

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

Part A consists of articles 091101–094031, Part B articles 094032–095029, and Part C articles 095030–099901(E)

PART A

LETTERS

Measurements of the absolute branching fractions of Ω^- decays and test of the $\Delta I = 1/2$ rule (9 pages)	L091101
M. Ablikim <i>et al.</i> (BESIII Collaboration)	
Probing hyperon electric dipole moments with a full angular analysis (7 pages)	L091301
Jinlin Fu, Hai-Bo Li, Jian-Peng Wang, Fu-Sheng Yu, and Jianyu Zhang	
Detecting the critical point through entanglement in the Schwinger model (8 pages)	L091501
Kazuki Ikeda, Dmitri E. Kharzeev, René Meyer, and Shuzhe Shi	
Illuminating nucleon-gluon interference via calorimetric asymmetry (6 pages)	L091502
Xiao Lin Li, Xiaohui Liu, Feng Yuan, and Hua Xing Zhu	
Resonant screening in dense and magnetized QCD matter (6 pages)	L091503
Guojun Huang, Jiaying Zhao, and Pengfei Zhuang	
Tomography of pions and protons via transverse momentum dependent distributions (7 pages)	L091504
P. C. Barry, L. Gamberg, W. Melnitchouk, E. Moffat, D. Pitonyak, A. Prokudin, and N. Sato (Jefferson Lab Angular Momentum (JAM) Collaboration)	
Hidden conformal symmetry from the lattice (7 pages)	L091505
T. Appelquist, R. C. Brower, K. K. Cushman, G. T. Fleming, A. Gasbarro, A. Hasenfratz, J. Ingoldby, X. Y. Jin, E. T. Neil, J. C. Osborn, C. Rebbi, E. Rinaldi, D. Schaich, P. Vranas, E. Weinberg, and O. Witzel (Lattice Strong Dynamics (LSD) Collaboration)	
Tribaryons with lattice QCD and one-boson exchange potentials (6 pages)	L091506
Tian-Wei Wu, Si-Qiang Luo, Ming-Zhu Liu, Li-Sheng Geng, and Xiang Liu	
Strangeness production in neutron stars (5 pages)	L091507
Gao-Chan Yong	
Novel approach for computing gradients of physical observables (6 pages)	L091508
Simone Bacchio	
Baryon asymmetry from dark matter decay in the vicinity of a phase transition (7 pages)	L091701
Debasish Borah, Arnab Dasgupta, Matthew Knauss, and Indrajit Saha	
New realization of light thermal self-interacting dark matter and detection prospects (7 pages)	L091702
Debasish Borah, Satyabrata Mahapatra, and Narendra Sahu	
Heavy QCD axion dark matter from avoided level crossing (7 pages)	L091703
David Cyncynates and Jedidiah O. Thompson	
$SU(2)_L$ triplet scalar as the origin of the 95 GeV excess? (9 pages)	L091704
Saiyad Ashanujjaman, Sumit Banik, Guglielmo Coloretti, Andreas Crivellin, Bruce Mellado, and Anza-Tshilidzi Mulaudzi	



(Continued)



2470-0010(20231101)108:9;1-J



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**, 010001 (2014).

Fireball baryogenesis from early structure formation due to Yukawa forces (8 pages)	L091705
Marcos M. Flores, Alexander Kusenko, Lauren Pearce, and Graham White	
Fingerprints of GeV scale right-handed neutrinos on inflationary gravitational waves and PTA data (7 pages)	L091706
Satyabrata Datta and Rome Samanta	

ARTICLES

Precision e^- beam polarimetry at an e^+e^- B factory using tau-pair events (20 pages)	092001
J. P. Lees <i>et al.</i> (BABAR collaboration)	
Improved measurement of the branching fractions for $J/\psi \rightarrow \gamma\pi^0$, $\gamma\eta$, and $\gamma\eta'$ (11 pages)	092002
M. Ablikim <i>et al.</i> (BESIII Collaboration)	
Precision measurements of $D_s^+ \rightarrow \eta e^+\nu_e$ and $D_s^+ \rightarrow \eta' e^+\nu_e$ (24 pages)	092003
M. Ablikim <i>et al.</i> (BESIII Collaboration)	
First measurement of the forward rapidity gap distribution in p Pb collisions at $\sqrt{s_{\text{NN}}} = 8.16$ TeV (25 pages)	092004
A. Tumasyan <i>et al.</i> (CMS Collaboration)	
New narrow resonance in the $e^+e^- \rightarrow \phi\eta$ data by the Belle collaboration (4 pages)	092005
Peter Lichard	
Search for inelastic WIMP-iodine scattering with COSINE-100 (8 pages)	092006
G. Adhikari <i>et al.</i> (COSINE-100 Collaboration)	
Search for a new pseudoscalar decaying into a pair of muons in events with a top-quark pair at $\sqrt{s} = 13$ TeV with the ATLAS detector (26 pages)	092007
G. Aad <i>et al.</i> (ATLAS Collaboration)	
Learning to isolate muons in data (11 pages)	092008
Edmund Witkowski, Benjamin Nachman, and Daniel Whiteson	
Measurements of the ν_μ and $\bar{\nu}_\mu$ -induced coherent charged pion production cross sections on ^{12}C by the T2K experiment (15 pages)	092009
K. Abe <i>et al.</i> (T2K Collaboration)	
Stochastic effects on observation of ultralight bosonic dark matter (23 pages)	092010
Hiromasa Nakatsuka, Soichiro Morisaki, Tomohiro Fujita, Jun'ya Kume, Yuta Michimura, Koji Nagano, and Ippei Obata	
Observation of the $\psi(3686)$ decays into $\Sigma^+\bar{\Sigma}^-\omega$ and $\Sigma^+\bar{\Sigma}^-\phi$ (11 pages)	092011
M. Ablikim <i>et al.</i> (BESIII Collaboration)	
Study of the process $e^+e^- \rightarrow \omega\pi^0 \rightarrow \pi^+\pi^-\pi^0\pi^0$ in the energy range 1.05–2.00 GeV with SND (14 pages)	092012
M. N. Achasov, A. Yu. Barnyakov, K. I. Beloborodov, A. V. Berdyugin, D. E. Berkaev, A. G. Bogdanchikov, A. A. Botov, V. S. Denisov, T. V. Dimova, V. P. Druzhinin, E. A. Eminov, L. B. Fomin, L. V. Kardapol'tsev, A. G. Kharlamov, I. A. Koop, A. A. Korol, D. P. Kovrizhin, A. S. Kupich, A. P. Kryukov, N. A. Melnikova, N. Yu. Muchnoy, A. E. Obrazovsky, E. V. Pakhtusova, E. A. Perevedentsev, K. V. Pugachev, Yu. A. Rogovsky, S. I. Serednyakov, Yu. M. Shatunov, D. A. Shtol, Z. K. Silagadze, I. K. Surin, M. V. Timoshenko, Yu. V. Usov, I. M. Zemlyansky, V. N. Zhabin, and V. V. Zhulanov (SND Collaboration)	
Determination of $ V_{cb} $ using $\bar{B}^0 \rightarrow D^{*+}\ell^-\bar{\nu}_\ell$ decays with Belle II (26 pages)	092013
I. Adachi <i>et al.</i> (Belle II Collaboration)	
Updated measurement of the branching fraction of $D_s^+ \rightarrow \tau^+\nu_\tau$ via $\tau^+ \rightarrow \pi^+\bar{\nu}_\tau$ (16 pages)	092014
M. Ablikim <i>et al.</i> (BESIII Collaboration)	
Fast flavor evolution in dense neutrino systems, as described in quantum field theory (9 pages)	093001
R. F. Sawyer	
Neutral current neutrino and antineutrino scattering off the polarized nucleon (10 pages)	093002
Krzysztof M. Graczyk and Beata E. Kowal	
Broadening of particle distributions in electron-, neutrino-, and antineutrino-nucleus scattering from QED interactions (16 pages)	093003
Oleksandr Tomalak and Ivan Vitev	
Tau polarization and correlated decays in neutrino experiments (22 pages)	093004
Joshua Isaacson, Stefan H"och, Frank Siebert, and Sherry Wang	

(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**, 010001 (2014).

Angular distribution of the FCNC process $B_c \rightarrow D_s^*(\rightarrow D_s\pi)\ell^+\ell^-$ (25 pages)	093005
Yu-Shuai Li and Xiang Liu	
Weak interaction corrections to muon pair production via the photon fusion at the LHC (11 pages)	093006
S. I. Godunov, E. K. Karkaryan, V. A. Novikov, A. N. Rozanov, M. I. Vysotsky, and E. V. Zhemchugov	
Short-term evolution of electron wave packets in constant crossed electromagnetic fields with radiative corrections (12 pages)	093007
I. Yu. Kostyukov, E. N. Nerush, A. A. Mironov, and A. M. Fedotov	
Semi-inclusive $b \rightarrow s\bar{\ell}\ell$ transitions at high q^2 (10 pages)	093008
Gino Isidori, Zachary Polonsky, and Arianna Tinari	
Anomalous production of massive gauge boson pairs at muon colliders (9 pages)	093009
Brad Abbott, Aram Apyan, Bianca Azartash-Namin, Veena Balakrishnan, Jeffrey Berryhill, Shih-Chieh Hsu, Sergio Jindariani, Mayuri Prabhakar Kawale, Elham E. Khoda, Ryan Parsons, Alexander Schuy, Michael Strauss, John Stupak, and Connor Waits	
Mikheyev-Smirnov-Wolfenstein matter potential at the one-loop level in the Standard Model (24 pages)	093010
Jihong Huang and Shun Zhou	
Two-body hadronic decays of Ξ_c^0 in light front approach (11 pages)	093011
Hang Liu and Chang Yang	
Heavy quarkonia in QGP medium in an arbitrary magnetic field (12 pages)	094001
Jobin Sebastian, Lata Thakur, Hiranmaya Mishra, and Najmul Haque	
Quark and gluon spin and orbital angular momentum in the proton (8 pages)	094002
Siqi Xu, Chandan Mondal, Xingbo Zhao, Yang Li, and James P. Vary (BLFQ Collaboration)	
Analytic results on the massive three-loop form factors: Quarkonic contributions (73 pages)	094003
J. Blümlein, A. De Freitas, P. Marquard, N. Rana, and C. Schneider	
Transverse Λ polarization in e^+e^- annihilations and in SIDIS processes at the EIC within TMD factorization (15 pages)	094004
Umberto D'Alesio, Leonard Gamberg, Francesco Murgia, and Marco Zaccheddu	
Spectrum of two-dimensional $su(2)$ gauge theories coupled to massless fermions in integer representations (12 pages)	094005
Rajamani Narayanan and Sruthi A. Narayanan	
Combined study of hadronic $D^+ \rightarrow K^-\pi^+\pi^+$ and $D_s^+ \rightarrow K^+K^+\pi^-$ decays by means of the analysis of semileptonic $D^+ \rightarrow K^-\pi^+\ell^+\nu_\ell$ decays (14 pages)	094006
R. Escribano, P. Masjuan, and Pablo Sanchez-Puertas	
Effect of time-varying electromagnetic field on Wiedemann-Franz law in a hot hadronic matter (19 pages)	094007
Kamaljeet Singh, Jayanta Dey, Raghunath Sahoo, and Sabyasachi Ghosh	
Possible charmed-strange molecular pentaquarks in quark delocalization color screening model (16 pages)	094008
Xuejie Liu, Yue Tan, Xiaoyun Chen, Dianying Chen, Hongxia Huang, and Jialun Ping	
Inclusive $ V_{cb} $ determination in $\overline{MS}$ mass scheme using dual-space-renormalon-subtraction method (19 pages)	094009
Yuuki Hayashi, Go Mishima, Yukinari Sumino, and Hiromasa Takaura	
✂ Flavored jets with exact anti- k_t kinematics and tests of infrared and collinear safety (35 pages)	094010
Fabrizio Caola, Radosław Grabarczyk, Maxwell L. Hutt, Gavin P. Salam, Ludovic Scyboz, and Jesse Thaler	
Excitation spectra of heavy baryons in a quark-diquark model with relativistic corrections (14 pages)	094011
S. Kinutani, H. Nagahiro, and D. Jido	
Expansion of $(2+1)$ -dimensional relativistic ideal hydrodynamic flow in heavy-ion collisions with broken longitudinal boost invariance (15 pages)	094012
M. Karimabadi, A. F. Kord, and B. Azadegan	
Dispersive analysis of the experimental data on the electromagnetic form factor of charged pions at spacelike momenta (35 pages)	094013
Silvano Simula and Ludovico Vittorio	
Evidence against a strong first-order phase transition in neutron star cores: Impact of new data (21 pages)	094014
Len Brandes, Wolfram Weise, and Norbert Kaiser	
Twist-3 contributions in semi-inclusive DIS in the target fragmentation region (10 pages)	094015
K. B. Chen, J. P. Ma, and X. B. Tong	
Renormalization group improved determination of light quark masses from Borel-Laplace sum rules (20 pages)	094016
M. S. A. Alam Khan	

(Continued)



Bottomonium dissociation in a rotating plasma (12 pages)	094017
Nelson R. F. Braga and Yan F. Ferreira	
Role of strange quarks in the D -term and cosmological constant term of the proton (7 pages)	094018
Ho-Yeon Won, Hyun-Chul Kim, and June-Young Kim	
Fully strange tetraquark states with the exotic quantum numbers $J^{PC} = 0^{+-}$ and 2^{+-} (13 pages)	094019
Hong-Zhou Xi, Yi-Wei Jiang, Hua-Xing Chen, Atsushi Hosaka, and Niu Su	
Chiral symmetry restoration in a rotating medium (15 pages)	094020
I. I. Gaspar, L. A. Hernández, and R. Zamora	
Prospecting effective Yang-Mills-Higgs models for the asymptotic confining flux tube (18 pages)	094021
David R. Junior, Luis E. Oxman, and Gustavo M. Simões	
Charming-loop contribution to $B_s \rightarrow \gamma\gamma$ decay (19 pages)	094022
Ilia Belov, Alexander Berezhnuy, and Dmitri Melikhov	
Exploring $T_{\psi\psi}$ tetraquark candidates in a coupled-channels formalism (9 pages)	094023
P. G. Ortega, D. R. Entem, and F. Fernández	
Transverse momentum dependent feed-down fractions for bottomonium production (10 pages)	094024
Jacob Boyd, Michael Strickland, and Sabin Thapa	
Nambu-Goto string in QCD: Dipole interactions, scattering, and entanglement (17 pages)	094025
Yizhuang Liu, Maciej A. Nowak, and Ismail Zahed	
Synchronization effects on rest frame energy and momentum densities in the proton (21 pages)	094026
Adam Freese and Gerald A. Miller	
Triangle singularity in the $J/\psi \rightarrow \gamma \bar{p} \Delta$ decay (7 pages)	094027
Ke Wang, Rong Li, and Bo-Chao Liu	
Higgs boson rapidity distribution in bottom annihilation at NNLL and beyond (14 pages)	094028
Goutam Das	
Entanglement renormalization of the class of continuous matrix product states (9 pages)	094029
Niloofar Vardian	
Toward a generative modeling analysis of CLAS exclusive 2π photoproduction (14 pages)	094030
T. Alghamdi, Y. Alanazi, M. Battaglieri, Ł. Bibrzycki, A. V. Golda, A. N. Hiller Blin, E. L. Isupov, Y. Li, L. Marsicano, W. Melnitchouk, V. I. Mokeev, G. Montaña, A. Pilloni, N. Sato, A. P. Szczepaniak, and T. Vittorini	
Causality and stability analysis for the minimal causal spin hydrodynamics (22 pages)	094031
Xin-Qing Xie, Dong-Lin Wang, Chen Yang, and Shi Pu	

PART B

Strong decays of low-lying D -wave Ξ_b and Ξ'_b baryons with quark-pair creation model (13 pages)	094032
Yu-Hui Zhou, Wen-Jia Wang, Li-Ye Xiao, and Xian-Hui Zhong	
Hadronic structure on the light-front. IX. Orbital-spin-isospin wave functions of baryons (24 pages)	094033
Nicholas Miesch, Edward Shuryak, and Ismail Zahed	
Leading Λ production in future electron-proton colliders (10 pages)	094034
F. Carvalho, K. P. Khemchandani, V. P. Gonçalves, F. S. Navarra, D. Spiering, and A. Martínez Torres	
Novel $T_{c\bar{s}}$ and $T_{\bar{c}s}$ candidates in a constituent-quark-model-based meson-meson coupled-channels calculation (13 pages)	094035
P. G. Ortega, D. R. Entem, F. Fernández, and J. Segovia	
Higher strangeonium decays into light flavor baryon pairs like $\Lambda\bar{\Lambda}$, $\Sigma\bar{\Sigma}$, or $\Xi\bar{\Xi}$ (13 pages)	094036
Zi-Yue Bai, Qin-Song Zhou, and Xiang Liu	
Gravitational form factors of the Δ baryon via QCD sum rules (17 pages)	094037
Z. Dehghan, K. Azizi, and U. Özdem	
Radiative decays of the heavy-quark-spin molecular partner of T_{cc}^+ (19 pages)	094038
Zhao-Sai Jia, Zhen-Hua Zhang, Gang Li, and Feng-Kun Guo	

(Continued)



Lyapunov exponents in a Sachdev-Ye-Kitaev-type model with population imbalance in the conformal limit and beyond (11 pages)	094039
A. S. Shankar, M. Fremling, S. Plugge, and L. Fritz	
Parton distributions of intrinsic charm in two-dimensional QCD (15 pages)	094040
Siwei Hu, Yu Jia, Zhewen Mo, Xiaonu Xiong, and Mingliang Zhu	
Novel relations for twist-3 tensor-polarized fragmentation functions in spin-1 hadrons (10 pages)	094041
Qin-Tao Song	
Chiral symmetry breaking and phase diagram of dual chiral density wave in a rotating quark matter (17 pages)	094042
S. M. A. Tabatabaee Mehr	
Pion gravitational form factors at large momentum transfer in the instant-form relativistic impulse approximation approach (12 pages)	094043
A. F. Krutov and V. E. Troitsky	
Electroweak mass difference of mesons (6 pages)	094044
Antonio Pich, Arthur Platschorre, and Mario Reig	
Investigating excited Ω_c states from pentaquark perspective (14 pages)	094045
Ye Yan, Xiaohuang Hu, Hongxia Huang, and Jialun Ping	
Production of charmonium $\chi_{cJ}(2P)$ plus one ω meson by e^+e^- annihilation (8 pages)	094046
Ri-Qing Qian and Xiang Liu	
Eigenvalues of the QCD Dirac matrix with improved staggered quarks in the continuum limit (10 pages)	094501
Olaf Kaczmarek, Ravi Shanker, and Sayantan Sharma	
Strings of diquark-quark $(QQ)Q$ baryon before the phase transition (29 pages)	094502
A. S. Bakry, M. A. Deliyergiyev, A. A. Galal, and M. N. Khalil	
Analog to the pion decay constant in the multiflavor Schwinger model (10 pages)	094503
Jaime Fabián Nieto Castellanos, Ivan Hip, and Wolfgang Bietenholz	
Application of the path optimization method to a discrete spin system (8 pages)	094504
Kouji Kashiwa, Yusuke Namekawa, Akira Ohnishi, and Hayato Takase	
Simple Hamiltonian for quantum simulation of strongly coupled $(2+1)$ D SU(2) lattice gauge theory on a honeycomb lattice (10 pages)	094505
Berndt Müller and Xiaojun Yao	
Equivalence between the Wilson flow and stout-link smearing (10 pages)	094506
Masato Nagatsuka, Keita Sakai, and Shoichi Sasaki	
Alleviating the sign problem in a chiral random matrix model with contour deformations (10 pages)	094507
Matteo Giordano, Attila Pásztor, Dávid Pesznyák, and Zoltán Tulipánt	
Symplectic lattice gauge theories in the grid framework: Approaching the conformal window (30 pages)	094508
Ed Bennett, Peter A. Boyle, Luigi Del Debbio, Niccolò Forzano, Deog Ki Hong, Jong-Wan Lee, Julian Lenz, C.-J. David Lin, Biagio Lucini, Alessandro Lupo, Maurizio Piai, and Davide Vadacchino	
Dispersive bounds for local form factors in $\Lambda_b \rightarrow \Lambda$ transitions (19 pages)	094509
Thomas Blake, Stefan Meinel, Muslem Rahimi, and Danny van Dyk	
Low-lying baryon masses using twisted mass fermions ensembles at the physical pion mass (16 pages)	094510
Constantia Alexandrou, Simone Bacchio, Georgios Christou, and Jacob Finkenrath	
Constraining beyond the standard model nucleon isovector charges (19 pages)	094511
R. E. Smail, M. Batelaan, R. Horsley, Y. Nakamura, H. Perlt, D. Pleiter, P. E. L. Rakow, G. Schierholz, H. Stüben, R. D. Young, and J. M. Zanotti (QCDSF/UKQCD/CSSM Collaboration)	
Nucleon electric dipole moment from the θ term with lattice chiral fermions (15 pages)	094512
Jian Liang, Andrei Alexandru, Terrence Draper, Keh-Fei Liu, Bigeng Wang, Gen Wang, and Yi-Bo Yang (χ QCD Collaboration)	
Quantum simulation of lattice QCD with improved Hamiltonians (14 pages)	094513
Anthony N. Ciavarella	

(Continued)



Pion transition form factor from twisted-mass lattice QCD and the hadronic light-by-light π^0 -pole contribution to the muon $g - 2$ (23 pages)	094514
C. Alexandrou, S. Bacchio, G. Bergner, S. Burri, J. Finkenrath, A. Gasbarro, K. Hadjiyiannakou, K. Jansen, G. Kanwar, B. Kostrzewa, G. Koutsou, K. Ottnad, M. Petschlies, F. Pittler, F. Steffens, C. Urbach, and U. Wenger (Extended Twisted Mass Collaboration)	
Gluon PDF of the proton using twisted mass fermions (15 pages)	094515
Joseph Delmar, Constantia Alexandrou, Krzysztof Cichy, Martha Constantinou, and Kyriakos Hadjiyiannakou	
Lattice study of the chiral properties of large- N_c QCD (28 pages)	094516
Thomas DeGrand and Evan Wickenden	
$\Delta I = 3/2$ and $\Delta I = 1/2$ channels of $K \rightarrow \pi\pi$ decay at the physical point with periodic boundary conditions (52 pages)	094517
Thomas Blum, Peter A. Boyle, Daniel Hoying, Taku Izubuchi, Luchang Jin, Chulwoo Jung, Christopher Kelly, Christoph Lehner, Amarjit Soni, and Masaaki Tomii (RBC and UKQCD Collaborations)	
Liouvillian dynamics of the open Schwinger model: String breaking and kinetic dissipation in a thermal medium (23 pages)	094518
Kyle Lee, James Mulligan, Felix Ringer, and Xiaojun Yao	
Low-lying odd-parity nucleon resonances as quark-model-like states (18 pages)	094519
Curtis D. Abell, Derek B. Leinweber, Zhan-Wei Liu, Anthony W. Thomas, and Jia-Jun Wu	
Fermionic portal to vector dark matter from a new gauge sector (30 pages)	095001
Alexander Belyaev, Aldo Deandrea, Stefano Moretti, Luca Panizzi, Douglas A. Ross, and Nakorn Thongyoi	
Constraints on the dark Z model from Higgs boson phenomenology (12 pages)	095002
Dong-Won Jung, Kang Young Lee, and Chaehyun Yu	
Dark-sector seeded solution to the strong CP problem (6 pages)	095003
H. B. Câmara, F. R. Joaquin, and J. W. F. Valle	
R-parity violating two-loop level rainbowlike contribution to the fermion electric dipole moment (24 pages)	095004
Nodoka Yamanaka	
Neutrino mass in nonsupersymmetric $SO(10)$ GUT (12 pages)	095005
Naoyuki Haba, Yasuhiro Shimizu, and Toshifumi Yamada	
Investigating the single production of vectorlike quarks decaying into a top quark and W boson through hadronic channels at the HL-LHC (11 pages)	095006
A. C. Canbay and O. Cakir	
Dark matter detection using nuclear magnetization in magnet with hyperfine interaction (29 pages)	095007
So Chigusa, Takeo Moroi, Kazunori Nakayama, and Thanaporn Sichanugrist	
Dark matter in the Higgs resonance region (20 pages)	095008
Mattia Di Mauro, Chiara Arina, Nicolao Fornengo, Jan Heisig, and Daniele Massaro	
Probing a local dark matter halo with neutrino oscillations (14 pages)	095009
Tony Gherghetta and Andrey Shkerin	
Minimal $SU(5)$ GUTs with vectorlike fermions (21 pages)	095010
Stefan Antusch, Kevin Hinze, and Shaikh Saad	
Resolving W boson mass shift and CKM unitarity violation in left-right symmetric models with a universal seesaw mechanism (16 pages)	095011
Ritu Dcruz and K. S. Babu	
Flavor physics in $SU(5)$ GUT with scalar fields in the 45 representation (28 pages)	095012
Toru Goto, Satoshi Mishima, and Tetsuo Shindou	
Nondecoupling effects from heavy Higgs bosons by matching 2HDM to HEFT amplitudes (29 pages)	095013
F. Arco, D. Domenech, M. J. Herrero, and R. A. Morales	
Gravitational wave signatures of gauged baryon and lepton number (18 pages)	095014
Jessica Bosch, Zoraida Delgado, Bartosz Fornal, and Alejandra Leon	
Note on scattering in asymptotically nonlocal theories (8 pages)	095015
Christopher D. Carone and Mikkie R. Musser	
Inelastic freeze-in (16 pages)	095016
Saniya Heeba, Tongyan Lin, and Katelin Schutz	

(Continued)



Pulsar timing array stochastic background from light Kaluza-Klein resonances (14 pages)	095017
Eugenio Megías, Germano Nardini, and Mariano Quirós	
Phenomenology of a minimal extension of the standard model with a family-dependent gauge symmetry (16 pages)	095018
Duong Van Loi, Cao H. Nam, and Phung Van Dong	
Flavor hierarchies from emergent fundamental partial compositeness (17 pages)	095019
Florian Goertz, Álvaro Pastor-Gutiérrez, and Jan M. Pawłowski	
Investigating the fluxes and physics potential of LHC neutrino experiments (18 pages)	095020
Felix Kling, Toni Mäkelä, and Sebastian Trojanowski	
Supersymmetric minimal $U(1)_X$ model at the TeV scale with right-handed Majorana neutrino dark matter (10 pages)	095021
Nobuchika Okada and Desmond Villalba	
Vacuum polarization and induced Maxwell and Kalb-Ramond effective action in very special relativity (13 pages)	095022
Roberto V. Maluf and Gonzalo J. Olmo	
P and CP solution of the strong CP puzzle (13 pages)	095023
Ravi Kuchimanchi	
Future leptonic CP phase determination in the presence of NSI (10 pages)	095024
Luis A. Delgadillo and O. G. Miranda	
Can we discover lepton number violation with the LHC far detectors? (15 pages)	095025
Ying-nan Mao, Kechen Wang, and Zeren Simon Wang	
Flavon signatures at the HL-LHC (25 pages)	095026
M. A. Arroyo-Ureña, Amit Chakraborty, J. Lorenzo Díaz-Cruz, Dilip Kumar Ghosh, Najimuddin Khan, and Stefano Moretti	
Constraint on scalar leptoquark from low-energy leptonic observables (20 pages)	095027
Uladimir Khasianeich, Dominik Stöckinger, Hyejung Stöckinger-Kim, and Johannes Wünsche	
Dirac-Majorana neutrino type oscillation induced by a wave dark matter (6 pages)	095028
YeolLin ChoeJo, Yechan Kim, and Hye-Sung Lee	
Insights from the magnetic field dependence of the muonium-to-antimuonium transition (17 pages)	095029
Takeshi Fukuyama, Yukihiro Mimura, and Yuichi Uesaka	

PART C

Excited bound states and their role in dark matter production (23 pages)	095030
Tobias Binder, Mathias Garny, Jan Heisig, Stefan Lederer, and Kai Urban	
Leptonic CP violation from the seesaw mechanism (16 pages)	095031
C. C. Nishi and J. I. Silva-Marcos	
Higgs boson footprints of hefty ALPs (9 pages)	095032
Anisha, Supratim Das Bakshi, Christoph Englert, and Panagiotis Stylianou	
Phantom fluid cosmology: Impact of a phantom hidden sector on cosmological observables (36 pages)	095033
James M. Cline, Matteo Puel, Takashi Toma, and Qiu Shi Wang	
Simple modular invariant model for quark, lepton, and flavored QCD axion (26 pages)	095034
Y. H. Ahn and Sin Kyu Kang	
Higgs potential criticality beyond the Standard Model (17 pages)	095035
Thomas Steingasser and David I. Kaiser	
Probing new physics with polarized τ and Λ_c in quasielastic $\nu_\tau + n \rightarrow \tau^- + \Lambda_c$ scattering process (33 pages)	095036
Ya-Ru Kong, Li-Fen Lai, Xin-Qiang Li, Xin-Shuai Yan, Ya-Dong Yang, and Dong-Hui Zheng	
Nano-Hertz gravitational waves from collapsing domain walls associated with freeze-in dark matter in light of pulsar timing array observations (11 pages)	095037
Zhao Zhang, Chengfeng Cai, Yu-Hang Su, Shiyu Wang, Zhao-Huan Yu, and Hong-Hao Zhang	
Global fits of new physics in $b \rightarrow s$ after the $R_{K^{(*)}}$ 2022 release (25 pages)	095038
Qiaoyi Wen and Fanrong Xu	
Dark photons from charged pion bremsstrahlung at proton beam experiments (14 pages)	095039
David Curtin, Yonatan Kahn, and Rachel Nguyen	

(Continued)



Gauged nonuniversal $U(1)_X$ model to study muon $g - 2$ and B meson anomalies (22 pages)	095040
J. S. Alvarado, S. F. Mantilla, R. Martinez, F. Ochoa, and Cristian Sierra	
Superheavy quasistable strings and walls bounded by strings in the light of NANOGrav 15 year data (7 pages)	095041
George Lazarides, Rinku Maji, and Qaisar Shafi	
Corrections of Z' to the magnetic moment of the muon (9 pages)	095042
Jorge Gamboa, Justo López-Sarrión, Fernando Méndez, and Natalia Tapia-Arellano	
Recurrent axion stars collapse with dark radiation emission and their cosmological constraints (13 pages)	095043
Patrick J. Fox, Neal Weiner, and Huangyu Xiao	
Testing neutrino electromagnetic properties at current and future dark matter experiments (12 pages)	095044
Carlo Giunti and Christoph A. Ternes	
Photon-dark photon conversion with multiple level crossings (11 pages)	095045
Nirmalya Brahma, Asher Berlin, and Katelin Schutz	
CP issues in the SM from a viewpoint of spontaneous CP violation (15 pages)	095046
Daijiro Suematsu	
Role of $\lambda_{hH^+H^-}$ in Higgs boson decays h to bs in the 2HDM (22 pages)	095047
F. Arco, S. Heinemeyer, and M. J. Herrero	
Neutrino magnetic moment and inert doublet dark matter in a Type-III radiative scenario (11 pages)	095048
Shivaramakrishna Singirala, Dinesh Kumar Singha, and Rukmani Mohanta	
Ultraheavy FIMP dark matter and conformal sectors (10 pages)	095049
Ameen Ismail	
Matter effect in presence of a sterile neutrino and resolution of the octant degeneracy using a liquid argon detector (25 pages)	095050
Animesh Chatterjee, Srubabati Goswami, and Supriya Pan	
New physics analysis of baryonic Λ_b decays with dileptons or dineutrinos in the final state within the SMEFT framework (25 pages)	095051
Nilakshi Das and Rupak Dutta	
Thermalized dark radiation in the presence of a PBH: ΔN_{eff} and gravitational waves complementarity (17 pages)	095052
Nayan Das, Suruj Jyoti Das, and Debasish Borah	
Singling out SO(10) GUT models using recent PTA results (9 pages)	095053
Stefan Antusch, Kevin Hinze, Shaikh Saad, and Jonathan Steiner	
Upper limit on scalar field dark matter from LIGO-Virgo third observation run (12 pages)	095054
Koki Fukusumi, Soichiro Morisaki, and Teruaki Suyama	
Probing the supersymmetry-mass scale with F -term hybrid inflation (17 pages)	095055
G. Lazarides and C. Pallis	
Indirect new physics effects on σ_{had} confront the $(g - 2)_\mu$ window discrepancies and the CMD-3 result (13 pages)	095056
Luc Darmé, Giovanni Grilli di Cortona, and Enrico Nardi	
Cancellation of small- x divergences in the three-gluon-vertex Hamiltonian with canonical gluon mass (13 pages)	096001
Juan José Gálvez-Viruet and María Gómez-Rocha	
New physics search via CP observables in $B_s^0 \rightarrow \phi\phi$ decays with left- and right-handed chromomagnetic operators (11 pages)	096002
Tejhas Kapoor and Emi Kou	
Optimal transport for a novel event description at hadron colliders (7 pages)	096003
L. Gouskos, F. Iemmi, S. Liechti, B. Maier, V. Mikuni, and H. Qu	
Baryons, multihadron systems, and composite dark matter in nonrelativistic QCD (39 pages)	096004
Benoît Assi and Michael L. Wagman	
Kramers-Krönig approach to the electric permittivity of the vacuum in a strong constant electric field (28 pages)	096005
Hidetoshi Taya and Charlie Ironside	
B_c -meson decays into J/ψ plus a light meson in the improved perturbative QCD formalism (20 pages)	096006
Xin Liu	
Splitting of chiral and deconfinement phase transitions induced by rotation (9 pages)	096007
Fei Sun, Kun Xu, and Mei Huang	

(Continued)



Femtoscopy of D mesons and light mesons upon unitarized effective field theories (15 pages)	096008
Juan M. Torres-Rincon, Angels Ramos, and Laura Tolos	
Scalar boson emission from a magnetized relativistic plasma (17 pages)	096009
Jorge Jaber-Urquiza and Igor A. Shovkovy	
Stability of multicomponent Israel-Stewart-Maxwell theory for charge diffusion (12 pages)	096010
L. Gavassino and Masoud Shokri	
Inclusive probability to record an electron in elastic electromagnetic scattering by a spin one-half hadron wave packet (17 pages)	096011
P. O. Kazinski, D. I. Rubtsova, and A. A. Sokolov	
Translation-invariant relativistic Langevin equation derived from first principles (11 pages)	096012
Filippo Zadra, Aleksandr Petrosyan, and Alessio Zaccone	
New effect in wave-packet scattering of quantum fields (19 pages)	096013
Kenzo Ishikawa, Kenji Nishiwaki, and Kin-ya Oda	
Photon radiation by relatively slowly rotating fermions in magnetic field (19 pages)	096014
Matteo Buzzegoli, Jonathan D. Kroth, Kirill Tuchin, and Nandagopal Vijayakumar	
Endpoint behavior of distribution amplitudes of pion and longitudinally polarized rho meson under the influence of renormalon-chain contributions (9 pages)	096015
S. V. Mikhailov and N. Volchanskiy	
Heavy quark radiation in an anisotropic hot QCD medium (10 pages)	096016
Jai Prakash, Vinod Chandra, and Santosh K. Das	
Dimensional deformation of sine-Gordon breathers into oscillons (31 pages)	096017
José T. Gálvez Gherzi and Jonathan Braden	
Morphing one dataset into another with maximum likelihood estimation (13 pages)	096018
Tobias Golling, Samuel Klein, Radha Mastandrea, Benjamin Nachman, and John Andrew Raine	
Pion quasiparticles in isospin medium from holography (17 pages)	096019
Weijian Liang, Xuanmin Cao, Hui Liu, and Danning Li	
Third-order relativistic dissipative fluid dynamics from the method of moments (15 pages)	096020
Caio V. P. de Brito and Gabriel S. Denicol	
One-loop integrals for purely virtual particles (19 pages)	096021
Aurora Melis and Marco Piva	
Variational formalism for the Klein-Gordon oscillon (11 pages)	096022
I. V. Barashenkov and N. V. Alexeeva	
Dynamically assisted nonlinear Breit-Wheeler pair production in bichromatic laser fields of circular polarization (12 pages)	096023
N. Mahlin, S. Villalba-Chávez, and C. Müller	
Quantum lattice models that preserve continuous translation symmetry (18 pages)	096024
Dominic G. Lewis, Achim Kempf, and Nicolas C. Menicucci	
Parton shower algorithm with the saturation effect (11 pages)	096025
Yu Shi, Shu-Yi Wei, and Jian Zhou	
 Hunt for magnetic signatures of hidden-photon and axion dark matter in the wilderness (19 pages)	096026
Ibrahim A. Sulai, Saarik Kalia, Ariel Arza, Itay M. Bloch, Eduardo Castro Muñoz, Christopher Fabian, Michael A. Fedderke, Madison Forseth, Brian Garthwaite, Peter W. Graham, Will Griffith, Erik Helgren, Katie Hermanson, Andres Interiano-Alvarado, Brittany Karki, Abaz Kryemadhi, Andre Li, Ehsanullah Nikfar, Jason E. Stalnaker, Yicheng Wang, and Derek F. Jackson Kimball	
Decomposed photon anomalous dimension in QCD and the $\{\beta\}$ -expanded representations for the Adler function (20 pages)	096027
A. L. Kataev and V. S. Molokoedov	
Interactions of the $\chi_{c1}(4274)$ state with light mesons (11 pages)	096028
A. L. M. Britto, L. M. Abreu, and F. S. Navarra	
Linear stability analysis in inhomogeneous equilibrium configurations (24 pages)	096029
Masoud Shokri and Dirk H. Rischke	
Quantum local-equilibrium state with fixed multiplicity constraint and Bose-Einstein momentum correlations (15 pages)	096030
M. D. Adzhymambetov, S. V. Akkelin, and Yu. M. Sinyukov	

(Continued)



CONTENTS - *Continued*

PHYSICAL REVIEW D

THIRD SERIES, VOLUME 108, NUMBER 9

D1 NOVEMBER 2023

Exclusive photoproduction of D -meson pairs with large invariant mass (25 pages)	096031
Marat Siddikov and Iván Schmidt	
New method for measuring the ratio $\mu_p G_E/G_M$ based on the polarization transfer from the initial proton to the final electron in the $e\vec{p} \rightarrow \vec{e}p$ process (6 pages)	096032
M. V. Galynskii, Yu. M. Bystritskiy, and V. M. Galynsky	
Bubble expansion at strong coupling (11 pages)	096033
Li Li, Shao-Jiang Wang, and Zi-Yan Yuwen	
Anatomy of real intermediate state-subtraction scheme (10 pages)	096034
Kalle Ala-Mattinen, Matti Heikinheimo, Kimmo Tuominen, and Kimmo Kainulainen	
Variational quantum eigensolver for causal loop Feynman diagrams and directed acyclic graphs (19 pages)	096035
Giuseppe Clemente, Arianna Crippa, Karl Jansen, Selomit Ramírez-Urbe, Andrés E. Rentería-Olivo, Germán Rodrigo, German F. R. Sborlini, and Luiz Vale Silva	
One loop reduced QED for massive fermions within an innovative formalism (15 pages)	096036
Victor Miguel Banda Guzmán, Adnan Bashir, Luis Albino, and Dania Rodríguez-Tzintzun	
Interference phenomena in the asymmetric dynamical Casimir effect for a single $\delta - \delta'$ mirror (12 pages)	096037
Matthew J. Gorban, William D. Julius, Ramesh Radhakrishnan, and Gerald B. Cleaver	
Vacuum decay in time-dependent backgrounds (15 pages)	096038
Patrick Draper, Manthos Karydas, and Hao Zhang	

ERRATA

Erratum: Status of negative coupling modifiers for extended Higgs sectors [Phys. Rev. D 105 , 035019 (2022)] (3 pages)	099901
Carlos H. de Lima, Daniel Stolarski, and Yongcheng Wu	



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**, 010001 (2014).