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2025

A heavy ion monitor on a chip based on a non-volatile memory architecture, Dale Julson, Will Flanagan, Mike Youngs, Aidan Medcalf, Benedict Anderson, Sharanya Palit and Tim Hossain, Nucl. Instrum. Methods Phys. Res. A **1072**, 170221 (2025).

A Novel Bayesian neural network approach for nuclear root-mean-square charge radii, X. Zhang, X. Liu, H. Zheng, W. Lin, R. Wada, J. Han, C. W. Ma, C. Y. Qiao, D. Peng, Y. Huang, Q. Leng, G. Qu, P. Ren and Z. Yang, IEEE Transactions on Nuclear Science **72**, 795–806 (2025)..

Artificial-intelligence-assisted analysis of $^{28}\text{Si}^* \rightarrow 7\alpha$ breakup data, T. Depastas, A. Bonasera and J.B. Natowitz, Phys. Rev. C **112**, 014614 (2025).

Asymmetry in the analogous spin--isospin-flip excitations of the $[J^\pi, T] = [2^+, 1]_1$ and $[2^+, 1]_2$ states in $^{14}_6\text{C}_8$, $^{14}_7\text{N}_7$, and $^{14}_8\text{O}_6$ from the $[1^+, 0]_1$ ground state of $^{14}_7\text{N}$, H. Fujita, Y. Fujita, P. Adsley, J.W. Brümmer, A. Fujimoto, D. Hounbo, M. Köhne, K.C.W. Li, P.Z. Mabika, A. Negret, R. Neveling, P. Papka, L. Pellegrini, F. D. Smit and S. Triambak, Phys. Rev. C **111**, 014317 (2025).

Calibration of an E//B Neutral Particle Analyzer and novel data analysis for its first experiment on the HL-3 tokamak, Yanxi Wang, Long Ma, Weiping Lin, Zhu An, Qidong Dai, Jifeng Han, Xingquan Liu, Xiaobing Luo, Yuan Luo, Guofeng Qu, Yufan Qu, Peipei Ren, Zhongbing Shi, Roy Wada, Shuo Wang, Dehao Xie, Linge Zang and Jingjun Zhu, Journal of Instrumentation **20**, P03030 (2025).

Constraining (n, γ) cross sections via surrogate measurements with hyperion, J. Koros, A. Simon, J.T. Harke, R.O. Hughes, P. Adsley, B.H. Isselhardt, B. Longfellow, M. Matney and C.S. Reingold, Nucl. Phys. A **1060**, 123110 (2025).

Damping mechanism of the isoscalar giant monopole resonance in ^{58}Ni , A. Bahini, P. von Neumann-Cosel, J. Carter, I. T. Usman, N. N. Arsenyev, A. P. Severyukhin, E. Litvinova, R. W. Fearick, R. Neveling, P. Adsley*, N. Botha, J. W. Brümmer, L. M. Donaldson, S. Jongile, T. C. Khumalo, M. B. Latif, K. C. W. Li, P. Z. Mabika, P. T. Molema, C. S. Moodley, S. D. Olorunfunmi, P. Papka, L. Pellegrini, B. Rebeiro, E. Sideras-Haddad, F. D. Smit, S. Triambak, M. Wiedeking and J. J. van Zyl, Nucl. Phys. A **1059**, 123078 (2025).

Deciphering hypertriton and antihypertriton spins from their global polarizations in heavy-ion collisions, K.J. Sun, D.N. Liu, Y.P. Zheng, J.H. Chen, C.M. Ko, and Y.G. Ma, Phys. Rev. Lett. **134**, 022301 (2025).

Development of the detector array for photons, protons, and exotic residues, A.B. McIntosh, A.D. Abbott, M.Q. Sorensen, K. Hagel, A. Couture, J. Gauthier, S. Ota, A. Alvarez, S. Balakrishnan, R. Ghimire,

M. Grinder, I. Jeanis, T. King, L.A. McIntosh*, S. Mosby, S.D. Pain, C. Prokop, A. Ratkiewicz, S. Regener, A. Rodriguez-Manso, R. Varner, A. Wakhle and S.J. Yennello*, in: Nucleus-Nucleus 2024, Whistler, BC, Canada, Nucl. Phys. **A1057**, 123038 (2025).

Elastic scattering in the $^{12}\text{N}+^{197}\text{Au}$ system at $E_{\text{lab}} = 70 \text{ MeV}$, P.L.D. Magro, V. Guimarães, R. Linares, J. Rangel, J.C. Zamora, G.V. Rogachev, E. Koshchiy, J. Bishop, M. Barbui, C.E. Parker, B. Roeder and A. Saastamoinen, Phys. Rev. C **111**, 034609 (2025).

Experimental and computational evaluation of alpha particle production from laser-driven proton-boron nuclear reaction in hole-boring scheme, M. Huault, T. Carriere, H. Larreur, Ph. Nicolaï, D. Raffestin, D. Singappuli, E. D’Humieres, D. Dubresson, K. Batani, M.G Cipriani, F. Filippi, M. Scisciò, C. Verona, L. Giuffrida, V. Kantarelou, S. Stancek, N. Boudjema, R. Lera, J.A. Pérez-Hernández, L. Volpe, M.D. Rodríguez Frías, A. Bonasera, M.R.D. Rodrigues, D. Ramirez Chavez, F. Consoli and D. Batani, Phys. Plasmas **32**, 013102 (2025).

Experimental search for high-spin resonant states in collisions of $^{28}\text{Si}+^{12}\text{C}$ at 35 MeV/nucleon, R. Wada, in: International Workshop on Multi faces on Eos and Clustering, Catania, Italy, IL Nuovo Cimento **48 C** (2025) 48.

Generation of radioisotopes for medical applications using high-repetition, high-intensity lasers, Katarzyna Liliana Batani, Marcia R.D. Rodrigues, Aldo Bonasera, Mattia Cipriani, Fabrizio Consoli, Francesco Filippi, Massimiliano M. Scisciò, Lorenzo Giuffrida, Vasiliki Kantarelou, Stanislav Stancek, Roberto Lera, Jose Antonio Pérez-Hernández, Luca Volpe, I.C. Edmond Turcu, Matteo Passoni, Davide Vavassori, David Dellasega, Alessandro Maffini, Marine Huault, Howel Larreur, Louis Sayo, Thomas Carriere, Philippe Nicolai, Didier Raffestin, Diluka Singappuli and Dimitri Batani, High Power Laser Science and Engineering **13**, 92 (2025).

Investigation of post-breakup Coulomb acceleration using a trajectory model, T. Hankins, B.M. Harvey, A. Hannaman, A.B. McIntosh, K. Hagel, M.Q. Sorensen and S. J. Yennello, Phys. Rev. C **111**, 034605 (2025).

Laser-initiated p-11 B fusion reactions in petawatt high-repetition-rate laser facilities, M. Scisciò, G. Petringa, Z. Zhu, M.R.D. Rodrigues, M. Alonzo, P.L. Andreoli, F. Filippi, Fe. Consoli, M. Huault, D. Raffestin, D. Molloy, H. Larreur, D. Singappuli, T. Carriere, C. Verona, P. Nicolai, A. McNamee, M. Ehret, E. Filippov, R. Lera, J.A. Pérez-Hernández, S. Agarwal, M. Krupka, S. Singh, V. Istokskaia, D. Lattuada, M. La Cognata, G.L. Guardo, S. Palmerini, G. Rapisarda, K. Batani, M. Cipriani, G. Cristofari, E. Di Ferdinando, G. Di Giorgio, R. De Angelis, D. Giulietti, J. Xu, L. Volpe, M. D. Rodríguez Frías, L. Giuffrida, D. Margarone, D. Batani, G.A.P. Cirrone, A. Bonasera and Fa. Consoli, Matter and Radiation at Extremes **10**, 037402 (2025).

Light nuclei femtoscopy and baryon interactions in 3 GeV Au+Au collisions at RHIC, B.E. Aboona, J. Atchison, A. Hamed, T. Lin and S. Mioduszewski, Phys. Lett. B **864**, 139412 (2025).

Measurement of directed flow in Au+Au collisions at $\sqrt{s_{NN}} = 19.6$ and 27 GeV with the STAR event plane detector, M.I. Abdulhamid and the STAR collaboration (including J. Atchison, C.A. Gagliardi, A. Hamed, T. Lin, X. Liu, Y. Liu, S. Mioduszewski and N.R. Sahoo), Phys. Rev. C **111**, 014906 (2025).

Nuclear Data Sheets for A=154, N. Nica, Nuclear Data Sheets **200**, 2 (2025).

Physics of exotic nuclei, Yanlin Ye, Xiaofei Yang, Hiroyoshi Sakurai and Baishan Hu, Nature Reviews Physics **7**, 21 (2025).

Probing the Redox Reactivity of Alkyl Bound Astatine: A Study on the Formation and Cleavage of a Stable At--C Bond, Jehan S. Perera, Jennifer M. Pyles, Avinash K. Srivastava, Christine C. Lawrence, Marcus Le, Laura A. Bills, Justin M. Tobar, Gabriel C. Tabacaru, Lauren A. McIntosh, Sherry J. Yennello and Jonathan D. Burns, Inorganic Chemistry **64**, 911 (2025).

Revisiting the 3α reaction rates in helium burning stars, T. Depastas, S.T. Sun, H.B. He, H. Zheng and A. Bonasera, Phys. Lett. B **860**, 139180 (2025).

Role of excited states in the sub-barrier fusion of light nuclei, S.T. Sun, T. Depastas, H.B. He, H. Zheng and A. Bonasera, Phys. Rev. C **111**, 014602 (2025).

Searching for solitons in heavy-ion reactions near the fermi energy, T. Depastas, A. Bonasera and J.B. Natowitz, Phys. Lett. B **868**, 139796 (2025).

The $^{22}\text{Ne}(\alpha, n)^{25}\text{Mg}$ reaction -- state of the art, astrophysics, and perspectives, Andreas Best, Philip Adsley, Ryan Amberger, Umberto Battino, Thomas Chillery, Marco La Cognata, Richard James deBoer, Daniela Mercogliano, Shuya Ota, David Rapagnani, Ragandeep Singh Sidhu, Roberta Spartà, Aurora Tumino and Michael Wiescher, The Eur. Phys. J. A **61**, 99 (2025).

Upper bounds on the production cross section of toroidally deformed nuclei, A. Hannaman, B. Harvey, K. Hagel, A. B. McIntosh, A. Abbott, L. Bills, A. Fentress, J. Gauthier, T. Hankins, Y.-W. Lui, L.A. McIntosh, S. Regener, R. Rider, S. Schultz, M. Q. Sorensen, J. Tobar, Z. Tobin and S. Yennello, in: Nucleus-Nucleus 2024, Nucl. Phys. **A1056**, Whistler, BC, Canada, pages 123024 (2025).

Using DAPPER to extract the photon strength function of ^{58}Fe using the inverse Oslo and shape methods, A. D. Abbott, M. Q. Sorensen, A.B. McIntosh, A. Alvarez, A. Couture, K. Hagel, L. Bills, A. Hannaman, B.M. Harvey, J. Gauthier, L.A. McIntosh, S. Ota, A. L. Richard, S. Schultz, Z. Tobin, K. Zelga and S. J. Yennello, Phys. Rev. C **111**, 034322 (2025).

2024

K_1/K^* enhancement in heavy-ion collisions and the restoration of chiral symmetry, Haesom Sung, Sungtae Cho, Che Ming Ko, Su Houng Lee and Sanghoon Lim, Phys. Rev. C **109**, 044911 (2024).

R-matrix analysis of ^{22}Ne states populated in $^{18}\text{O}(\alpha,\alpha)$ resonant elastic scattering, A.K. Nurmukhanbetova, V.Z. Goldberg, A. Volya, D.K. Nauruzbayev, G.E. Serikbayeva and G.V. Rogachev, Phys. Rev. C **109**, 024607 (2024).

Softening of the hypertriton transverse momentum spectrum in heavy-ion collisions, D.N. Liu, C.M. Ko, Y.G. Ma, F. Mazzschi, M. Pucci, Q.Y. Shon, K.J. Sun, and Y.Z. Wang, Phys. Lett. B **855**, 138855 (2024).

^{18}F alpha cluster structure in the resonant $^{14}\text{N}+\alpha$ scattering, A.K. Nurmukhanbetova, V.Z. Goldberg, A. Volya, D.K. Nauruzbayev and G.V. Rogachev, The European Physical Journal A **60**, 217 (2024).

^{21}Ne energy levels approaching the α -particle threshold, C. Angus, J. Frost-Schenk, A.M. Laird, P. Adsley, R. Longland, C.J. Barton, C.Aa Diget, C. Marshall, F. Portillo~Chaves and K. Setoodehnia, Phys. Rev. C **109**, 044323 (2024).

A novel encoding mechanism for particle physics, Zhi-Guang Tan, Sheng-Jie Wang, You-Neng Guo, Hua Zheng and Aldo Bonasera, Nuclear Science and Techniques **35**, 8 (2024).

Analog-antianalog isospin mixing in $^{47}\text{K} \beta^-$ decay, Brian Kootte, H. Gallop, C. Luktuke, J. C. McNeil, A. Gorelov, D. G. Melconian*, J. Klimo, B. M. Vargas-Calderon and J. A. Behr, Phys. Rev. C **109**, L052501 (2024).

Asymptotic normalization coefficients for $\alpha+^{12}\text{C}$ synthesis and the S factor for $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ radiative capture, A. M. Mukhamedzhanov, R. J. deBoer, B. F. Irgaziev, L. D. Blokhintsev, A. S. Kadyrov and D. A. Savin, Phys. Rev. C **110**, 055803 (2024).

Characterization and application of alkanethiolate self-assembled monolayers on Au-coated chips for Ir(IV) and Rh(III) sorption, Vira Zakusilova, Evgeny E. Tereshatov, Maria Boltoeva and Charles M. Folden III, Applied Surface Science **642**, 158356 (2024).

Characterization of the energy response of a LYSO+SiPM detector module for E//B NPA using α and hydrogen ions, Y. Luo, L. Ma, D. Xie, Y. Huang, Y. Wang, F. Fang, J. Han, W. Lin, X. Liu, X. Luo, G. Qu, Y. Qu, P. Ren, R. Wada, Z. Yang, L. Zang and J. Zhu, Nucl. Instrum. Methods Phys. Res. A **1061**, 169110 (2024).

Cluster structure of 3α +p states in ^{13}N , J. Bishop, G.V. Rogachev, S. Ahn, M. Barbui, S.M. Cha, E. Harris, C. Hunt, C.H. Kim, D. Kim, S.H. Kim, E. Koshchiy, Z. Luo, C. Park, C. E. Parker, E.C. Pollacco, B.T. Roeder, M. Roosa, A. Saastamoinen and D.P. Scriven, *Phys. Rev. C* **109**, 054308 (2024).

Correlations of event activity with hard and soft processes in p+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at the RHIC STAR experiment, M.I. Abdulhamid and the STAR collaboration (including B. E. Aboona, J. Atchison and S. Mioduszewski), *Phys. Rev. C* **110**, 044908 (2024).

Comparing pion production in transport simulations of heavy-ion collisions at 270A MeV under controlled conditions, Jun Xu, Hermann Wolter, Maria Colonna, Mircea Dan Cozma, Pawel Danielewicz, Che Ming Ko, Akira Ono, Manyee Betty Tsang, Ying-Xun Zhang, Hui-Gan Cheng, Natsumi Ikeno, Rohit Kumar, Jun Su, Hua Zheng, Zhen Zhang, Lie-Wen Chen, Zhao-Qing Feng, Christoph Hartnack, Arnaud Le Fèvre, Bao-An Li, Yasushi Nara, Akira Ohnishi and Feng-Shou Zhang, *Phys. Rev. C* **109**, 044609 (2024).

Constraining nucleon effective masses with flow and stopping observables from the S π RIT experiment, C.Y. Tsang, M. Kurata-Nishimura, M.B. Tsang, W.G. Lynch, Y.X. Zhang, J. Barney, J. Estee, G. Jhang, R. Wang, M. Kaneko, J.W. Lee, T. Isobe, T. Murakami, D.S. Ahn, L. Atar, T. Aumann, H. Baba, K. Boretzky, J. Brzychczyk, G. Cerizza, N. Chiga, N. Fukuda, I. Gašparić, B. Hong, A. Horvat, K. Ieki, N. Inabe, Y.J. Kim, T. Kobayashi, Y. Kondo, P. Lasko, H. S. Lee, Y. Leifels, J. Łukasik, J. Manfredi, A.B. McIntosh, P. Morfouace, T. Nakamura, N. Nakatsuka, S. Nishimura, H. Otsu, P. Pawłowski, K. Pelczar, D. Rossi, H. Sakurai, C. Santamaria, H. Sato, H. Scheit, R. Shane, Y. Shimizu, H. Simon, A. Snoch, A. Sochocka, T. Sumikama, H. Suzuki, D. Suzuki, H. Takeda, S. Tangwanchaoen, H. Törnqvist, Y. Togano, Z.G. Xiao, S.J. Yennello and Y. Zhang, *Phys. Lett. B* **853**, 138661 (2024).

Dense nuclear matter equation of state from heavy-ion collisions, Agnieszka Sorensen, Kshitij Agarwal, Kyle W. Brown, Zbigniew Chajęcki, Pawel Danielewicz, Christian Drischler, Stefano Gandolfi, Jeremy W. Holt*, Matthias Kaminski, Che Ming Ko, Rohit Kumar, Bao-An Li, William G. Lynch, Alan B. McIntosh, William G. Newton, Scott Pratt, Oleh Savchuk, Maria Stefaniak, Ingo Tews, Manyee Betty Tsang, Ramona Vogt, Hermann Wolter, Hanna Zbroszczyk, Navid Abbasi, Jörg Aichelin, Anton Andronic, Steffen A. Bass, Francesco Becattini, David Blaschke, Markus Bleicher, Christoph Blume, Elena Bratkovskaya, B. Alex Brown, David A. Brown, Alberto Camaiani, Giovanni Casini, Katerina Chatziioannou, Abdelouahad Chbihi, Maria Colonna, Mircea Dan Cozma, Veronica Dexheimer, Xin Dong, Travis Dore, Lipei Du, José A. Dueñas, Hannah Elfner, Wojciech Florkowski, Yuki Fujimoto, Richard J. Furnstahl, Alexandra Gade, Tetyana Galatyuk, Charles Gale, Frank Geurts, Fabiana Gramegna, Sašo Grozdanov, Kris Hagel, Steven P. Harris, Wick Haxton, Ulrich Heinz, Michal P. Heller, Or Hen, Heiko Hergert, Norbert Herrmann, Huan Zhong Huang, Xu-Guang Huang, Natsumi Ikeno, Gabriele Inghirami, Jakub Jankowski, Jiangyong Jia, José C. Jiménez, Joseph Kapusta, Behruz Kardan, Iurii Karpenko, Declan Keane, Dmitri Kharzeev, Andrej Kugler, Arnaud {Le Fèvre}, Dean Lee, Hong Liu, Michael A. Lisa, William J. Llope, Ivano Lombardo, Manuel Lorenz, Tommaso Marchi, Larry McLerran, Ulrich Mosel, Anton Motornenko, Berndt Müller, Paolo Napolitani, Joseph B. Natowitz, Witold Nazarewicz, Jorge Noronha, Jacquelyn Noronha-Hostler, Grażyna Odyniec, Panagiota Papakonstantinou, Zuzana Paulínyová, Jorge Piekarewicz, Robert D. Pisarski,

Christopher Plumberg, Madappa Prakash, Jørgen Randrup, Claudia Ratti, Peter Rau, Sanjay Reddy, Hans-Rudolf Schmidt, Paolo Russotto, Radoslaw Ryblewski, Andreas Schäfer, Björn Schenke, Srimoyee Sen, Peter Senger, Richard Seto, Chun Shen, Bradley Sherrill, Mayank Singh, Vladimir Skokov, Michał Spaliński, Jan Steinheimer, Mikhail Stephanov, Joachim Stroth, Christian Sturm, Kai-Jia Sun, Aihong Tang, Giorgio Torrieri, Wolfgang Trautmann, Giuseppe Verde, Volodymyr Vovchenko, Ryoichi Wada, Fuqiang Wang, Gang Wang, Klaus Werner, Nu Xu, Zhang-Bu Xu, Ho-Ung Yee, Sherry Yennello and Yi Yin, Prog. Part. Nucl. Phys. **134**, 104080 (2024).

Development of alpha cluster structure in nuclei of the same mass number, Aliya Nurmukhanbetova, Vladilen Goldberg, Alexander Volya, Dosbol Nauruzbayev, Aurora Tumino and Grigory Rogachev*, in: The Fifth International Workshop on State of the Art in Nuclear Cluster Physics (SOTANCP5), Hvar, Croatia, June 10-14, 2024, EPJ Web of Conferences **311**, 00022 (2024).

Double helix level scheme of ^{171}Yb nucleus, N. Nica, Atomic Data and Nuclear Data Tables **160**, 101682 (2024).

ERCS24: An updated version of the ERCS08 program for calculations of the cross sections for atomic electron removal based on the ECPSSR theory and its variants, Vladimir Horvat, Computer Physics Communications **299**, 109147 (2024).

Exclusive J/ψ , $\psi(2s)$, and e^+e^- pair production in Au+Au ultraperipheral collisions at the BNL Relativistic Heavy Ion Collider, M.I. Abdulhamid and the STAR collaboration (including J. Atchison and S. Mioduszewski), Phys. Rev. C **110**, 014911 (2024).

Experimental Determination of α widths of ^{21}Ne Levels in the Region of Astrophysical Interest: New $^{17}\text{O}+\alpha$ Reaction Rates and Impact on the Weak s Process, F. Hammache, P. Adsley, L. Lamia, D.S. Harrouz, N. de Séréville, B. Bastin, A. Choplin, T. Faestermann, C. Fougères, R. Hertenberger, R. Hirschi, M. La Cognata, A. Meyer, S. Palmerini, R. G. Pizzone, F. de Oliveira Santos, S. Romano, A. Tumino and H.-F. Wirth, Phys. Rev. Lett. **132**, 182701 (2024).

Experimental search for toroidal high-spin isomers in collisions of $^{28}\text{Si}+^{12}\text{C}$ at 35 MeV/nucleon with the Forward Array Using Silicon Technology, A. Hannaman, B. Harvey, A.B. McIntosh, K. Hagel, A. Abbott, A. Fentress, J. Gauthier, T. Hankins, Y.-W. Lui, L. McCann, L. A. McIntosh, S. Regener, R. Rider, S. Schultz, M. Q. Sorensen, J. Tobar, Z.N. Tobin and S.J. Yennello, Phys. Rev. C **109**, 054615 (2024).

Fine structure of the isoscalar giant monopole resonance in ^{58}Ni , ^{90}Zr , ^{120}Sn , and ^{208}Pb , A. Bahini, P. von Neumann-Cosel, J. Carter, I.T. Usman, N.N. Arsenyev, A. P. Severyukhin, E. Litvinova, R.W. Fearick, R. Neveling, P. Adsley, N. Botha, J.W. Brümmer, L.M. Donaldson, S. Jongile, T.C. Khumalo, M.B. Latif, K.C. W. Li, P.Z. Mabika, P.T. Molema, C.S. Moodley, S.D. Olorunfunmi, P. Papka, L. Pellegrini, B. Rebeiro, E. Sideras-Haddad, F.D. Smit, S. Triambak, M. Wiedeking and J.J. van Zyl, Phys. Rev. C **109**, 014325 (2024).

Hadronic effects on Λ polarization in relativistic heavy ion collisions, H. Sung, C.M. Ko, and S.H. Lee, Phys. Lett. B **858**, 139004 (2024).

Heavy ion induced e^+e^- pair production: Theoretical and preliminary experimental efforts, T. Depastas, T. Settlemeyre, M.R.D. Rodriguez, Y. Koshchiy, H.J. Quevedo, H. Zheng and A. Bonasera, in: Hlppnw7, EPJ Web of Conferences **304**, Ioannina Greece, 01002 (2024).

Impact of composition and symmetry energy on the temperature of quasiprojectiles simulated with antisymmetrized molecular dynamics, M. Q. Sorensen, A.B. McIntosh, K. Hagel, B.M. Harvey, R. Wada, A. Abbott, L. Bills, J. Gauthier, T. Hankins, A. Hannaman, A. Hood, A. Jede, Y.-W. Lui, L. A. McIntosh, R. Rider, S. Schultz, Z. Tobin, A. Wakhle, M. Youngs, K. Zelga and S. J. Yennello, Phys. Rev. C **110**, 064613 (2024).

Improving relativistic energy density functionals with tensor couplings, Stefan Typel and Shalom Shlomo, Eur. Phys. J. A **60**, 236 (2024).

Investigation of the difference in charge radii of mirror pairs with deep Bayesian neural networks, X. Zhang, H. He, G. Qu, X. Liu, H. Zheng, W. Lin, J. Han, P. Ren and R. Wada, Phys. Rev. C **110**, 014316 (2024); DOI: <https://doi.org/10.1103/PhysRevC.110.014316>

Jet-induced enhancement of deuteron production in pp and p -Pb collisions at the LHC, Y.H. Feng, C. M. Ko, Y.G. Ma, K.J. Sun, X.N. Wang, Z. Yang, and S. Zhang, Phys. Lett. B **859**, 139102 (2024). DOI: <https://doi.org/10.1016/j.physletb.2024.139102>

Larmor power limit for cyclotron radiation of relativistic particles in a waveguide, N. Buzinsky, R.J. Taylor, W. Byron, W. DeGraw, B. Dodson, M. Fertl, A. García, A P Goodson, B. Graner, H. Harrington, L. Hayen, L. Malavasi, D. McClain, D. Melconian, P. Müller, E. Novitski, N.S. Oblath, R.G.H. Robertson, G. Rybka, G. Savard, E. Smith, D.D. Stancil, D.W. Storm, H.E. Swanson, J.R. Tedeschi, B.A. VanDevender, F. E. Wietfeldt and A.R. Young, New J. Phys. **26**, 083021 (2024) pub id: 1386. DOI: 10.1088/1367-2630/ad6d85

Longitudinal and transverse spin transfer to Λ and $\bar{\Lambda}$ hyperons in polarized $p+p$ collisions at $\sqrt{s}=200$ GeV, M. I. Abdulhamid and the STAR collaboration (including D. M. Anderson, J. Atchison, C. A. Gagliardi, A. Hamed, T. Lin, X. Liu, Y. Liu, S. Mioduszewski, N. R. Sahoo and R. E. Tribble), Phys. Rev. D **109**, 012004 (2024); DOI: <https://doi.org/10.1103/PhysRevD.109.012004>

LSTAR - An isobar separator for expanding radioactive ion beam production at the Cyclotron Institute, Texas A&M University, G. P. A. Berg, D. Melconian*, M. Couder, M. Brodeur, V. E. Iacob, J. Klimo and P. D. Shidling, Nucl. Instrum. Methods Phys Res **A1069**, 169944 (2024), DOI: <https://doi.org/10.1016/j.nima.2024.169944>

Measurement of the $^{27}\text{Al}(p,\alpha)^{24}\text{Mg}$ fusion reaction at astrophysical energies via the Trojan Horse Method, M. La Cognata, S. Palmerini, P. Adsley*, F. Hammache, A. Di Pietro, P. Figuera, F. Dell 'Agli, R. Alba, S. Cherubini, G. L. Guardo, M. Gulino, L. Lamia, D. Lattuada, C. Maiolino, A. Oliva, R. G. Pizzone, P. Prajapati, G. G. Rapisarda, S. Romano, D. Santonocito, R. Spartá, M. L. Sergi, A. Tumino and P. Ventura, in: FUSION23 – International Conference on Heavy-Ion Collisions at Near-Barrier Energies, EPJ Web of Conferences **306**, Shizuoka, Japan, 01010 (2024).

Measurements of charged-particle multiplicity dependence of higher-order net-proton cumulants in p+collisions at $\sqrt{s} = 200$ GeV from STAR at RHIC, M. I. Abdulhamid and the STAR collaboration (including J. Atchison, A. Hamed, T. Lin, X. Liu, Y. Liu and S. Mioduszewski), Phys. Lett. B **857**, 138966 (2024).

Microscopic evidence for scission neutrons, I. Abdurrahman, M. Kafker, A. Bulgac* and I. Stetcu, in: 16th Varenna Conference on Nuclear Reaction Mechanisms, Varenna, Italy, EPJ Web Conf. **292**, 08008, (2024).

Multinucleon transfer in $^{48}\text{Ti}+^{48}\text{Ti}$ collisions at 11.5 MeV/nucleon, Georgios Souliotis, Stergios Koulouris, Marcia R. D. Rodrigues, Brian Roeder, Theodoros Depastas, Njeri Edwards, Justin Mabilia, Daniela Ramirez, Thomas Settlemeyre* and Aldo Bonasera, in: HINPw7 – 7th International Workshop of the Hellenic Institute of Nuclear Physics on Nuclear Structure, Astrophysics and Reaction Dynamics, Ioannina, Greece, EPJ Web of Conferences **304**, pages 01010 (2024).

Neck Rupture and Scission Neutrons in Nuclear Fission, Ibrahim Abdurrahman*, Matthew Kafker, Aurel Bulgac* and Ionel Stetcu, Phys. Rev. Lett. **132**, 242501 (2024).

Neutron stars as dense liquid drop at equilibrium within the effective surface approximation, A. G. Magner, S. P. Maydanyuk, A. Bonasera, H. Zheng, A. I. Levon, T. M. Depastas and U. V. Grygoriev, International Journal of Modern Physics E **33**, S0218301324500435 (2024).

New Physical Insight into High-Spin Physics: Double Helix Level Scheme A nuclear structure data approach, Ninel Nica, in Workshop of the Hellenic Institute of Nuclear Physics on Nuclear Structure, Astrophys and Reaction Dynamics, Ioannina, Greece, EPJ Web of Conferences **304**, pages 04003 (2024).

Non-Markovian character and irreversibility of real-time quantum many-body dynamics, Aurel Bulgac*, Matthew Kafker, Ibrahim Abdurrahman* and Ionel Stetcu, Phys. Rev. C **109**, 064617 (2024).

Nuclear Data Sheets for A=162, N. Nica, Nuclear Data Sheets **195**, 1–367 (2024).

Pairing correlations within the micro-macroscopic approach for the level density, A. G. Magner, A. I. Sanzhur, S. N. Fedotkin, A. I. Levon, U. V. Grygoriev and S. Shlomo, The European Physical Journal A **60**, 6 (2024).

Precise measurements of the γ -ray intensities following the β decay of ^{144}Ce and ^{147}Nd , K. Kolos, N. D. Scielzo, V. E. Iacob, J. C. Hardy, A. M. Hennessy, D. E. M. Hoff, M. A. Stoyer, A. P. Tonchev, M. Bencomo,

J. A. Clark, B. Champine, P. Copp, D. Melconian*, E. B. Norman, W. J. Ong, H. I. Park, D. Santiago-Gonzalez, G. Savard, A. J. Shaka and S. Zhu, Phys. Rev. C **110**, 024307 (2024).

Production of protons and light nuclei in Au+Au collisions at $\sqrt{s_{NN}}=3$ GeV with the STAR detector, M. I. Abdulhamid and the STAR collaboration (including J. Atchison, C. A. Gagliardi, A. Hamed, T. Lin, X. Liu, Y. Liu, S. Mioduszewski and N. R. Sahoo), Phys. Rev. C **110**, 054911 (2024).

Radiative decay branching ratio of the Hoyle state, Zifeng Luo, M. Barbui, J. Bishop, G. Chubarian, V. Z. Goldberg, E. Harris, E. Koshchiy, C. E. Parker*, M. Roosa, A. Saastamoinen, D. P. Scriven* and G. V. Rogachev*, Phys. Rev. C **109**, 025801 (2024).

Radioisotope production using lasers: From basic science to applications, M. R. D. Rodrigues, A. Bonasera, M. Scisciò, J. A. Pérez-Hernández, M. Ehret, F. Filippi, P. L. Andreoli, M. Huault, H. Larreur, D. Singappuli, D. Molloy, D. Raffestin, M. Alonzo, G. G. Rapisarda, D. Lattuada, G. L. Guardo, C. Verona, Fe. Consoli, G. Petringa, A. McNamee, M. La Cognata, S. Palmerini, T. Carriere, M.G Cipriani, G. Di Giorgio, G. Cristofari, R. De Angelis, G. A. P. Cirrone, D. Margarone, L. Giuffrida, D. Batani, P. Nicolai, K. Batani, R. Lera, L. Volpe, D. Giulietti, S. Agarwal, M. Krupka, S. Singh and Fa. Consoli, Matter and Radiation at Extremes 9, 037203 (2024).

Re-evaluation of the sequential 3α reaction in stellar conditions, Theodoros Depastas, Shuting Sun, Hongbin He, Hua Zheng and Aldo Bonasera, in: HINPw7, Ioannina, Greece, EPJ Web of Conferences 304, pages 02004 (2024).

Search for toroids in excited nuclear material, A. Hannaman, B. Harvey, A. B. McIntosh, K. Hagel, L. Bills, A. Abbott*, A. Fentress, J. Gauthier, T. Hankins, Y. -W. Lui, L. A. McIntosh*, S. Regener, R. Rider, S. Schultz, M. Q. Sorensen*, J. Tobar, Z. Tobin and S. Yennello*, in: Nucleus-Nucleus 2024, Whistler, BC, Canada, EPJ Web of Conferences **304**, pages 01001 (2024).

Signatures of clustering accessible with a Time Projection Chamber: TexAT, Jack Bishop, S. Ahn, M. Barbui, Tz. Kokalova, E. Koshchiy, C. E. Parker*, S. H. Pirrie, E. C. Pollacco, B. T. Roeder, G. V. Rogachev*, A. Saastamoinen and C. Wheldon, in: The Fifth International Workshop on State of the Art in Nuclear Cluster Physics (SOTANCP5), Hvar Island, Croatia, EPJ Web of Conferences **311**, pages 00007, (2024).

The research progress of an E//B neutral particle analyzer, Long 龙 MA 马, Yufan 玉凡 QU 屈, Yuan 圆 LUO 罗, Dehao 德豪 XIE 谢, Yanxi 彦熹 WANG 汪, Shuo 硕 WANG 王, Guofeng 国峰 QU 曲, Peipei 培培 REN 任, Xiaobing 小兵 LUO 罗, Xingquan 星泉 LIU 刘, Jifeng 纪锋 HAN 韩, Roy Wada and Linge 临阁 and ZHU 朱, Jingjun 敬军 LIN 林, Weiping 炜平 and ZANG 臧, Plasma Science and Technology **26**, 034002 (2024).

Toward the Discovery of New Elements: Production of Livermorium ($Z=116$) with ^{50}Ti , J. M. Gates, R. Orford, D. Rudolph, C. Appleton, B. M. Barrios, J. Y. Benitez, M. Bordeau, W. Botha, C. M. Campbell, J.

Chadderton, A. T. Chemey, R. M. Clark, H. L. Crawford, J. D. Despotopoulos, O. Dorvaux, N. E. Esker, P. Fallon, Charles M. Folden III, B. J. P. Gall, F. H. Garcia, P. Golubev, J. A. Gooding, M. Grebo, K. E. Gregorich, M. Guerrero, R. A. Henderson, R.-D. Herzberg, Y. Hrabar, T. T. King, M. Kireeff Covo, A. S. Kirkland, R. Krücken, E. Leistenschneider, E. M. Lykiardopoulou, M. McCarthy, J. A. Mildon, C. Müller-Gatermann, L. Phair, J. L. Pore, E. Rice, K. P. Rykaczewski, B. N. Sammis, L. G. Sarmiento, D. Seweryniak, D. K. Sharp, A. Sinjari, P. Steinegger, M. A. Stoyer, J. M. Szornel, K. Thomas, D. S. Todd, P. Vo, V. Watson and P. T. Woody, Physical Review Letters 133, 172502 (2024).

Understanding the total width of the 3^- state in ^{12}C , K. C. W. Li, R. Neveling, P. Adsley*, H. Fujita, P. Papka, F. D. Smit, J. W. Brümmer, L. M. Donaldson, M. N. Harakeh, Tz. Kokalova, E. Nikolskii, W. Paulsen, L. Pellegri, S. Siem and M. Wiedeking, Phys. Rev. C **109**, 015806 (2024).

Unveiling the dynamics of little-bang nucleosynthesis, Kai-Jia Sun, Rui Wang, Che Ming Ko, Yu-Gang Ma and Chun Shen, Nature Communications 15, 1074 (2024).