



UK Nuclear Activity

April 2020 Issue 82

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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 April (also includes missed publications from previous months)

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 (2020)

<https://www.nature.com/articles/s41567-020-0868-y>

Measurement and microscopic description of odd–even staggering of charge radii of exotic copper isotopes

R. P. de Groote¹, J. Billowes, C. L. Binnersley, M. L. Bissell, T. E. Cocolios, T. Day Goodacre, G. J. Farooq-Smith, D. V. Fedorov, K. T. Flanagan, S. Franchoo, R. F. Garcia Ruiz, W. Gins, J. D. Holt, Á. Koszorús, K. M. Lynch, T. Miyagi, W. Nazarewicz, G. Neyens, P.-G. Reinhard, S. Rothe, H. H. Stroke, A. R. Vernon, K. D. A. Wendt, S. G. Wilkins, Z. Y. Xu and X. F. Yang

Published 13 April 2020

Phys. Rev. Lett. **124** 152501

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.152501>

Establishing the Maximum Collectivity in Highly Deformed N=Z Nuclei

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Published 16 April 2020

Phys. Rev. Lett. **124**, 152502

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.152502>

Extending the Southern Shore of the Island of Inversion to 28F

[A. Revel](#)¹, [O. Sorlin](#)¹, [F. M. Marqués](#)², [Y. Kondo](#)³, [J. Kahlbow](#)^{4,5}, [T. Nakamura](#)³, [N. A. Orr](#)², [F. Nowacki](#)^{6,7}, [J. A. Tostevin](#)⁸, [C. X. Yuan](#)⁹, [N. L. Achouri](#)², [H. Al Falou](#)¹⁰, [L. Atar](#)⁴, [T. Aumann](#)^{4,11}, [H. Baba](#)⁵, [K. Boretzky](#)¹¹, [C. Caesar](#)^{4,11}, [D. Calvet](#)¹², [H. Chae](#)¹³, [N. Chiga](#)⁵, [A. Corsi](#)¹², [H. L. Crawford](#)¹⁴, [F. Delaunay](#)², [A. Delbart](#)¹², [Q. Deshayes](#)², [Z. Dombrádi](#)¹⁵, [C. A. Douma](#)¹⁶, [Z. Elekes](#)¹⁵, [P. Fallon](#)¹⁴, [I. Gašparić](#)^{17,5}, [J.-M. Gheller](#)¹², [J. Gibelin](#)², [A. Gillibert](#)¹², [M. N. Harakeh](#)^{11,16}, [W. He](#)⁵, [A. Hirayama](#)³, [C. R. Hoffman](#)¹⁸, [M. Holl](#)¹¹, [A. Horvat](#)¹¹, [Á. Horváth](#)¹⁹, [J. W. Hwang](#)²⁰, [T. Isobe](#)⁵, [N. Kalantar-Nayestanaki](#)¹⁶, [S. Kawase](#)²¹, [S. Kim](#)²⁰, [K. Kisamori](#)⁵, [T. Kobayashi](#)²², [D. Körper](#)¹¹, [S. Koyama](#)²³, [I. Kuti](#)¹⁵, [V. Lapoux](#)¹², [S. Lindberg](#)²⁴, [S. Masuoka](#)²⁵, [J. Mayer](#)²⁶, [K. Miki](#)²⁷, [T. Murakami](#)²⁸, [M. Najafi](#)¹⁶, [K. Nakano](#)²¹, [N. Nakatsuka](#)²⁸, [T. Nilsson](#)²⁴, [A. Obertelli](#)¹², [F. de Oliveira Santos](#)¹, [H. Otsu](#)⁵, [T. Ozaki](#)³, [V. Panin](#)⁵, [S. Paschalis](#)⁴, [D. Rossi](#)⁴, [A. T. Saito](#)³, [T. Saito](#)²³, [M. Sasano](#)⁵, [H. Sato](#)⁵, [Y. Satou](#)²⁰, [H. Scheit](#)⁴, [F. Schindler](#)⁴, [P. Schrock](#)²⁵, [M. Shikata](#)³, [Y. Shimizu](#)⁵, [H. Simon](#)¹¹, [D. Sohler](#)¹⁵, [L. Stuhl](#)⁵, [S. Takeuchi](#)³, [M. Tanaka](#)²⁹, [M. Thoennessen](#)²⁷, [H. Törnqvist](#)⁴, [Y. Togano](#)³, [T. Tomai](#)³, [J. Tscheuschner](#)⁴, [J. Tsubota](#)³, [T. Uesaka](#)⁵, [Z. Yang](#)⁵, [M. Yasuda](#)³, and [K. Yoneda](#)⁵ (SAMURAI21 collaboration)

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Phys. Rev. C **101**, 042802(R)

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.042802>

2H(p,γ)3He cross section measurement using high-energy-density plasmas

[A. B. Zylstra](#), [H. W. Herrmann](#), [Y. H. Kim](#), [A. McEvoy](#), [J. A. Frenje](#), [M. Gatu Johnson](#), [R. D. Petrasso](#), [V. Yu. Glebov](#), [C. Forrest](#), [J. Delettrez](#), [S. Gales](#), and [M. Rubery](#)

Published 27 April 2020

Phys. Rev. C **101**, 044312

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.044312>

First candidates for γ vibrational bands built on the [505]11/2⁻ neutron orbital in odd-A Dy isotopes

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Published 20 April 2020

Phys. Rev. C **101**, 044611

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.044611>

Global polarization of Λ^{\pm} hyperons in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV

[S. Acharya et al.](#) (ALICE Collaboration)

Published 20 April 2020

Phys. Rev. C **101**, 044906

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.044906>

Production of (anti-)3He and (anti-)3H in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV

[S. Acharya et al.](#) (ALICE Collaboration)

Published 28 April 2020

Phys. Rev. C **101**, 044311

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.044311>

Shape evolution of neutron-rich 106,108,110Mo isotopes in the triaxial degree of freedom

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Phys. Rev. C **101**, 044907

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.044907>

Production of charged pions, kaons, and (anti-)protons in Pb-Pb and inelastic pp collisions at $\sqrt{s_{NN}}=5.02$ TeV

[S. Acharya *et al.*](#) (ALICE Collaboration)

Published 29 April 2020

Phys. Rev. C **101**, 042801(R)

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.042801>

β -decay half-lives of 55 neutron-rich isotopes beyond the N=82 shell gap

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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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