pure Yang–Mills theory *(27 pages)* 123515
Masaki Yamada and Kazuya Yonekura

Self-similar cosmological solutions in symmetric teleparallel theory: Friedmann-Lemaître-Robertson-Walker spacetimes *(12 pages)* 123516
N. Dimakis, M. Roumeliotis, A. Paliathanasis, Pantelis S. Apostolopoulos, and T. Christodoulakis

Constraining the galaxy-halo connection of infrared-selected *unWISE* galaxies with galaxy clustering and galaxy-CMB lensing power spectra *(27 pages)* 123517
Aleksandra Kusiak, Boris Bolliet, Alex Krolewski, and J. Colin Hill

PART B

Lower bound on the cosmological constant from the classicality of the early Universe *(10 pages)* 123518
Niayesh Afshordi and João Magueijo

Primordial black hole dark matter from inflation: The reverse engineering approach *(24 pages)* 123519
Gabriele Franciolini and Alfredo Urbano

Magnetogenesis in Higgs-Starobinsky inflation *(21 pages)* 123520
R. Durrer, O. Sobol, and S. Vilchinskii

Evaluating Lyman-α constraints for general dark-matter velocity distributions: Multiple scales and cautionary tales *(21 pages)* 123521
Keith R. Dienes, Fei Huang, Jeff Kost, Brooks Thomas, and Hai-Bo Yu

Second-order stochastic theory for self-interacting scalar fields in de Sitter spacetime *(18 pages)* 123522
Archie Cable and Arttu Rajantie

Can high-redshift Hubble diagrams rule out the standard model of cosmology in the context of cosmography? *(17 pages)* 123523
S. Pourojaghi, N. F. Zabihi, and M. Malekjani

Tilted spatially nonflat inflation *(15 pages)* 123524
Bharat Ratra

Squeezing $f_{\rm NL}$ out of the matter bispectrum with consistency relations *(17 pages)* 123525
Samuel Goldstein, Angelo Esposito, Oliver H. E. Philcox, Lam Hui, J. Colin Hill, Roman Scoccimarro, and Maximilian H. Abitbol

From inflation to black hole mergers and back again: Gravitational-wave data-driven constraints on inflationary scenarios with a first-principle model of primordial black holes across the QCD epoch *(40 pages)* 123526
Gabriele Franciolini, Ilia Musco, Paolo Pani, and Alfredo Urbano

Numerical study of the Schwinger effect in axion inflation *(20 pages)* 123527
Yann Cado and Mariano Quirós

Inflation with stochastic boundary *(19 pages)* 123528
Amin Nassiri-Rad, Kosar Asadi, and Hassan Firouzjahi

Simultaneous inference of neutron star equation of state and the Hubble constant with a population of merging neutron stars *(13 pages)* 123529
Tathagata Ghosh, Bhaskar Biswas, and Sukanta Bose

(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**, 00001 (2014).

PHYSICAL REVIEW D THIRD SERIES, VOLUME 106, NUMBER 12 D15 DECEMBER 2022

Issues in Palatini $\mathcal{R}^2$ inflation: Bounds on the reheating temperature *(26 pages)* 123530
A. B. Lahanas

Constraining scalarization in scalar-Gauss-Bonnet gravity through binary pulsars *(14 pages)* 124001
Victor I. Danchev, Daniela D. Doneva, and Stoytcho S. Yazadjiev

I-Love-Q relations in Hořava-Lifshitz gravity *(19 pages)* 124002
Siddarth Ajith, Kent Yagi, and Nicolás Yunes

Echoes from braneworld wormholes *(21 pages)* 124003
Shauvik Biswas, Mostafizur Rahman, and Sumanta Chakraborty

Nonoscillatory gravitational quasinormal modes and telling tails for Schwarzschild–de Sitter black holes *(8 pages)* 124004
R. A. Konoplya and A. Zhidenko

Thermodynamic stability of quasibald asymptotically flat black holes *(9 pages)* 124005
Nuno M. Santos, Carlos A. R. Herdeiro, and Eugen Radu

Classical mass inflation versus semiclassical inner horizon inflation *(17 pages)* 124006
Carlos Barceló, Valentin Boyanov, Raúl Carballo-Rubio, and Luis J. Garay

Gauss-Bonnet black holes in $(2+1)$ dimensions: Perturbative aspects and entropy features *(15 pages)* 124007
B. Cuadros-Melgar, R. D. B. Fontana, and Jeferson de Oliveira

High accuracy post-Newtonian and numerical relativity comparisons involving higher modes for eccentric binary black holes and a dominant mode eccentric inspiral-merger-ringdown model *(19 pages)* 124008
Abhishek Chattaraj, Tamal RoyChowdhury, Divyajyoti, Chandra Kant Mishra, and Anshu Gupta

Quasinormal modes from bound states: The numerical approach *(14 pages)* 124009
Sebastian H. Völkel

Maximal masses of white dwarfs for polytropes in R^2 gravity and theoretical constraints *(11 pages)* 124010
A. V. Astashenok, S. D. Odintsov, and V. K. Oikonomou

Impact of the wavelike nature of Proca stars on their gravitational-wave emission *(16 pages)* 124011
Nicolas Sanchis-Gual, Juan Calderón Bustillo, Carlos Herdeiro, Eugen Radu, José A. Font, Samson H. W. Leong, and Alejandro Torres-Forné

Constraining $F(R)$ bouncing cosmologies through primordial black holes *(18 pages)* 124012
Shreya Banerjee, Theodoros Papanikolaou, and Emmanuel N. Saridakis

Metamaterial analog of a black hole shadow: An exact ray-tracing simulation based on the spacetime index of refraction *(7 pages)* 124013
M. Nouri-Zonoz, A. Parvizi, and H. Forghani-Ramandy

Extended Tolman III and VII solutions in $f(\mathcal{R}, T)$ gravity: Models for neutron stars and supermassive stars *(25 pages)* 124014
Thomas D. Pappas, Camilo Posada, and Zdeněk Stuchlík

Extension of unimodular gravity and the cosmological constant *(17 pages)* 124015
F. R. Klinkhamer

Implications of the singularity theorem for the size of a nonsingular universe *(12 pages)* 124016
Kimihiro Nomura and Daisuke Yoshida

Constraining the extra polarization modes of gravitational waves with double white dwarfs *(14 pages)* 124017
Ning Xie (谢宁), Jian-dong Zhang (张建东), Shun-Jia Huang (黄顺佳), Yi-Ming Hu (胡一鸣), and Jianwei Mei (梅健伟)

Spin contributions to the gravitational-waveform modes for spin-aligned binaries at the 3.5PN order *(28 pages)* 124018
Quentin Henry, Sylvain Marsat, and Mohammed Khalil

Polarizations of gravitational waves in the bumblebee gravity model *(16 pages)* 124019
Dicong Liang, Rui Xu, Xuchen Lu, and Lijing Shao

Resonant dynamics and the instability of the box Minkowski model *(22 pages)* 124020
Joël Kurzweil and Maciej Maliborski

Solving nonlinear Klein-Gordon equations on unbounded domains via the finite element method *(27 pages)* 124021
Hugo Lévy, Joël Bergé, and Jean-Philippe Uzan

Example of cross-polarized standing gravitational waves *(9 pages)* 124022
Krzysztof Głód, Szymon Sikora, and Sebastian J. Szybka

Anisotropic two-fluid stellar objects in general relativity *(26 pages)* 124023
Nolene F. Naidu, Sante Carloni, and Peter Dunsby

(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**, 00001 (2014).

PHYSICAL REVIEW D THIRD SERIES, VOLUME 106, NUMBER 12 D15 DECEMBER 2022

Hidden conformal symmetry and entropy of Schwarzschild–de Sitter spacetime *(7 pages)* 124024
D. Guerrero-Domínguez and P. Talavera

Deflection of charged signals in a dipole magnetic field in a Schwarzschild background using the Gauss-Bonnet theorem *(15 pages)* 124025
Zonghai Li, Wei Wang, and Junji Jia

Scattering of gravitational waves off spinning compact objects with an effective worldline theory *(21 pages)* 124026
M. V. S. Saketh and Justin Vines

Detecting the stochastic gravitational wave background with the TianQin detector *(15 pages)* 124027
Jun Cheng (程俊), En-Kun Li (李恩坤), Yi-Ming Hu (胡一鸣), Zheng-Cheng Liang (梁正程), Jian-dong Zhang (张建东), and Jianwei Mei (梅健伟)

Extreme-mass-ratio burst detection with TianQin *(11 pages)* 124028
Hui-Min Fan, Shiyan Zhong, Zheng-Cheng Liang, Zheng Wu, Jian-dong Zhang, and Yi-Ming Hu

Black lens in a bubble of nothing *(8 pages)* 124029
Shinya Tomizawa and Ryotaku Suzuki

Scattering angles in Kerr metrics *(14 pages)* 124030
Poul H. Damgaard, Jitze Hoogeveen, Andres Luna, and Justin Vines

Wave equations in conformally separable, accreting, rotating black holes *(28 pages)* 124031
Andrew J. S. Hamilton and Tyler McMaken

Hydrodynamic approach to the Synge gas *(12 pages)* 124032
Salvador Mengual, Joan Josep Ferrando, and Juan Antonio Sáez

Noether's second theorem in teleparallel gravity *(8 pages)* 124033
Rafael Ferraro

Dark matter effect on black hole accretion disks *(21 pages)* 124034
D. Pugliese and Z. Stuchlík

Quantum clocks, gravitational time dilation, and quantum interference *(9 pages)* 124035
Takeshi Chiba and Shunichiro Kinoshita

Constraining modifications of black hole perturbation potentials near the light ring with quasinormal modes *(12 pages)* 124036
Sebastian H. Völkel, Nicola Franchini, Enrico Barausse, and Emanuele Berti

Simulating gravitational waves passing through the spacetime of a black hole *(24 pages)* 124037
Jian-hua He and Zhenyu Wu

Relativistic effects on the Schrödinger-Newton equation *(16 pages)* 124038
David Brizuela and Albert Duran-Cabacés

Two boson stars in equilibrium *(15 pages)* 124039
P. Cunha, C. Herdeiro, E. Radu, and Ya. Shnir

Eccentric binary black holes: Comparing numerical relativity and small mass-ratio perturbation theory *(29 pages)* 124040
Antoni Ramos-Buades, Maarten van de Meent, Harald P. Pfeiffer, Hannes R. Rüter, Mark A. Scheel, Michael Boyle, and Lawrence E. Kidder

Implementation of advanced Riemann solvers in a neutrino-radiation magnetohydrodynamics code in numerical relativity and its application to a binary neutron star merger *(41 pages)* 124041
Kenta Kiuchi, Loren E. Held, Yuichiro Sekiguchi, and Masaru Shibata

Energy extraction in electrostatic extreme binary black holes *(14 pages)* 124042
A. Baez, Nora Breton, and I. Cabrera-Munguia

Colliding plane fronted waves and a gravitoelectromagnetic searchlight *(7 pages)* 124043
Peter A. Hogan and Dirk Puetzfeld

PART C

Generation of gravitational waves in dynamical Chern-Simons gravity *(9 pages)* 124044
Zhi-Zhang Peng, Zhen-Min Zeng, Chengjie Fu, and Zong-Kuan Guo

Multipole moments on the common horizon in a binary-black-hole simulation *(23 pages)* 124045
Yitian Chen, Prayush Kumar, Neev Khera, Nils Deppe, Arnab Dhani, Michael Boyle, Matthew Giesler, Lawrence E. Kidder, Harald P. Pfeiffer, Mark A. Scheel, and Saul A. Teukolsky

(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**, 00001 (2014).

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 106, NUMBER 12** **D15 DECEMBER 2022**

Nonlocal parameter degeneracy in the intrinsic space of gravitational-wave signals from extreme-mass-ratio inspirals *(39 pages)* 124046
Alvin J. K. Chua and Curt J. Cutler

Using physics-informed neural networks to compute quasinormal modes *(23 pages)* 124047
Alan S Cornell, Anele Ncube, and Gerhard Harmsen

Matter and forces near physical black holes *(12 pages)* 124048
Pravin K. Dahal, Ioannis Soranidis, and Daniel R. Terno

Radiation-reaction and angular momentum loss at the second post-Minkowskian order *(20 pages)* 124049
Donato Bini and Thibault Damour

Extracting energy via magnetic reconnection from Kerr–de Sitter black holes *(15 pages)* 124050
Chao-Hui Wang, Cheng-Qun Pang, and Shao-Wen Wei

Alleviating H_0 tension in Horndeski gravity *(10 pages)* 124051
Maria Petronikolou, Spyros Basilakos, and Emmanuel N. Saridakis

Bounce corrections to gravitational lensing, quasinormal spectral stability, and gray-body factors of Reissner-Nordström black holes *(14 pages)* 124052
Yang Guo, Chen Lan, and Yan-Gang Miao

Forecasting constraints on deviations from general relativity in $f(Q)$ gravity with standard sirens *(11 pages)* 124053
Rocco D'Agostino and Rafael C. Nunes

Thermal false vacuum decay around black holes *(7 pages)* 125001
Vadim Briaud, Andrey Shkerin, and Sergey Sibiryakov

Consistency between causality and complementarity guaranteed by the Robertson inequality in quantum field theory *(12 pages)* 125002
Yuuki Sugiyama, Akira Matsumura, and Kazuhiro Yamamoto

Multikink scattering in the ϕ^6 model revisited *(18 pages)* 125003
C. Adam, P. Dorey, A. García Martín-Caro, M. Huidobro, K. Oles, T. Romanczukiewicz, Y. Shnir, and A. Wereszczynski

Restoration of a spontaneously broken symmetry in a Euclidean quantum $\lambda\varphi^4_{d+1}$ model with quenched disorder *(15 pages)* 125004
G. O. Heymans, N. F. Svaiter, and G. Krein

Improved Noether's theorem for spacetime symmetries *(12 pages)* 125005
Ioanna Kourkoulou, Alberto Nicolis, and Guanhao Sun

Unruh DeWitt probe of late time revival of quantum correlations in Friedmann spacetimes *(24 pages)* 125006
Ankit Dhanuka and Kinjalk Lochan

CT or *P* problem and symmetric gapped fermion solution *(27 pages)* 125007
Juven Wang

Maxwell theory of fractons *(16 pages)* 125008
Erica Bertolini and Nicola Maggiore

Finite temperature charge and current densities around a cosmic string in AdS spacetime with compact dimension *(21 pages)* 125009
E. R. Bezerra de Mello, W. Oliveira dos Santos, and A. A. Saharian

Spontaneous non-Hermiticity in the $(2+1)$-dimensional Thirring model *(22 pages)* 125010
M. M. Gubaeva, T. G. Khunjua, K. G. Klimenko, and R. N. Zhokhov

Two-point function of a quantum scalar field in the interior region of a Kerr black hole *(37 pages)* 125011
Noa Zilberman, Marc Casals, Amos Ori, and Adrian C. Ottewill

Noether's theorems and the energy-momentum tensor in quantum gauge theories *(9 pages)* 125012
Adam Freese

Quantization of a charged scalar field on a charged black hole background *(47 pages)* 125013
Visakan Balakumar, Rafael P. Bernar, and Elizabeth Winstanley

All finite-mass Dirac monopoles *(5 pages)* 125014
Filip Blaschke and Petr Beneš

Spacelike thermal correlators are almost time independent *(5 pages)* 125015
Simon Caron-Huot and Guy D. Moore

(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**, 00001 (2014).

PHYSICAL REVIEW D THIRD SERIES, VOLUME 106, NUMBER 12 D15 DECEMBER 2022

$\mathcal{PT}$-symmetric $-g\varphi^4$ theory *(7 pages)* 125016
Wen-Yuan Ai, Carl M. Bender, and Sarben Sarkar

Scalar fields and Lifshitz black holes from Derrick's theorem evasion *(11 pages)* 125017
D. C. Moreira, F. A. Brito, and J. C. Mota-Silva

Non-Markovian Abraham-Lorenz-Dirac equation: Radiation reaction without pathology *(24 pages)* 125018
Jen-Tsung Hsiang and Bei-Lok Hu

Perturbative understanding of nonperturbative processes and quantumization versus classicalization *(15 pages)* 125019
Gia Dvali and Lukas Eisemann

Remarks on the Clauser-Horne-Shimony-Holt inequality in relativistic quantum field theory *(13 pages)* 125020
G. Peruzzo and S. P. Sorella

Null bootstrap for non-Hermitian Hamiltonians *(9 pages)* 125021
Wenliang Li

New multipartite entanglement measure and its holographic dual *(7 pages)* 126001
Abhijit Gadde, Vineeth Krishna, and Trakshu Sharma

Configuration space for quantum gravity in a locally regularized path integral *(15 pages)* 126002
Benjamin Knorr, Alessia Platania, and Marc Schiffer

Determining wave equations in holographic QCD from Wilsonian renormalization group *(7 pages)* 126003
Fei Gao and Masatoshi Yamada

Superintegrability as the hidden origin of the Nekrasov calculus *(17 pages)* 126004
A. Mironov and A. Morozov

Quantumness of gravity in harmonically trapped particles *(18 pages)* 126005
Youka Kaku, Shin'ya Maeda, Yasusada Nambu, and Yuki Osawa

Code properties of the holographic Sierpinski triangle *(6 pages)* 126006
Ning Bao and Joydeep Naskar

Thermodynamics of isolated horizons in loop quantum gravity *(8 pages)* 126007
Shupeng Song, Gaoping Long, Cong Zhang, and Xiangdong Zhang

Hexagonalization in $AdS_3 \times S^3 \times T^4$: Mirror corrections *(13 pages)* 126008
Matheus Fabri

Probing chaos by magic monotones *(26 pages)* 126009
Kanato Goto, Tomoki Nosaka, and Masahiro Nozaki

Bound on energy dependence of chaos *(4 pages)* 126010
Koji Hashimoto, Keiju Murata, Norihiro Tanahashi, and Ryota Watanabe

Boundary timelike Liouville theory: Bulk one-point and boundary two-point functions *(22 pages)* 126011
Teresa Bautista and Aditya Bawane

Holographic nonlocal rotating observables and their renormalization *(16 pages)* 126012
Vangelis Giantsos and Dimitrios Giataganas

Understanding quantum black holes from quantum reduced loop gravity *(33 pages)* 126013
Wen-Cong Gan, Geeth Ongole, Emanuele Alesci, Yang An, Fu-Wen Shu, and Anzhong Wang

Beyond quantum chaos in emergent dual holography *(15 pages)* 126014
Ki-Seok Kim

Spontaneous conformal symmetry breaking and quantum quadratic gravity *(22 pages)* 126015
Jisuke Kubo and Jeffrey Kuntz

Splitting-merging transitions in tensor-vectors systems in exact large-N limits *(16 pages)* 126016
Naoki Sasakura

Action complexity of charged black holes with higher derivative interactions *(15 pages)* 126017
Taniya Mandal, Arpita Mitra, and Gurmeet Singh Punia

Planar black holes in holographic axion gravity: Islands, Page times, and scrambling times *(13 pages)* 126018
Seyed Ali Hosseini Mansoori, Orlando Luongo, Stefano Mancini, Mirmani Mirjalali, Morteza Rafiee, and Alireza Tavanfar

Dispersion relations, knots polynomials, and the q-deformed harmonic oscillator *(10 pages)* 126019
Aninda Sinha

(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**, 00001 (2014).

PHYSICAL REVIEW D **THIRD SERIES, VOLUME 106, NUMBER 12** **D15 DECEMBER 2022**

Applicability of holography in thermodynamic equilibrium *(12 pages)* 126020
Run-Qiu Yang, Li Li, and Rong-Gen Cai

Holographic model with power-law Maxwell field for color superconductivity *(11 pages)* 126021
Cao H. Nam

From CFTs to theories with Bondi-Metzner-Sachs symmetries: Complexity and out-of-time-ordered correlators *(16 pages)* 126022
Aritra Banerjee, Arpan Bhattacharyya, Priya Drashni, and Srinidhi Pawar

Holographic entropy production in a Bjorken expanding hot and dense strongly coupled quantum fluid *(45 pages)* 126023
Romulo Rougemont and Willians Barreto

Gravitational susceptibility of QGP *(12 pages)* 126024
Alex Buchel

Generalized BMS algebra in higher even dimensions *(13 pages)* 126025
Chandramouli Chowdhury, A. H Anupam, and Arpan Kundu

Critical points of warped AdS/CFT and higher-curvature gravity *(11 pages)* 126026
Gerónimo Caselli, Gaston Giribet, and Andrés Goya

Corrections to the instanton configuration as baryon in holographic QCD *(17 pages)* 126027
Si-wen Li, Hao-qian Li, and Sen-kai Luo

Contour prescriptions in string-inspired nonlocal field theories *(28 pages)* 126028
Luca Buoninfante

ERRATA

Erratum: Lensing by a Fisher-Janis-Newman-Winicour naked singularity: Observational issues related to the existence of caustic bending in the strongly scalarized case [Phys. Rev. D **105**, 024071 (2022)] *(2 pages)* 129901
Bertrand Chauvineau

Erratum: Perturbed stellar motions around the rotating black hole in Sgr A* for a generic orientation of its spin axis [Phys. Rev. D **84**, 124001 (2011)] *(1 pages)* 129902
L. Iorio

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**, 00001 (2014).