



# UK Nuclear Activity

June 2020 Issue 84

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

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## 1. Nuclear Physics Publications for June (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.

Proc. Royal Soc. A, **476**: 20190703 (Editor's pick)

<https://royalsocietypublishing.org/doi/10.1098/rspa.2019.0703>

Gamow's cyclist: a new look at relativistic measurements for a binocular observer

[E. A. Cryer-Jenkins](#) and [P. D. Stevenson](#)

Published 3 June 2020

Phys. Rev. Lett. **124**, 222501

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.222501>

Metastable States of  $^{92,94}\text{Se}$ : Identification of an Oblate K Isomer of  $^{94}\text{Se}$  and the Ground-State Shape Transition between N=58 and 60

[C. Lizarazo](#)<sup>1,2</sup>, [P.-A. Söderström](#)<sup>1,3,4,\*</sup>, [V. Werner](#)<sup>1</sup>, [N. Pietralla](#)<sup>1</sup>, [P. M. Walker](#)<sup>5</sup>, [G. X. Dong](#)<sup>6</sup>, [F. R. Xu](#)<sup>7</sup>, [T. R. Rodríguez](#)<sup>8</sup>, [F. Browne](#)<sup>9</sup>, [P. Doornenbal](#)<sup>3</sup>, [S. Nishimura](#)<sup>3</sup>, [C. R. Niță](#)<sup>10</sup>, [A. Obertelli](#)<sup>1,3,11</sup>, [T. Ando](#)<sup>3,12</sup>, [T. Arici](#)<sup>2</sup>, [G. Authelet](#)<sup>11</sup>, [H. Baba](#)<sup>3</sup>, [A. Blazhev](#)<sup>13</sup>, [A. M. Bruce](#)<sup>9</sup>, [D. Calvet](#)<sup>11</sup>, [R. J. Carroll](#)<sup>5</sup>, [F. Château](#)<sup>11</sup>, [S. Chen](#)<sup>3,7</sup>, [L. X. Chung](#)<sup>14</sup>, [A. Corsi](#)<sup>11</sup>, [M. L. Cortés](#)<sup>1,2,3</sup>, [A. Delbart](#)<sup>11</sup>, [M. Dewald](#)<sup>13</sup>, [B. Ding](#)<sup>15</sup>, [F. Flavigny](#)<sup>16</sup>, [S. Franchoo](#)<sup>16</sup>, [J. Gerl](#)<sup>2</sup>, [J.-M. Gheller](#)<sup>11</sup>, [A. Giganon](#)<sup>11</sup>, [A. Gillibert](#)<sup>11</sup>, [M. Górska](#)<sup>2</sup>, [A. Gottardo](#)<sup>16</sup>, [I. Kojouharov](#)<sup>2</sup>, [N. Kurz](#)<sup>2</sup>, [V. Lapoux](#)<sup>11</sup>, [J. Lee](#)<sup>17</sup>, [M. Lettmann](#)<sup>1</sup>, [B. D. Linh](#)<sup>14</sup>, [J. J. Liu](#)<sup>17</sup>, [Z. Liu](#)<sup>15,18</sup>, [S. Momiyama](#)<sup>3,12</sup>, [K. Moschner](#)<sup>13</sup>, [T. Motobayashi](#)<sup>3</sup>, [S. Nagamine](#)<sup>12</sup>, [N. Nakatsuka](#)<sup>19</sup>, [M. Niihara](#)<sup>12</sup>, [C. Nobs](#)<sup>9</sup>, [L. Olivier](#)<sup>16</sup>, [Z. Patel](#)<sup>5</sup>, [N. Paul](#)<sup>11,3</sup>, [Zs. Podolyák](#)<sup>5</sup>, [J.-Y. Rousse](#)<sup>11</sup>, [M. Rudigier](#)<sup>5</sup>, [T. Y. Saito](#)<sup>12</sup>, [H. Sakurai](#)<sup>3,12</sup>, [C. Santamaria](#)<sup>11</sup>, [H. Schaffner](#)<sup>2</sup>, [C. Shand](#)<sup>5</sup>, [I. Stefan](#)<sup>16</sup>, [D. Steppenbeck](#)<sup>3</sup>, [R. Taniuchi](#)<sup>3,12</sup>, [T. Uesaka](#)<sup>3</sup>, [V. Vaquero](#)<sup>20</sup>, [K. Wimmer](#)<sup>12</sup>, and [Z. Xu](#)<sup>17</sup>

Published 1 June 2020

Phys. Rev. Lett. **124**, 222503

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.222503>

**High-Precision Q-Value Measurement Confirms the Potential of  $^{135}\text{Cs}$  for Absolute Antineutrino Mass Scale Determination**

[A. de Roubin](#)<sup>\*</sup>, [J. Kostensalo](#), [T. Eronen](#), [L. Canete](#)<sup>†</sup>, [R. P. de Groote](#), [A. Jokinen](#), [A. Kankainen](#), [D. A. Nesterenko](#), [I. D. Moore](#), [S. Rinta-Antila](#), [J. Suhonen](#), and [M. Vilén](#)<sup>‡</sup>

Published 5 June 2020

Phys. Rev. Lett. **124**, 222504

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.222504>

**Two-Neutron Halo is Unveiled in  $^{29}\text{F}$**

[S. Bagchi](#)<sup>i1,2,3</sup>, [R. Kanungo](#)<sup>1,4,\*</sup>, [Y. K. Tanaka](#)<sup>1,2,3</sup>, [H. Geissel](#)<sup>2,3</sup>, [P. Doornenbal](#)<sup>5</sup>, [W. Horiuchi](#)<sup>6</sup>, [G. Hagen](#)<sup>7,8</sup>, [T. Suzuki](#)<sup>9</sup>, [N. Tsunoda](#)<sup>10</sup>, [D. S. Ahn](#)<sup>5</sup>, [H. Baba](#)<sup>5</sup>, [K. Behr](#)<sup>2</sup>, [F. Browne](#)<sup>5</sup>, [S. Chen](#)<sup>5</sup>, [M. L. Cortés](#)<sup>5</sup>, [A. Estradé](#)<sup>11</sup>, [N. Fukuda](#)<sup>5</sup>, [M. Holl](#)<sup>1,4</sup>, [K. Itahashi](#)<sup>5</sup>, [N. Iwasa](#)<sup>12</sup>, [G. R. Jansen](#)<sup>7,13</sup>, [W. G. Jiang](#)<sup>8,7</sup>, [S. Kaur](#)<sup>1,14</sup>, [A. O. Macchiavelli](#)<sup>15</sup>, [S. Y. Matsumoto](#)<sup>16</sup>, [S. Momiyama](#)<sup>17</sup>, [I. Murray](#)<sup>5,18</sup>, [T. Nakamura](#)<sup>19</sup>, [S. J. Novario](#)<sup>8,7</sup>, [H. J. Ong](#)<sup>20,†</sup>, [T. Otsuka](#)<sup>5,17</sup>, [T. Papenbrock](#)<sup>8,7</sup>, [S. Paschalis](#)<sup>21</sup>, [A. Prochazka](#)<sup>2</sup>, [C. Scheidenberger](#)<sup>2,3</sup>, [P. Schrock](#)<sup>22</sup>, [Y. Shimizu](#)<sup>5</sup>, [D. Steppenbeck](#)<sup>5,22</sup>, [H. Sakurai](#)<sup>5,17</sup>, [D. Suzuki](#)<sup>5</sup>, [H. Suzuki](#)<sup>5</sup>, [M. Takechi](#)<sup>23</sup>, [H. Takeda](#)<sup>5</sup>, [S. Takeuchi](#)<sup>19</sup>, [R. Taniuchi](#)<sup>17,21</sup>, [K. Wimmer](#)<sup>17</sup>, and [K. Yoshida](#)<sup>5</sup>

Published 5 June 2020

Phys. Rev. Lett. **124**, 252702

<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.124.252702>

**Search for Nova Presolar Grains:  $\gamma$ -Ray Spectroscopy of  $^{34}\text{Ar}$  and its Relevance for the Astrophysical  $^{33}\text{Cl}(p,\gamma)$  Reaction**

[A. R. L. Kennington](#)<sup>1</sup>, [G. Lotay](#)<sup>1</sup>, [D. T. Doherty](#)<sup>1</sup>, [D. Seweryniak](#)<sup>2</sup>, [C. Andreoiu](#)<sup>3</sup>, [K. Auranen](#)<sup>2,\*</sup>, [M. P. Carpenter](#)<sup>2</sup>, [W. N. Catford](#)<sup>1</sup>, [C. M. Deibel](#)<sup>4</sup>, [K. Hadyńska-Kleń](#)<sup>1,†</sup>, [S. Hallam](#)<sup>1</sup>, [D. E. M. Hoff](#)<sup>5</sup>, [T. Huang](#)<sup>2</sup>, [R. V. F. Janssens](#)<sup>6,7</sup>, [S. Jazrawi](#)<sup>1</sup>, [J. José](#)<sup>8,9</sup>, [F. G. Kondev](#)<sup>2</sup>, [T. Lauritsen](#)<sup>2</sup>, [J. Li](#)<sup>2</sup>, [A. M. Rogers](#)<sup>5</sup>, [J. Saiz](#)<sup>10</sup>, [G. Savard](#)<sup>2</sup>, [S. Stolze](#)<sup>2</sup>, [G. L. Wilson](#)<sup>2,4</sup>, and [S. Zhu](#)<sup>2,‡</sup>

Published 26 June 2020

Phys. Rev. C **101**, 064319

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.064319>

**Lee-Yang–inspired energy-density functional including contributions from p-wave scattering**

[Jérémy Bonnard](#), [Marcella Grasso](#), and [Denis Lacroix](#)

Published 18 June 2020

Phys. Rev. C **101**, 064321

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.064321>

**Shape coexistence in  $^{187}\text{Au}$  studied by laser spectroscopy**

[A. E. Barzakh](#)<sup>1,\*</sup>, [D. Atanasov](#)<sup>2,†</sup>, [A. N. Andreyev](#)<sup>3,4</sup>, [M. Al Monthery](#)<sup>3</sup>, [N. A. Althubiti](#)<sup>5,6</sup>, [B. Andel](#)<sup>7,8</sup>, [S. Antalic](#)<sup>8</sup>, [K. Blaum](#)<sup>2</sup>, [T. E. Cocolios](#)<sup>5,7</sup>, [J. G. Cubiss](#)<sup>3</sup>, [P. Van Duppen](#)<sup>7</sup>, [T. Day Goodacre](#)<sup>5,9,‡</sup>, [A. de Roubin](#)<sup>2,§</sup>, [G. J. Farooq-Smith](#)<sup>5,7</sup>, [D. V. Fedorov](#)<sup>1</sup>, [V. N. Fedosseev](#)<sup>9</sup>, [D. A. Fink](#)<sup>2,9</sup>, [L. P. Gaffney](#)<sup>9,10</sup>, [L. Ghys](#)<sup>7,11</sup>, [R. D. Harding](#)<sup>3,9</sup>, [M. Huysse](#)<sup>7</sup>, [N. Imai](#)<sup>12</sup>, [S. Kreim](#)<sup>2,9</sup>, [D. Lunney](#)<sup>13,||</sup>, [K. M. Lynch](#)<sup>5,9</sup>, [V. Manea](#)<sup>2,||</sup>, [B. A. Marsh](#)<sup>9</sup>, [Y. Martinez Palenzuela](#)<sup>7,9</sup>, [P. L. Molkanov](#)<sup>1</sup>, [D. Neidherr](#)<sup>14</sup>, [M. Rosenbusch](#)<sup>15</sup>, [R. E. Rossel](#)<sup>9,16</sup>, [S. Rothe](#)<sup>9,16</sup>, [L. Schweikhard](#)<sup>15</sup>, [M. D. Seliverstov](#)<sup>1</sup>, [S. Sels](#)<sup>7</sup>, [C. Van Beveren](#)<sup>7</sup>, [E. Verstraelen](#)<sup>7</sup>, [A. Welker](#)<sup>9,17</sup>, [F. Wienholtz](#)<sup>9,15,¶</sup>, [R. N. Wolf](#)<sup>2,15,#</sup>, and [K. Zuber](#)<sup>17</sup>

Published 25 June 2020

Comm. Phys. **3**, 107 (2020)

<https://www.nature.com/articles/s42005-020-0348-9#article-info>

**Structural trends in atomic nuclei from laser spectroscopy of tin**

Deyan T. Yordanov, Liss V. Rodríguez, Dimiter L. Balabanski, Jacek Bieroń, Mark L. Bissell, Klaus Blaum, Bradley Cheal, Jörgen Ekman, Gediminas Gaigalas, Ronald F. Garcia Ruiz, Georgi Georgiev, Wouter Gins, Michel R. Godefroid, Christian Gorges, Zoltán Harman, Hanne Heylen, Per Jönsson, Anastasios Kanellakopoulos, Simon Kaufmann, Christoph H. Keitel, Varvara Lagaki, Simon Lechner, Bernhard Maaß, Stephan Malbrunot-Ettenauer, Witold Nazarewicz, Rainer Neugart, Gerda Neyens, Wilfried Nörtershäuser, Natalia S. Oreshkina, Asimina Papoulia, Pekka Pyykkö, Paul-Gerhard Reinhard, Stefan Sailer, Rodolfo Sánchez, Sacha Schiffmann, Stefan Schmidt, Laura Wehner, Calvin Wraith, Liang Xie, Zhengyu Xu & Xiaofei Yang

Published 8 June 2020

Phys. Lett. B, **806**, 135488

<https://www.sciencedirect.com/science/article/pii/S0370269320302926?via%3Dihub>

**Population of a low-spin positive-parity band from high-spin intruder states in  $^{177}\text{Au}$ : The two-state mixing effect**

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Available online 14 May 2020.

Eur. Phys. J. A, **56**, 161 (2020)

<https://rd.springer.com/article/10.1140/epja/s10050-020-00174-0>

**Nuclear structure of  $^{181}\text{Au}$  studied via  $\beta^+$ /EC decay of  $^{181}\text{Hg}$  at ISOLDE**

M. Sedlák, M. Venhart, J. L. Wood, V. Matoušek, M. Balogh, A. J. Boston, T. E. Cocolios, L. J. Harkness-Brennan, R.-D. Herzberg, D. T. Joss, D. S. Judson, J. Kliman, R. D. Page, A. Patel, K. Petřík & M. Veselský

Published 5 June 2020

J. High Energ. Phys. **2020**, 147 (2020)

[https://link.springer.com/article/10.1007/JHEP06\(2020\)147](https://link.springer.com/article/10.1007/JHEP06(2020)147)

**Non-linear flow modes of identified particles in Pb-Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, J. Liu, J. Norman, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 24 June 2020

Phys. Lett. B **805** (2020) 135434

<https://www.sciencedirect.com/science/article/pii/S0370269320302380>

**Centrality and transverse momentum dependence of inclusive  $J/\psi$  production at midrapidity in Pb-Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 10 June 2020

Phys. Lett. B **805** (2020) 135419

<https://www.sciencedirect.com/science/article/pii/S0370269320302239>

**Investigation of the  $p$ - $\Sigma^0$  interaction via femtoscopy in  $pp$  collisions**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 10 June 2020

Phys. Lett. B **805** (2020) 135414

<https://www.sciencedirect.com/science/article/pii/S0370269320302185>

**Measurement of the (anti)- $^3\text{He}$  elliptic flow in  $Pb$ - $Pb$  collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 10 June 2020

J. High Energ. Phys. **2020**, 35 (2020)

<https://link.springer.com/article/10.1007/JHEP06%282020%29035>

**Coherent photoproduction of  $\rho^0$  vector mesons in ultra-peripheral  $Pb$ - $Pb$  collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, J. Liu, J. Norman, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 4 June 2020

Phys. Rev. C **101**, 064901

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.064901>

**Jet-hadron correlations measured relative to the second order event plane in  $Pb$ - $Pb$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 3 June 2020

J. High Energ. Phys. **2020**, 85 (2020)

<https://link.springer.com/article/10.1007/JHEP05%282020%29085>

**Higher harmonic non-linear flow modes of charged hadrons in  $Pb$ - $Pb$  collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, J. Liu, J. Norman, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 19 May 2020

Physics Letters B **804** (2020) 135375

<https://www.sciencedirect.com/science/article/pii/S0370269320301799>

**Longitudinal and azimuthal evolution of two-particle transverse momentum correlations in  $Pb$ - $Pb$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, J. Norman, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 10 May 2020



Physics Letters B **804** (2020) 135377

<https://www.sciencedirect.com/science/article/pii/S0370269320301817>

**Measurement of electrons from semileptonic heavy-flavour hadron decays at midrapidity in pp and Pb–Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M. Borri, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 10 May 2020

J. High Energ. Phys. 2020, 192 (2020)

<https://link.springer.com/article/10.1007/JHEP04%282020%29192>

**Underlying event properties in pp collisions at  $\sqrt{s} = 13$  TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 29 April 2020

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**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M. Borri, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 29 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**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 28 April 2020

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

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

**Global polarization of  $\Lambda$  and anti- $\Lambda$  hyperons in Pb-Pb collisions at  $\sqrt{s_{NN}} = 2.76$  and 5.02 TeV**

ALICE Collaboration, UK Authors: H.A. Andrews, L.S. Barnby, M. Borri, M.D. Buckland, M. Chartier, G. Contin, D. Evans, K.L. Graham, C. Hills, J. Iddon, O. Jevons, P.G. Jones, A. Jusko, M. Krivda, J. Kvapil, R.C. Lemmon, R. Lietava, S.W. Lindsay, S. Ragoni, O. Villalobos Baillie, E. Willsher

Published 20 April 2020

Phys. Rev. C **101**, 064906

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.064906>

**Strange hadron production in pp and pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

A. M. Sirunyan *et al.* (CMS Collaboration)

Published 22 June 2020

<https://journals.aps.org/prc/abstract/10.1103/PhysRevC.101.065206>

## Measurement of the photon beam asymmetry in $\rightarrow\gamma p \rightarrow K+\Sigma 0$ at $E_\gamma=8.5$ GeV

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## 2. News to Report

### a. IOP Nuclear Physics Group Early Career Prize 2019



### problem of proton-neutron pairing in mean-field models".

The prize is awarded annually to promising early-career scientists for outstanding contributions to the field of Nuclear Physics. Antonio (featured in the photo) will receive prize money from the IoP and be invited to present his work at the next annual IOP Nuclear Physics Conference.

In the meantime you can hear Antonio's talk as part of the UK Lockdown and Distancing nuclear seminar series on Mon 20th July at 3pm BST.

<http://ns.ph.liv.ac.uk/lockdownseminars>

On behalf of the committee we wish Antonio all the best in his future career!

*Contributed by Tzany Kokalova Wheldon (Previous Chair) and David Sharp (Current Chair) of the IoP NPG Committee*

The early career award for 2019 from the Nuclear Physics Group of the IoP goes to Antonio Márquez Romero for the work he did as a nuclear theory PhD student at the University of York. Antonio was nominated by Dr Alessandro Pastore for his "**Unique contribution to solve the long standing**

## **b. Second UK Workshop on the Electron-Ion Collider (27 - 28 July 2020)**

The second UK Workshop on the Electron-Ion Collider (EIC) will be held remotely in the afternoon of 27th and the morning of 28th July 2020. It follows the first workshop held in 2016 on Loch Lomond and aims to bring together the UK nuclear, particle and accelerator communities to discuss opportunities, current and possible future involvement, exchange ideas and identify paths forward to secure funding.

The EIC, which is expected to start operation in 2030, will be the world's premier facility for hadron physics research. The project has been formally launched this January with the granting of "critical decision zero" status by the US Department of Energy and Brookhaven National Lab was selected as its site. A call for Expressions of Interest in contributions to the detectors and interaction region(s) has just opened, with a deadline in November. It is expected that bids for detector construction will be sought in spring next year, serving as the formation of collaborations — and formal start of construction will begin in 2023. The workshop aims to generate discussion of opportunities and identify possibilities for collaboration within the UK.

Details of the workshop and registration can be found at:

<https://indico.cern.ch/event/934314/>

### **The Organising Committee –**

Laura Gonella,  
Paul Newman (Birmingham),  
Daria Sokhan (Glasgow)

*Contributed by Daria Sokhan  
(Univ. Glasgow)*

## **c. New UK representative for the ISOLDE Collaboration Committee (ISCC)**

The current UK representative on the ISOLDE Collaboration Committee (ISCC) is coming to the end of their term and it is therefore time to look for a replacement.

The ISCC typically meets three times a year, just before the INTC (ISOLDE and n\_TOF Experiments Committee) meeting, and the UK representative may vote as one of the contributing countries. Since STFC regard the presence of a representative as an official duty, they reimburse any associated travel expenses directly so it need not come from your own budget.

If you are interested in this role, please could you indicate your interest to Dan Doherty (via [d.t.doherty@surrey.ac.uk](mailto:d.t.doherty@surrey.ac.uk)) by the 22nd of July. In the event that there are multiple expressions of interest, an election will be conducted. The UK representative should be a full-time academic although Advanced Fellows might also be considered. In addition, please do contact Dan if you want to know more about the role.

The next ISCC meeting will take place in November, most likely via Zoom. At this meeting, the ISCC will be interviewing candidates for the next ISOLDE group leader.

*Contributed by Daniel Doherty  
(Univ. Surrey)*

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### **3. Outreach Activity**

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### **4. Media Interactions**

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