



UK Nuclear Activity

June 2026 Issue 155

In this issue,

1. [Nuclear Physics Publications for June](#)
2. [News to Report](#)
 - a. [Cluster'26 conference hosted in London](#)
 - b. [Detector R&D and Commercialisation workshop held in Liverpool](#)
3. [Outreach Activity](#)
4. [Media Interactions](#)

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

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

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

1. Nuclear Physics Publications for June*

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** 012501 (2026) (<https://doi.org/10.1103/ztcl-lpdf>)

Multifaceted Decay of ^{116}Cs

J. Dey *et al.*

Published 29 June 2026

Phys. Rev. Lett. **136** 252701 (2026) (<https://doi.org/10.1103/9zv2-wlkl>)

Identification of Resonant States in the $^{45}\text{V}(p,\gamma)^{46}\text{Cr}$ Reaction and Their Influence on the Production of ^{44}Ti in Core-Collapse Supernovae

C. Cousins *et al.*

Published 23 June 2026

Phys. Rev. Lett. **136** 232504 (2026) (<https://doi.org/10.1103/z93q-9g6y>)

Beta-Delayed Neutron Emission of $N=84$ ^{132}Cd

M. Madurga *et al.*

Published 11 June 2026

Phys. Rev. Lett. **136** 222501 (2026) (<https://doi.org/10.1103/3vts-dwst>)

$N=8$ Shell Breaking in ^{12}Be from a Single-Particle Perspective

J. Chen *et al.*

Published 2 June 2026

Phys. Lett. B **879** 140595 (2026) (<https://doi.org/10.1016/j.physletb.2026.140595>)

Probing QFS mechanism with the $^{12}\text{C}(p, 2p)^{11}\text{B}$ reaction in inverse kinematics

V. Panin *et al.*

Published 2 June 2026

Phys. Lett. B **879** 140668 (2026) (<https://doi.org/10.1016/j.physletb.2026.140668>)

Shape coexistence in ^{94}Zr from a model-independent analysis

N. Marchini *et al.*

Published 30 Jun 2026

Phys. Rev. C **113** 064320 (2026) (<https://doi.org/10.1103/jrh6-rh6h>)

Inelastic neutron scattering on ^{238}U with γ -ray coincidence spectroscopy

C. Chatel *et al.*

Published 30 June 2026

Phys. Rev. C **113** 064322 (2026) (<https://doi.org/10.1103/393p-ghvk>)

Multiple valence-space and core-excited band terminations in Ho and Er isotopes

E. S. Paul *et al.*

Published 30 June 2026

Phys. Rev. C **113** 064903 (2026) (<https://doi.org/10.1103/by8d-d9z2>)

Riemannian geometry of the moment manifold in relativistic kinetic theory and the approach to hydrodynamics

C. S. Wright

Published 8 June 2026

Phys. Rev. C **113** 065202 (2026) (<https://doi.org/10.1103/9tk1-2dxd>)

New high-statistics measurement of the $\pi^0 \rightarrow e^+e^-\gamma$ Dalitz decay at the Mainz Microtron

S. Prakhov *et al.* (A2 Collaboration)

Published 5 June 2026

Phys. Rev. C **113** 065203 (2026) (<https://doi.org/10.1103/lqv1-kf2n>)

Measurement of the near-threshold J/ψ photoproduction cross section with the CLAS12 experiment

P. Chatagnon *et al.* (CLAS Collaboration)

Published 9 June 2026

Phys. Rev. C **113** 065806 (2026) (<https://doi.org/10.1103/h5h1-xrj2>)

Measurement of high-energy resonances in ^{22}Ne through inverse kinematics

B. Greaves *et al.*

Published 17 June 2026

J. Phys. G **53** 065107 (2026) (<https://doi.org/10.1088/1361-6471/ae7d44>)

Differential cross sections for $^{12}\text{C}(n, \alpha_0)$, $^{16}\text{O}(n, \alpha_0)$ and $^{16}\text{O}(n, \alpha_{1,2,3})$ between $E_n = 7.2$ and 10 MeV with an active-target time projection chamber

J. Bishop *et al.*

Published 26 June 2026

Eur. J. Phys. A **62** 123 (2026) (<https://doi.org/10.1140/epja/s10050-026-01883-8>)

High-precision mass and β -decay Q-value measurement of ^{129}Sb and its isomer

M. Winter *et al.*

Published 23 June 2026

Eur. J. Phys. A **62** 114 (2026) (<https://doi.org/10.1140/epja/s10050-026-01873-w>)

Evolution of the nuclear structure in neutron-rich Cu isotopes: first spectroscopy of odd-odd ^{74}Cu and ^{76}Cu

L. G. Pedersen *et al.*

Published 10 June 2026

Nucl. Instr. Meth. Phys. Res. A **1092** 171767 (2026) (<https://doi.org/10.1016/j.nima.2026.171767>)

A new detection array for underground charged particle spectroscopy at LUNA-400

L. Barbieri *et al.*

Published 20 June 2026

Nucl. Instr. Meth. Phys. Res. A **1091** 171763 (2026) (<https://doi.org/10.1016/j.nima.2026.171763>)

Fast neutron spectroscopy in CeBr_3 via advanced pulse shape discrimination

J. O'Neill *et al.*

Published 16 June 2026

Nucl. Instr. Meth. Phys. Res. A **1089** 171563 (2026) (<https://doi.org/10.1016/j.nima.2026.171563>)

CHICOX, a heavy-ion detection system for GRETA

D. M. Rhodes *et al.*

Published 16 April 2026

*Also includes missed publications from previous months

2. News to Report

a. Cluster'26 conference hosted in London

From 8-12th June 2026, the IOP headquarters in London welcomed a total of 82 delegates to participate in the 12th International Conference on Clustering Aspects of Nuclear Structure and Dynamics.



The first edition of this long-running conference series took place in Bochum, Germany in 1969, and has since been held in a total of 8 different countries, with the last edition in Napoli, Italy, in 2016. Due to the COVID-19 pandemic, there was no conference for over 10 years, so it was extra special to invite world leaders in nuclear cluster physics

to London for this long-overdue showcase of a decade's worth of progress in the field.

The talks and posters covered many aspects of nuclear cluster-related physics including the latest innovations in many-body ab initio structure calculations, advances in nuclear reaction theory, the role of clustered states in nuclear astrophysics, along with a broad range of novel experimental techniques and latest high-impact results, providing insights into clustering in nuclei.

Sponsorship from Mirion Technologies, EURO-LABS, EMMI and NuPECC helped to fund several aspects of the conference, not least the significantly reduced registration fees for contributing Early Career Researchers (ECR, less than 5 years post-PhD, accounting for career breaks). As such, Thursday 11th June featured a dedicated ECR session, where future leaders in the field presented their work, spanning a broad range of topics. We thoroughly thank the International Advisory Committee for their suggestions of ECR researchers who could contribute to this session.

The conference was closed by Alessia Di Pietro (INFN Catania) and Masaaki Kimura (RIKEN) who expertly summarised the progress

highlighted in the conference from experimental and theoretical perspectives, respectively. A final open discussion session, chaired by Jack Bishop instigated some lively dialogue around fundamental questions in nuclear clustering and highlighted potential directions for the field in the build-up to the next edition of the conference, which is set to take place in Catania, Italy, in 2030.

Funding from NuPECC provided funds for prizes. The awards for best contributions were swept up by UK-based PhD students, with best poster going to Olivia Tindle (Sheffield Hallam), and best talks going to Miriam Davies (Surrey) and Benjamin Wood (Birmingham).

On Tuesday 9th June, the conference dinner was held on the imposing HMS Belfast, docked on the river Thames near London Bridge, with attendees free to explore the ship's museum between courses. On Wednesday 10th June, delegates enjoyed the sights of London with informal excursions including a boat trip along the Thames, and visits to London's many museums and galleries.

Contribution by Robin Smith on behalf of the local organising committee:

Jack Bishop, Birmingham (Chair); Jagjit Singh, Manchester (Co-chair); Robin Smith, Sheffield Hallam (Co-chair); Marialuisa Aliotta, Edinburgh; Kevin Becker, Edinburgh (ECR-representative); David Jenkins, York; Alison Laird, York; Ragandeep Singh Sidhu, Surrey (Finance-secretary).

b. Detector R&D and Commercialisation workshop held in Liverpool

A workshop was held at the University of Liverpool to bring together academic and industrial members of the radiation detector

research and development community. The workshop focussed on productive routes for collaboration between academia and industry, with talks from leading members of both communities, as well as from potential funders.

A large fraction of the workshop was dedicated to networking, providing an opportunity for connections between potential partners to be forged.



The event was well-attended, with about forty members of the academic, national lab and industrial community present. Feedback received from attendees was positive, and indicated a desire for the event to repeat - likely on an annual basis.

Funding for the event was provided by the IoP Nuclear Physics Group.

*Contribution from Jack Henderson, University of Surrey for the organisers:
Ellis Rintoul (University of Liverpool)
David Sharp (Rapiscan and University of Manchester)*

3. Outreach Activity

4. Media Interactions