UK Nuclear Activity

October 2024 Issue 135

In this issue,

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 October*

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.
*Also includes missed publications from previous months

Nature Physics (2024) (https://doi.org/10.1038/s41567-024-02680-0)
In-beam spectroscopy reveals competing nuclear shapes in the rare isotope ^{62}Cr
A. Gade *et al.*
Published 18 October 2024

Scientific Reports **14** 25621 (2024) (https://doi.org/10.1038/s41598-024-76975-w)
High-resolution laser spectroscopy of singly charged natural uranium isotopes
A. Raggio *et al.*
Published 27 October 2024

Nature **634** 1075 (2024) (https://doi.org/10.1038/s41586-024-08062-z)
Smooth trends in fermium charge radii and the impact of shell effects
J. Warbinek *et al.*
Published 30 October 2024

Phys. Rev. Lett. **133** 172502 (2024) (https://doi.org/10.1103/PhysRevLett.133.172502)
Toward the Discovery of New Elements: Production of Livermorium (Z=116) with ^{50}Ti
J. M. Gates *et al.*
Published 21 October 2024

Edited by Jack Henderson, IOP Nuclear Physics Group Committee
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Phys. Lett. B **858** 139047 (2024) (https://doi.org/10.1016/j.physletb.2024.139047)
Triaxial deformation in neutron-rich Zr nuclei explored by high-resolution in-beam γ-ray spectroscopy
B. Moon *et al.*
Published 3 October 2024

Phys. Lett. B **858** 139048 (2024) (https://doi.org/10.1016/j.physletb.2024.139048)
Direct observation of E0 transitions in 188Pb through in-beam spectroscopy
P. Papadakis *et al.*
Published 3 October 2024

Phys. Rev. C **110** 044304 (2024) (https://doi.org/10.1103/PhysRevC.110.044304)
Collectivity and shapes in light cesium nuclei: Band structures in ^{117}Cs
P. M. Jodidar *et al.*
Published 4 October 2024

Phys. Rev. C **110** 044308 (2024) (https://doi.org/10.1103/PhysRevC.110.044308)
Spectroscopic study of ^{97}Mo, ^{99}Mo, and ^{101}Mo
V. Kumar *et al.*
Published 9 October 2024

Phys. Rev. C **110** 044601 (2024) (https://doi.org/10.1103/PhysRevC.110.044601)
Magnetic dipole contribution to the γ spectrum from d–t collisions
N. K. Timofeyuk
Published 7 October 2024

Phys. Rev. C **110** 044612 (2024) (https://doi.org/10.1103/PhysRevC.110.044612)
Cross-section measurements of neutron-induced reactions on Ge isotopes in the neutron energy range 14.0–18.9 MeV
S. Chasapglou *et al.*
Published 25 October 2024

Phys. Rev. C **110** 044614 (2024) (https://doi.org/10.1103/PhysRevC.110.044614)
Investigation of direct nuclear reactions in a storage ring using in-ring detection
J. C. Zamora *et al.*
Published 30 October 2024

Eur. Phys. Jour. A **60** 206 (2024) (https://doi.org/10.1140/epja/s10050-024-01401-8)
Reflections on the science and impact of Bent Herskind
S. Leoni *et al.*
Published 14 October 2024

Eur. Phys. Jour. C **84** 1079 (2024) (https://doi.org/10.1140/epjc/s10052-024-13228-0)
Multiplicity dependence of charged-particle intra-jet properties in pp collisions at $\sqrt{s}$ = 13 TeV
ALICE Collaboration., Acharya, S., Adamová, D. et al.
Published 17 October 2024

J. High Energ. Phys. 2024 110 (2024) (https://doi.org/10.1007/JHEP10(2024)110)
Measurement of beauty-quark production in pp collisions at $\sqrt{s}$ = 13 TeV via non-prompt D mesons
The ALICE collaboration., Acharya, S., Adamová, D. et al.
Published 15 October 2024

EPJ Web of Conferences **306** 01031 (2024) (https://doi.org/10.1051/epjconf/202430601031)
Coulomb and symmetry-energy effects on proton and neutron density-distributions in central heavy-ion collisions, across beam energies and system masses
Jirina R. Stone, Pawel Danielewicz and Yoritaka Iwata
Published 18th October 2024

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2. News to Report

a. First FAUST Science Workshop announcement

The first FAUST science workshop will be held at the Institute of Physics building in London on the 14th and 15th of April, 2025. FAUST is an STFC-funded project to construct a state-of-the-art, charged-particle detection system at FRIB. This system will be coupled to the GRETA high-purity germanium array and S800 spectrometer, with the goal of performing reaction studies at the extremes of the nuclear landscape, using fast beams.

The workshop will include discussions of the current project status and plans, including anticipated timelines and capabilities. We will also invite contributions for potential scientific priorities.

Registration for the event will be opened in the New Year.

Contribution from Jack Henderson (University of Surrey) for the FAUST Collaboration

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3. Outreach Activity

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4. Media Interactions

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