



# UK Nuclear Activity

January 2024 Issue 126

In this issue,

1. [Nuclear Physics Publications for January](#)
2. [News to Report](#)
  - a. [IoP Joint NP, HEPP, APP meeting - abstract deadline extended](#)
3. [Outreach Activity](#)
4. [Media Interactions](#)

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 January\*

If you are publishing a paper that you think would be of media value, please contact [Wendy Ellison](#), STFC Press Officer. She can help with press releases and publicity. If you get in touch with her before publication, she can also get material ready in advance for the day of publication.

Nature Physics (2024) (<https://doi.org/10.1038/s41567-023-02296-w>)  
Precision spectroscopy and laser-cooling scheme of a radium-containing molecule  
S. M. Udrescu *et al.*  
Published 9 January 2024

Phys. Rev. Lett. **132** 042301 (2024) (<https://doi.org/10.1103/PhysRevLett.132.042301>)  
 $\psi(2S)$  Suppression in Pb-Pb Collisions at the LHC  
S. Acharya *et al.* (ALICE Collaboration)  
Published 24 January 2024

Phys. Lett. B **849** 138412 (2024) (<https://doi.org/10.1016/j.physletb.2023.138412>)  
Measurement of the radius dependence of charged-particle jet suppression in Pb–Pb collisions at  
 $\sqrt{s_{NN}} = 5.02$  TeV  
ALICE Collaboration  
Published 22 January 2024

Phys. Lett. B **849** 138452 (2024) (<https://doi.org/10.1016/j.physletb.2024.138452>)  
Magnetic moments of thallium isotopes in the vicinity of magic N = 126  
Z. Yue *et al.*  
Published 25 January 2024

Phys. Rev. C **109** L011001 (2024) (<https://doi.org/10.1103/PhysRevC.109.L011001>)

First measurement of neutron birefringence in polarized  $^{129}\text{Xe}$  and  $^{131}\text{Xe}$  nuclei

H. Lu *et al.*

Published 4 January 2024

Phys. Rev. C **109** 014314 (2024) (<https://doi.org/10.1103/PhysRevC.109.014314>)

Electric dipole transitions in the relativistic quasiparticle random-phase approximation at finite temperature

A. Kaur, E. Yüksel, and N. Paar

Published 11 January 2024

Phys. Rev. C **109** 014318 (2024) (<https://doi.org/10.1103/PhysRevC.109.014318>)

Global properties of nuclei at finite-temperature within the covariant energy density functional theory

A. Ravić, E. Yüksel, T. Nikšić, and N. Paar

Published 16 January 2024

Phys. Rev. C **109** 014327 (2024) (<https://doi.org/10.1103/PhysRevC.109.014327>)

Suppressed electric quadrupole collectivity in  $^{32}\text{Si}$

J. Heery *et al.*

Published 25 January 2024

Phys. Rev. C **109** 014328 (2024) (<https://doi.org/10.1103/PhysRevC.109.014328>)

Measurement of the production branching ratios following nuclear muon capture for palladium isotopes using the in-beam activation method

M. Niikura *et al.*

Published 29 January 2024

Phys. Rev. C **109** 014618 (2024) (<https://doi.org/10.1103/PhysRevC.109.014618>)

Determination of fission barrier height of  $^{210}\text{Fr}$  and  $^{210}\text{Ra}$  via neutron measurement

M. Veselský *et al.*

Published 18 January 2024

Phys. Rev. C **109** 014911 (2024) (<https://doi.org/10.1103/PhysRevC.109.014911>)

System-size dependence of the hadronic rescattering effect at energies available at the CERN Large Hadron Collider

S. Acharya *et al.* (ALICE Collaboration)

Published 29 January 2024

Phys. Rev. C **109** 015806 (2024) (<https://doi.org/10.1103/PhysRevC.109.015806>)

Understanding the total width of the  $3^-_1$  state in  $^{12}\text{C}$

K. C. W. Li *et al.*

Published 29 January 2024

Eur. Phys. J. A **60** 11 (2024) (<https://doi.org/10.1140/epja/s10050-024-01233-6>)

Direct measurements of the  $^{12}\text{C}+^{12}\text{C}$  reactions cross-sections towards astrophysical energies

L. Morales-Gallegos *et al.*

Published 22 January 2024

Il Nuovo Cimento C **47** 26 (2024) (<http://dx.doi.org/10.1393/ncc/i2024-24026-y>)

Isoscalar giant monopole resonance in Mo-100: TDHF calculations and ground state deformation

P. D. Stevenson, Abhishek, Y. Shi

Published 17 January 2024

\*Also includes missed publications from previous months

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## 2. News to Report

***a. IoP Joint NP, HEPP, APP meeting - abstract deadline extended***

The abstract deadline for the 2024 joint meeting between the Institute of Physics' Nuclear Physics, High-Energy Particle Physics and Astroparticle Physics groups has been

extended until the 16<sup>th</sup> of February. The conference will be held in Liverpool from the 8th-11th of April. Further details and instructions on abstract submission can be found on the [conference website](#).

*Contributed by Jack Henderson, IoP NPG Chair*

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**3. Outreach Activity**

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**4. Media Interactions**

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