



# UK Nuclear Activity

March 2023 Issue 116

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Newsletter archive: <http://npg.dl.ac.uk/OutreachNewsletter/index.html>

Nuclear Physics Public Engagement Website: [NuclearPhysicsForYou](#)

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## 1. Nuclear Physics Publications for March\*

Phys. Rev. Lett. **130** 132502 (2023) (<https://doi.org/10.1103/PhysRevLett.130.132502>)

Discovery of New Isotope  $^{241}\text{U}$  and Systematic High-Precision Atomic Mass Measurements of Neutron-Rich Pa-Pu Nuclei Produced via Multinucleon Transfer Reactions

T. Niwase *et al.*

Published 31 March 2023

Phys. Rev. Lett. **130** 122502 (2023) (<https://doi.org/10.1103/PhysRevLett.130.122502>)

First Evidence of Axial Shape Asymmetry and Configuration Coexistence in  $^{74}\text{Zn}$ : Suggestion for a Northern Extension of the N=40 Island of Inversion

M. Rocchini *et al.*

Published 24 March 2023

Phys. Rev. Lett. **130** 092701 (2023) (<https://doi.org/10.1103/PhysRevLett.130.092701>)

Measurement of the  $^{18}\text{O}(\alpha, \gamma)^{22}\text{Ne}$  Reaction Rate at JUNA and Its Impact on Probing the Origin of SiC Grains

L. H. Wang *et al.*

Published 2 March 2023

Phys. Lett. B **838** 137675 (2023) (<https://doi.org/10.1016/j.physletb.2023.137675>)

Quadrupole and octupole collectivity in the semi-magic nucleus  $^{206}\text{Hg}$

L. M. Morrison *et al.*

Published 10 March 2023

Phys. Rev. C **107** 034602 (2023) (<https://doi.org/10.1103/PhysRevC.107.034602>)

Reaction channel contributions to the triton +  $^{208}\text{Pb}$  optical potential

N. Keeley and R. S. Mackintosh

Published 3 March 2023

Phys. Rev. C **107** 035803 (2023) (<https://doi.org/10.1103/PhysRevC.107.035803>)

Cross sections of the  $^{83}\text{Rb}(p,\gamma)^{84}\text{Sr}$  and  $^{84}\text{Kr}(p,\gamma)^{85}\text{Rb}$  reactions at energies characteristic of the astrophysical  $\gamma$  process

M. Williams *et al.*

Published 13 March 2023

Eur. J. Phys. A **59** 44 (2023) (<https://doi.org/10.1140/epja/s10050-023-00950-8>)

In-beam  $\gamma$ -ray spectroscopy of  $^{94}\text{Ag}$

X. Pereira-López *et al.*

Published 15 March 2023

J. Phys. G: Nucl. Part. Phys. **50** 033002 (2023) (<https://doi.org/10.1088/1361-6471/ac9cf8>)

Progress on nuclear reaction rates affecting the stellar production of  $^{26}\text{Al}$

A. M. Laird *et al.*

Published 28 February 2023

NIM A **1050** 168166 (2023) (<https://doi.org/10.1016/j.nima.2023.168166>)

The Advanced Implantation Detector Array (AIDA)

O. Hall *et al.*

Published 23 May 2023, Available online 25 February 2023

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## 2. News to Report

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## 3. Outreach Activity

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## 4. Media Interactions

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