PHYSICAL REVIEW C™

For editorial and subscription correspondence, please see inside front cover
(ISSN: 2469-9985)

PERIODICALS
Postmaster send address changes to:

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

THIRD SERIES, VOLUME 102, NUMBER 4 ***CONTENTS*** **OCTOBER 2020**

RAPID COMMUNICATIONS

Nuclear Structure

Core of ^{25}F in the rotational model *(4 pages)* . . . . . 041301(R)
A. O. Macchiavelli, R. M. Clark, H. L. Crawford, P. Fallon, I. Y. Lee, C. Morse, C. M. Campbell, M. Cromaz, and C. Santamaria

Pure σ-bond linear chain in ^{16}C *(4 pages)* . . . . . 041302(R)
T. Baba, Y. Liu, J. X. Han, and Y. L. Ye

Almost medium-free measurement of the Hoyle state direct-decay component with a TPC *(5 pages)* . . . . . 041303(R)
J. Bishop, G. V. Rogachev, S. Ahn, E. Aboud, M. Barbui, A. Bosh, C. Hunt, H. Jayatissa, E. Koshchiy, R. Malecek, S. T. Marley, E. C. Pollacco, C. D. Pruitt, B. T. Roeder, A. Saastamoinen, L. G. Sobotka, and S. Upadhyayula

Restoring the valence-shell stabilization in ^{140}Nd *(6 pages)* . . . . . 041304(R)
R. Kern, R. Zidarova, N. Pietralla, G. Rainovski, R. Stegmann, A. Blazhev, A. Boukhari, J. Cederkäll, J. G. Cubiss, M. Djongolov, C. Fransen, L. P. Gaffney, K. Gladnishki, E. Giannopoulos, H. Hess, J. Jolie, V. Karayonchev, L. Kaya, J. M. Keatings, D. Kocheva, Th. Kröll, O. Möller, G. G. O'Neill, J. Pakarinen, P. Reiter, D. Rosiak, M. Scheck, J. Snall, P.-A. Söderström, P. Spagnoletti, M. Stoyanova, S. Thiel, A. Vogt, N. Warr, A. Welker, V. Werner, J. Wiederhold, and H. De Witte

Relativistic Nuclear Collisions

System-size scan of D meson R_{AA} and v_n using PbPb, XeXe, ArAr, and OO collisions at energies available at the CERN Large Hadron Collider *(7 pages)* . . . . . 041901(R)
Roland Katz, Caio A. G. Prado, Jacquelyn Noronha-Hostler, and Alexandre A. P. Suaide

Nuclear Astrophysics

Analytic insights on the information content of new observables *(7 pages)* . . . . . 042801(R)
Wei-Chia Chen and J. Piekarewicz

ARTICLES

Nucleon-Nucleon Interaction, Few-Body Systems

Novel regularization scheme for nucleon-nucleon lattice simulations with effective field theory *(10 pages)* 044001
M. Ahmadi, M. R. Hadizadeh, M. Radin, and S. Bayegan

Copyright 2020 by American Physical Society

2469-9985(202010)102:4;1-8

(Continued)

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

The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C **THIRD SERIES, VOLUME 102, NUMBER 4** **OCTOBER 2020**

Observation of a $\overline{K}NN$ bound state in the ^{3}He$(K^-, \Lambda p)n$ reaction *(14 pages)* 044002
T. Yamaga *et al.* (J-PARC E15 Collaboration)

Extrapolating lattice QCD results using effective field theory *(7 pages)* 044003
Moti Eliyahu, Betzalel Bazak, and Nir Barnea

Total and differential cross sections of the $dp \to {}^3\mathrm{He}\,\eta$ reaction at excess energies between 1 and 15 MeV *(11 pages)* 044004
C. Fritzsch, S. Barsov, I. Burmeister, S. Dymov, R. Gebel, M. Hartmann, A. Kacharava, A. Khoukaz, V. Komarov, P. Kulessa, A. Kulikov, A. Lehrach, B. Lorentz, D. Mchedlishvili, T. Mersmann, M. Mielke, S. Mikirtychiants, M. Nioradze, H. Ohm, M. Papenbrock, D. Prasuhn, V. Serdyuk, H. Ströher, A. Täschner, Yu. Valdau, and C. Wilkin (ANKE Collaboration)

Nuclear Structure

Nuclear energy level complexity: Fano factor signature of chaotic behavior of nearest-neighbor time-series analysis *(5 pages)* 044301
Diego Alberto Lara Bustillos, Leonardo López-Hernández, N. Ramírez-Cruz, Edna M. Hernández, Ruben Fossion, Enrique López-Moreno, Carlos E. Vargas, and V. Velázquez

New transitions and levels for ^{163}Tb obtained from β-decay studies *(9 pages)* 044302
C. J. Zachary, E. Wang, N. T. Brewer, J. C. Batchelder, J. H. Hamilton, J. M. Eldridge, B. M. Musangu, A. V. Ramayya, C. J. Gross, K. P. Rykaczewski, R. Grzywacz, A. C. Dai, F. R. Xu, M. Madurga, D. Miller, D. W. Stracener, C. Jost, E. F. Zganjar, J. A. Winger, M. Karny, S. V. Paulauskas, S. H. Liu, M. Wolińska-Cichocka, S. W. Padgett, A. J. Mendez, K. Miernik, A. Fijałkowska, and S. V. Ilyushkin

Strength of the isoscalar pairing interaction determined by a relation between double-charge change and double-pair transfer for double-β decay *(17 pages)* 044303
J. Terasaki

Origin of the evolution of spin-orbit and pseudospin-orbit splittings in neutron drops *(5 pages)* 044304
Yinghui Ge, Ying Zhang, and Jinniu Hu

Nucleon localization function in rotating nuclei *(13 pages)* 044305
T. Li (李通), M. Z. Chen (陈孟之), C. L. Zhang (张春莉), W. Nazarewicz, and M. Kortelainen

Neutron-proton pairing correction in the extended isovector and isoscalar pairing model *(14 pages)* 044306
Feng Pan, Yingwen He, Yingxin Wu, Yu Wang, Kristina D. Launey, and Jerry P. Draayer

Efficient solution for the Dirac equation in 3D lattice space with the conjugate gradient method *(7 pages)* 044307
B. Li (李博), Z. X. Ren (任政学), and P. W. Zhao (赵鹏巍)

Effects of shell correction on α-decay systematics *(7 pages)* 044308
Jing Zhang and Hong Fei Zhang

Ab initio no-core shell model study of $^{10-14}$B isotopes with realistic *NN* interactions *(15 pages)* 044309
Priyanka Choudhary, Praveen C. Srivastava, and Petr Navrátil

Lifetime measurements of ^{162}Er: Evolution of collectivity in the rare-earth region *(9 pages)* 044310
L. Knafla, G. Häfner, J. Jolie, J.-M. Régis, V. Karayonchev, A. Blazhev, A. Esmaylzadeh, C. Fransen, A. Goldkuhle, S. Herb, C. Müller-Gatermann, N. Warr, and K. O. Zell

Band structures, lifetimes, and shape coexistence in ^{130}La *(18 pages)* 044311
M. Ionescu-Bujor, S. Aydin, A. Iordăchescu, N. Mărginean, S. Pascu, D. Bucurescu, C. Costache, N. Florea, T. Glodariu, A. Ionescu, R. Mărginean, C. Mihai, R. E. Mihai, A. Mitu, A. Negret, C. R. Niţă, A. Olăcel, B. Sayğı, L. Stroe, R. Suvăilă, S. Toma, and A. Turturică

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).
The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C **THIRD SERIES, VOLUME 102, NUMBER 4** **OCTOBER 2020**

α decay of $^{243}Fm_{143}$ and $^{245}Fm_{145}$, and of their daughter nuclei *(8 pages)* 044312
J. Khuyagbaatar, F. P. Heßberger, S. Hofmann, D. Ackermann, H. G. Burkhard, S. Heinz, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, J. Maurer, and K. Nishio

Exploration of the exotic structure in Ce isotopes by the relativistic point-coupling model combined with complex momentum representation *(7 pages)* 044313
Xue-Neng Cao, Ke-Meng Ding, Min Shi, Quan Liu, and Jian-You Guo

Analytic formula for estimating the α-particle preformation factor *(17 pages)* 044314
Jun-Gang Deng (邓军刚) and Hong-Fei Zhang (张鸿飞)

Magnetic dipole excitations based on the relativistic nuclear energy density functional *(12 pages)* 044315
G. Kružić, T. Oishi, D. Vale, and N. Paar

Bayesian inference of nuclear symmetry energy from measured and imagined neutron skin thickness in ^{116,118,120,122,124,130,132}Sn, ^{208}Pb, and ^{48}Ca *(10 pages)* 044316
Jun Xu, Wen-Jie Xie, and Bao-An Li

Collectivity of the 2_1^+ state in $Z \leqslant 82$ even-even nuclei probed by a ratio involving dynamic and static electromagnetic $E2$ moments: Evolution of the quadrupole degrees of freedom and a new signature for shape coexistence *(13 pages)* 044317
P. Petkov, D.-S. Delion, and C. Müller-Gatermann

Predictions for nuclear structure functions from the impact-parameter-dependent Balitsky-Kovchegov equation *(9 pages)* 044318
J. Cepila, J. G. Contreras, and M. Matas

γ-ray and conversion-electron spectroscopy of the high-spin isomer in ^{145}Sm *(19 pages)* 044319
M. S. M. Gerathy, G. J. Lane, A. E. Stuchbery, G. D. Dracoulis, T. Kibédi, A. Akber, L. J. Bignell, B. J. Coombes, J. T. H. Dowie, T. J. Gray, B. Q. Lee, B. P. McCormick, A. J. Mitchell, and N. Palalani

Pseudospin partner bands in ^{130}Ba *(16 pages)* 044320
S. Guo (郭松), C. M. Petrache, D. Mengoni, Y. X. Liu (刘艳鑫), Q. B. Chen (陈启博), Y. H. Qiang (强赟华), A. Astier, E. Dupont, K. K. Zheng (郑宽宽), J. G. Wang (王建国), B. Ding (丁兵), B. F. Lv (吕冰锋), M. L. Liu (柳敏良), Y. D. Fang (方永得), X. H. Zhou (周小红), D. Bazzacco, A. Boso, A. Goasduff, F. Recchia, D. Testov, F. Galtarossa, G. Jaworski, D. R. Napoli, S. Riccetto, M. Siciliano, J. J. Valiente-Dobon, C. Andreoiu, F. H. Garcia, K. Ortner, K. Whitmore, B. Cederwall, E. A. Lawrie, I. Kuti, D. Sohler, T. Marchlewski, J. Srebrny, and A. Tucholski

Insights into nuclear saturation density from parity-violating electron scattering *(6 pages)* 044321
C. J. Horowitz, J. Piekarewicz, and Brendan Reed

Search for the η mesic ^{3}He in the $pd \to dp\pi^0$ reaction with the WASA-at-COSY facility *(9 pages)* 044322
P. Adlarson *et al.* (WASA-at-COSY Collaboration)

Structure of ^{155}Nd and ^{163}Gd from ^{252}Cf spontaneous fission *(8 pages)* 044323
J. M. Eldridge, E. H. Wang, C. J. Zachary, J. H. Hamilton, B. M. Musangu, A. V. Ramayya, G. M. Ter-Akopian, Yu. Ts. Oganessian, Y. X. Luo, J. O. Rasmussen, and S. J. Zhu

Effective field theory for deformed odd-mass nuclei *(21 pages)* 044324
T. Papenbrock and H. A. Weidenmüller

Implementation of nuclear time-dependent density-functional theory and its application to the nuclear isovector electric dipole resonance *(19 pages)* 044325
Yue Shi (石跃), Nobuo Hinohara, and Bastian Schuetrumpf

Intrinsic electric quadrupole moment of the $K^\pi = 8^-$ isomeric state in ^{178}Hf *(5 pages)* 044326
S. Zhu

(Continued)

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

The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C **THIRD SERIES, VOLUME 102, NUMBER 4** **OCTOBER 2020**

Dipole response of ^{87}Rb and its impact on the ^{86}Rb$(n,\gamma)^{87}$Rb cross section *(12 pages)* 044327
J. Wilhelmy, M. Müscher, G. Rusev, R. Schwengner, R. Beyer, M. Bhike, P. Erbacher, F. Fiedler, U. Friman-Gayer, J. Glorius, R. Greifenhagen, S. Hammer, T. Hensel, J. Isaak, A. R. Junghans, Krishichayan, B. Löher, S. E. Müller, N. Pietralla, S. Reinicke, D. Savran, P. Scholz, K. Sonnabend, T. Szücs, M. Tamkas, W. Tornow, S. Turkat, A. Wagner, and A. Zilges

Zero-pairing and zero-temperature limits of finite-temperature Hartree-Fock-Bogoliubov theory *(14 pages)* 044328
T. Duguet and W. Ryssens

High-spin states above the isomers in neutron-rich iodine nuclei near $N = 82$ *(15 pages)* 044329
R. Banik, S. Bhattacharyya, M. Rejmund, A. Lemasson, S. Biswas, A. Navin, Y. H. Kim, C. Michelagnoli, I. Stefan, P. Bednarczyk, Soumik Bhattacharya, E. Clément, H. L. Crawford, G. de France, P. Fallon, G. Frémont, J. Goupil, B. Jacquot, H. J. Li, J. Ljungvall, A. Maj, L. Ménager, V. Morel, G. Mukherjee, R. Palit, R. M. Pérez-Vidal, J. Ropert, and C. Schmitt

Neutron-pair structure in the continuum spectrum of ^{26}O *(8 pages)* 044330
S. Affranchino and R. M. Id Betan

Mapping of fragmented $\nu f_{5/2} \rightarrow \pi f_{7/2}$ transitions in the ^{73}Co $\rightarrow$ ^{73}Ni decay *(10 pages)* 044331
S. Go, R. Grzywacz, C. Mazzocchi, S. N. Liddick, M. Alshudifat, J. C. Batchelder, T. Baumann, A. A. Ciemny, T. N. Ginter, C. J. Gross, K. Kolos, A. Korgul, S. V. Paulauskas, C. J. Prokop, M. M. Rajabali, K. P. Rykaczewski, S. Taylor, and Y. Xiao

Laser-assisted decay spectroscopy and mass spectrometry of ^{178}Au *(12 pages)* 044332
J. G. Cubiss *et al.*

Reexamining the relation between the binding energy of finite nuclei and the equation of state of infinite nuclear matter *(13 pages)* 044333
M. C. Atkinson, W. H. Dickhoff, M. Piarulli, A. Rios, and R. B. Wiringa

Nuclear Reactions

Measurement of the thermal neutron capture cross section by ^{9}Be using the neutron flux from a nuclear research reactor and the AMS technique *(6 pages)* 044601
D. J. Marín-Lámbarri, J. García-Ramírez, E. Sánchez-Zúñiga, S. Padilla, L. Acosta, E. Chávez, H. S. Cruz-Galindo, A. Huerta, G. Méndez, R. Raya-Arredondo, M. Rodríguez-Ceja, C. Solís, and L. Barrón-Palos

Precise ^{92}Rb and ^{96}Y yields for thermal-neutron-induced fission of ^{235}U and ^{239,241}Pu determined using calorimetric low-temperature detectors *(10 pages)* 044602
Santwana Dubey, Artur Echler, Peter Egelhof, Patrick Grabitz, Werner Lauterfeld, Manfred Mutterer, Stefan Stolte, Aurelien Blanc, Ulli Köster, Olivier Serot, Gregoire Kessedjian, Saskia Kraft-Bermuth, Pascal Scholz, and Friedrich Gönnenwein

Time-dependent covariant density functional theory in three-dimensional lattice space: Benchmark calculation for the ^{16}O + ^{16}O reaction *(10 pages)* 044603
Z. X. Ren, P. W. Zhao, and J. Meng

Formation and dynamics of exotic hypernuclei in heavy-ion collisions *(7 pages)* 044604
Zhao-Qing Feng

Investigation of fusion probabilities in the reactions with ^{52,54}Cr, ^{64}Ni, and ^{68}Zn ions leading to the formation of $Z = 120$ superheavy composite systems *(9 pages)* 044605
K. V. Novikov, E. M. Kozulin, G. N. Knyazheva, I. M. Itkis, M. G. Itkis, A. A. Bogachev, I. N. Diatlov, M. Cheralu, D. Kumar, N. I. Kozulina, A. N. Pan, I. V. Pchelintsev, I. V. Vorobiev, W. H. Trzaska, S. Heinz, H. M. Devaraja, B. Lommel, E. Vardaci, S. Spinosa, A. Di Nitto, A. Pulcini, S. V. Khlebnikov, Pushpendra P. Singh, Rudra N. Sahoo, B. Gall, Z. Asfari, C. Borcea, I. Harca, and D. M. Filipescu

(Continued)

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

The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C **THIRD SERIES, VOLUME 102, NUMBER 4** **OCTOBER 2020**

Analysis of two-nucleon transfer reactions in the ^{20}Ne + ^{116}Cd system at 306 MeV *(14 pages)* 044606
D. Carbone *et al.* (NUMEN Collaboration)

Influence of fast emissions and statistical de-excitation on the isospin transport ratio *(9 pages)* 044607
A. Camaiani, S. Piantelli, A. Ono, G. Casini, B. Borderie, R. Bougault, C. Ciampi, J. A. Dueñas, C. Frosin, J. D. Frankland, D. Gruyer, N. LeNeindre, I. Lombardo, G. Mantovani, P. Ottanelli, M. Parlog, G. Pasquali, S. Upadhyaya, S. Valdré, G. Verde, and E. Vient

Clustering and α-capture reaction rate from *ab initio* symmetry-adapted descriptions of ^{20}Ne *(14 pages)* 044608
A. C. Dreyfuss, K. D. Launey, J. E. Escher, G. H. Sargsyan, R. B. Baker, T. Dytrych, and J. P. Draayer

Fission-fragment excitation energy sharing beyond scission *(5 pages)* 044609
Aurel Bulgac

Effect of nuclear structure and fissility on quasifission *(8 pages)* 044610
G. Mohanto, Sukanya De, A. Parihari, P. C. Rout, K. Ramachandran, K. Mahata, E. T. Mirgule, Ramandeep Gandhi, Sangeeta, M. Kushwaha, B. Srinivasan, S. Santra, A. Shrivastava, S. P. Behera, B. J. Roy, A. Jhingan, B. K. Nayak, and A. Saxena

Isobar correlations bearing information on the properties of hot disassembling nuclear sources *(6 pages)* 044611
S. R. Souza and R. Donangelo

Kinetic energy distribution for photofission of light actinides *(10 pages)* 044612
P. Mehdipour Kaldiani

Nuclide production cross sections from irradiation of thorium by 438 MeV protons and a comparison to FLUKA and GEANT4 simulations *(16 pages)* 044613
Andrew K. H. Robertson, Peter Kunz, Cornelia Hoehr, and Paul Schaffer

Single-nucleon knockout cross sections for reactions producing resonance states at or beyond the drip line *(17 pages)* 044614
R. J. Charity, L. G. Sobotka, and J. A. Tostevin

Measurement of the α ratio and (n, γ) cross section of ^{235}U from 0.2 to 200 eV at n_TOF *(18 pages)* 044615
J. Balibrea-Correa *et al.* (n_TOF Collaboration)

Nonresonant p-wave direct capture and interference effect observed in the ^{16}O$(n, \gamma)\,^{17}$O reaction *(8 pages)* 044616
Y. Nagai, M. Kinoshita, M. Igashira, Y. Nobuhara, H. Makii, K. Mishima, T. Shima, and A. Mengoni

Optical potentials, retarded Green's functions, and nonorthogonality *(8 pages)* 044617
Michael C. Birse

Relativistic Nuclear Collisions

Examining the event-shape-dependent modifications to charged-particle transverse momentum spectra and elliptic flow in p-Pb collisions at energies available at the CERN Large Hadron Collider *(8 pages)* 044901
Somnath Kar, Subikash Choudhury, Xiaoming Zhang, and Daicui Zhou

Diffusion of heavy quarks in the early stage of high-energy nuclear collisions at energies available at the BNL Relativistic Heavy Ion Collider and at the CERN Large Hadron Collider *(10 pages)* 044902
J. H. Liu, S. Plumari, S. K. Das, V. Greco, and M. Ruggieri

Impact of single string structure and multiple string interaction on strangeness production in Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV *(6 pages)* 044903
Dai-Mei Zhou, Liang Zheng, Yu-Liang Yan, Zhi-hong Song, Gang Chen, Xiao-Mei Li, Xu Cai, and Ben-Hao Sa

Global polarization in heavy-ion collisions based on the axial vortical effect *(4 pages)* 044904
Yu. B. Ivanov

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).
The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C THIRD SERIES, VOLUME 102, NUMBER 4 OCTOBER 2020

Running the gamut of high energy nuclear collisions *(23 pages)* 044905
Björn Schenke, Chun Shen, and Prithwish Tribedy

Beam-energy dependence of the directed flow of deuterons in Au + Au collisions *(8 pages)* 044906
J. Adam *et al.* (STAR Collaboration)

Charm quark dynamics in quark-gluon plasma with 3 + 1D viscous hydrodynamics *(11 pages)* 044907
Manu Kurian, Mayank Singh, Vinod Chandra, Sangyong Jeon, and Charles Gale

Measurement of isolated photon-hadron correlations in $\sqrt{s_{\rm NN}} = 5.02$ TeV pp and p-Pb collisions *(16 pages)* 044908
S. Acharya *et al.* (ALICE Collaboration)

Determining the diffusivity for light quarks from experiment *(6 pages)* 044909
Scott Pratt and Christopher Plumberg

Jet quenching and effects of non-Gaussian transverse-momentum broadening on dijet observables *(10 pages)* 044910
A. van Hameren, K. Kutak, W. Płaczek, M. Rohrmoser, and K. Tywoniuk

Temperature dependence of η/s of strongly interacting matter: Effects of the equation of state and the parametric form of $(\eta/s)(T)$ *(17 pages)* 044911
Jussi Auvinen, Kari J. Eskola, Pasi Huovinen, Harri Niemi, Risto Paatelainen, and Péter Petreczky

Beam-energy dependence of the production of light nuclei in Au + Au collisions *(9 pages)* 044912
Wenbin Zhao, Chun Shen, Che Ming Ko, Quansheng Liu, and Huichao Song

Identifying groomed jet splittings in heavy-ion collisions *(9 pages)* 044913
James Mulligan and Mateusz Płoskoń

Hadronic Physics and QCD

Spacetime development of in-medium hadronization: Scenario for leading hadrons *(15 pages)* 045201
B. Guiot and B. Z. Kopeliovich

Possible molecular states from the $N\Delta$ interaction *(8 pages)* 045202
Zhi-Tao Lu, Han-Yu Jiang, and Jun He

Spin-flip loss in magnetic traps for ultracold neutrons *(8 pages)* 045203
A. Steyerl and E. Gutsmiedl

Masses and decay widths of charmonium states in the presence of strong magnetic fields *(12 pages)* 045204
Amruta Mishra and S. P. Misra

Two-photon exchange from intermediate state resonances in elastic electron-proton scattering *(19 pages)* 045205
Jaseer Ahmed, P. G. Blunden, and W. Melnitchouk

ϕ meson mass and decay width in strange hadronic matter *(13 pages)* 045206
Rajesh Kumar and Arvind Kumar

Electroweak Interaction, Symmetries

Superallowed $0^+ \to 0^+$ nuclear β decays: 2020 critical survey, with implications for V_{ud} and CKM unitarity *(29 pages)* 045501
J. C. Hardy and I. S. Towner

Intensity of a weak 519-keV γ ray following β decay of the superallowed emitter ^{34}Ar determined via the ^{33}S$(p,\gamma)^{34}$Cl reaction *(4 pages)* 045502
H. I. Park, J. C. Hardy, M. Bencomo, V. E. Iacob, I. S. Towner, K. T. Macon, W. P. Tan, M. Brodeur, A. Boeltzig, B. Frentz, S. L. Henderson, J. Long, S. McGuinness, O. Olivas-Gomez, P. O'Malley, G. Seymour, B. Vande Kolk, and A. Kayani

(Continued)

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

The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).

PHYSICAL REVIEW C THIRD SERIES, VOLUME 102, NUMBER 4 OCTOBER 2020

Nuclear Astrophysics

Fast neutrino cooling of nuclear pasta in neutron stars: Molecular dynamics simulations *(12 pages)* 045801
Zidu Lin, Matthew E. Caplan, Charles J. Horowitz, and Cecilia Lunardini

^{19}Ne level structure for explosive nucleosynthesis *(12 pages)* 045802
M. R. Hall, D. W. Bardayan, T. Baugher, A. Lepailleur, S. D. Pain, A. Ratkiewicz, S. Ahn, J. M. Allen, J. T. Anderson, A. D. Ayangeakaa, J. C. Blackmon, S. Burcher, M. P. Carpenter, S. M. Cha, K. Y. Chae, K. A. Chipps, J. A. Cizewski, M. Febbraro, O. Hall, J. Hu, C. L. Jiang, K. L. Jones, E. J. Lee, P. D. O'Malley, S. Ota, B. C. Rasco, D. Santiago-Gonzalez, D. Seweryniak, H. Sims, K. Smith, W. P. Tan, P. Thompson, C. Thornsberry, R. L. Varner, D. Walter, G. L. Wilson, and S. Zhu

Surface energy of magnetized superconducting matter in neutron star cores *(15 pages)* 045803
D. N. Kobyakov

Fission and the *r*-process nucleosynthesis of translead nuclei in neutron star mergers *(12 pages)* 045804
Samuel A. Giuliani, Gabriel Martínez-Pinedo, Meng-Ru Wu, and Luis M. Robledo

Reanalysis of the ^{13}N$(p, \gamma)^{14}$O reaction and its role in the stellar CNO cycle *(16 pages)* 045805
S. B. Dubovichenko, R. Ya. Kezerashvili, N. A. Burkova, A. V. Dzhazairov-Kakhramanov, and B. Beisenov

Level structure of ^{31}S via ^{32}S$(p, d)^{31}$S *(12 pages)* 045806
K. Setoodehnia, A. A. Chen, J. Chen, J. A. Clark, C. M. Deibel, J. Hendriks, D. Kahl, W. N. Lennard, P. D. Parker, D. Seiler, and C. Wrede

Curvature-slope correlation of nuclear symmetry energy and its imprints on the crust-core transition, radius, and tidal deformability of canonical neutron stars *(13 pages)* 045807
Bao-An Li and Macon Magno

Impact of the neutron-star deformability on equation of state parameters *(12 pages)* 045808
C. Y. Tsang, M. B. Tsang, Pawel Danielewicz, W. G. Lynch, and F. J. Fattoyev

Spin-polarized β-stable neutron star matter: The nuclear symmetry energy and GW170817 constraint *(10 pages)* 045809
Ngo Hai Tan, Dao T. Khoa, and Doan Thi Loan

Influence of ^{73}Rb on the ashes of accreting neutron stars *(7 pages)* 045810
D. E. M. Hoff, A. M. Rogers, Z. Meisel, P. C. Bender, K. Brandenburg, K. Childers, J. A. Clark, A. C. Dombos, E. R. Doucet, S. Jin, R. Lewis, S. N. Liddick, C. J. Lister, C. Morse, H. Schatz, K. Schmidt, D. Soltesz, S. K. Subedi, S. M. Wang (王思敏), and S. Waniganeththi

New measurement of the ^{144}Sm$(\alpha, \gamma)^{148}$Gd reaction rate for the γ process *(11 pages)* 045811
P. Scholz, H. Wilsenach, H. W. Becker, A. Blazhev, F. Heim, V. Foteinou, U. Giesen, C. Münker, D. Rogalla, P. Sprung, A. Zilges, and K. Zuber

ERRATA

Erratum: Measurement of ^{58}Ni$(p, p)^{58}$Ni elastic scattering at low momentum transfer by using the HIRFL-CSR heavy-ion storage ring [Phys. Rev. C **100**, 054609 (2019)] *(1 page)* . . . . . 049901(E)
K. Yue, J. T. Zhang, X. L. Tu, C. J. Shao, H. X. Li, P. Ma, B. Mei, X. C. Chen, Y. Y. Yang, X. Q. Liu, Y. M. Xing, K. H. Fang, X. H. Li, Z. Y. Sun, M. Wang, P. Egelhof, Yu. A. Litvinov, K. Blaum, Y. H. Zhang, and X. H. Zhou

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

The editors and referees of PRC find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. C 86, 010001 (2012).