



UK Nuclear Activity

August 2026 Issue 157

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

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

Support for ECR travel and other research expenses is available from the IoP.

Support is typically at the level of about £300. Applications typically require the completion of a short form, and are reviewed periodically, so try to apply well in advance.

IoP Support and grants: <https://www.iop.org/about/support-grants>

1. Nuclear Physics Publications for August*

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.

Phys. Rev. Lett. **137** 082501 (2026) (<https://doi.org/10.1103/7gzt-ldn5>)

Deformation and Magicity in Heavy Actinides: First Observation of the Ground-State Rotational Band of ^{252}Fm

R. Orlandi *et al.*

Published 17 August 2026

Phys. Rev. Lett. **137** 082301 (2026) (<https://doi.org/10.1103/gymp-vp87>)

Evidence of Nuclear Geometry-Driven Anisotropic Flow in O+O and Ne+Ne Collisions at $\sqrt{s_{\text{NN}}}=5.36$ TeV
I. J. Abualrob *et al.* (ALICE Collaboration)

Published 17 August 2026

Phys. Rev. Lett. **137** 082701 (2026) (<https://doi.org/10.1103/538w-rhqb>)

First $^{94}\text{Nb}(n,\gamma)$ Measurement: Constraining the Nucleosynthetic Origin of ^{94}Mo in Presolar Grains

J. Balibrea-Correa *et al.*

Published 18 August 2026

- Phys. Lett. B **880** 140766 (2026) (<https://doi.org/10.1016/j.physletb.2026.140766>)
Measurement of the transverse-momentum fraction of strange hadrons from jet-like correlation structures in pp collisions at $\sqrt{s}=13$ TeV
D. A. H. Abdallah *et al.* (ALICE Collaboration)
Published 05 August 2026
- Phys. Lett. B **880** 140790 (2026) (<https://doi.org/10.1016/j.physletb.2026.140790>)
Structure of the semi-magic ^{203}Ir and ^{202}Os nuclei
G. Bartram *et al.*
Published 08 August 2026
- Phys. Rev. C **114** L021304 (2026) (<https://doi.org/10.1103/442b-1n6g>)
 $\pi h_{11/2}$ rotational structure in the neutron-deficient rare-earth nucleus ^{131}Pm
C. M. Sullivan *et al.*
Published 25 August 2026
- Phys. Rev. C **114** 024002 (2026) (<https://doi.org/10.1103/tqp4-kwrt>)
Measurement of π^0 -hadron correlations relative to the event plane in semicentral Pb-Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV
D. A. H. Abdallah *et al.* (ALICE Collaboration)
Published 20 August 2026
- Phys. Rev. C **114** 024303 (2026) (<https://doi.org/10.1103/44zk-rh97>)
Complete set of low-spin single-particle excitations in ^{115}I and their evolution toward termination
P. M. Jodidar *et al.*
Published 3 August 2026
- Phys. Rev. C **114** 024320 (2026) (<https://doi.org/10.1103/mxx4-sxv2>)
Isomeric states in ^{165}W and ^{169}W
H. Joukainen *et al.*
Published 12 August 2026
- Phys. Rev. C **114** 024332 (2026) (<https://doi.org/10.1103/d6vm-5jfl>)
Evolution and coexistence of low-lying configurations in the $N=80$ isotones
Y. X. Yu *et al.*
Published 20 August 2026
- Phys. Rev. C **114** 024338 (2026) (<https://doi.org/10.1103/n2jr-6c42>)
Emergence of quadrupole and octupole collectivity near $N=50$ and $Z=40$: Coulomb excitation of ^{92}Mo
J. Heery *et al.*
Published 25 August 2026
- Phys. Rev. C **114** 024342 (2026) (<https://doi.org/10.1103/smjm-rplr>)
Yrast-state lifetimes in ^{94}Pd at the transition between the isoscalar and isovector coupling regimes
Y. Jang *et al.*
Published 25 August 2026
- Phys. Rev. C **114** 024346 (2026) (<https://doi.org/10.1103/z381-vk5n>)
Improved β -decay properties of the $A=105$ isobars from Rh to Mo
T. J. Ruland *et al.*
Published 31 August 2026

- Phys. Rev. C **114** 024901 (2026) (<https://doi.org/10.1103/xtf2-bsc9>)
Strangeness production as a function of charged-particle multiplicity in proton-proton collisions at $\sqrt{s}=5.02$ TeV
I. J. Abualrob *et al.* (ALICE Collaboration)
Published 3 August 2026
- Phys. Rev. C **114** 024909 (2026) (<https://doi.org/10.1103/j21y-pqd6>)
Centrality dependence of strange particle production in Pb-Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV
I. J. Abualrob *et al.* (ALICE Collaboration)
Published 20 August 2026
- Phys. Rev. D **114** 032002 (2026) (<https://doi.org/10.1103/tgtl-7xh9>)
Exposing the parton-hadron transition within jets with energy-energy correlators in pp collisions at $\sqrt{s} = 5.02$ TeV
S. Acharya *et al.* (ALICE Collaboration)
Published 4 August 2026
- Phys. Rev. C **114** 024901 (2026) (<https://doi.org/10.1103/xtf2-bsc9>)
Strangeness production as a function of charged-particle multiplicity in proton-proton collisions at $\sqrt{s} = 5.02$ TeV
I.J. Abualrob *et al.* (ALICE Collaboration)
Published 3 August 2026
- Nucl. Instr. and Meth. in Phys. Res. B **580** 166276 (2026) (<https://doi.org/10.1016/j.nimb.2026.166276>)
Measurement of the stopping power for ^{12}C in ^4He gas
D. Torresi *et al.*
Published 5 August 2026
- Mod. Phys. Lett. A **41** 2650137 (2026) (<https://doi.org/10.1142/S0217732326501373>)
The role of the surface energy in nuclear octupole excitations
Khlood Alharthi and Paul Stevenson
Published 19 May 2026
- Atoms **14** 63 (2026) (<https://doi.org/10.3390/atoms14080063>)
First direct mass measurement of ^{184}Ta and surrounding nuclei
J.M. Yap *et al.*
Published 01 August 2026
- Eur. Phys. J. A **62** 187 (2026) (<https://doi.org/10.1140/epja/s10050-026-01950-0>)
Identification of a nanosecond isomer of ^{164}Tb
J. P. Bormans *et al.*
Published 03 August 2026
- Eur. Phys. J. A **62** 168 (2026) (<https://doi.org/10.1140/epja/s10050-026-01931-3>)
Regular Article- Experimental Physics Pandemonium free data for the JEFF-project
A. Algora *et al.*
Published 11 August 2026
- Eur. Phys. J. A **62** 157 (2026) (<https://doi.org/10.1140/epja/s10050-026-01909-1>)
Electro- and photoproduction of muon pairs with μCLAS12 : double deeply virtual compton scattering, timelike compton scattering, and J/ψ production
J. S. Alvarado *et al.*
Published 01 August 2026

Eur. Phys. J. Plus **141** 914 (2026) (<https://doi.org/10.1140/epjp/s13360-026-07626-4>)
Time resolution of the ALICE time-of-flight detector with the first Run 3 pp collisions at $\sqrt{s} = 13.6$ TeV
I. J. Abualrob *et al.* (ALICE Collaboration)
Published 7 August 2026

Eur. Phys. J. Web of Conf. **378** 01011 (2026) (<https://doi.org/10.1051/epjconf/202637801011>)
New region of maximum octupole collectivity in the rare-earth nuclei: The case of Gd isotopes
S. Pascu *et al.*
Published 05 May 2026

Eur. Phys. J. Web of Conf. **378** 01013 (2026) (<https://doi.org/10.1051/epjconf/202637801013>)
Nuclear spectroscopy of neutron-rich Ta, W, Re at KISS
M. Mukai *et al.*
Published 05 August 2026

Eur. Phys. J. Web of Conf. **378** 01009 (2026) (<https://doi.org/10.1051/epjconf/202637801009>)
Decay spectroscopy of a high-spin long-lived isomer in ^{187}Ta using KISS facility
J.L. Chen *et al.*
Published 05 August 2026

*Also includes missed publications from previous months

2. News to Report

a. UK contribution to Quantum Physics of Stars workshop

Alexis Diaz-Torres from the University of Surrey presented at the [Quantum Physics of Stars](#) workshop, hosted by the Institute for Nuclear Theory. The workshop focussed on the fundamental quantum mechanical processes which drive the nuclear reaction rates in stellar environments. Alexis spoke on a microscopic

quantum dynamical approach to carbon burning in stars.

Contribution from Alexis Diaz-Torres (University of Surrey)

3. Outreach Activity

4. Media Interactions