

## LIST OF PAPERS

### 2019

#### Review papers

1. Andreas Zilges, Dimiter L. Balabanski, Norbert Pietralla, Denis Savran  
*Photonuclear reactions – from basic research to applications*  
**Prog. Part. Nucl. Phys. (2019) in preparation**
2. K. A. Tanaka, K. M. Spohr, D. L. Balabanski, M. Cuciuc, D. Doria, J. F. Ong, D. Stutman, O. Tesileanu, N. Tsoneva, C. A. Ur, D. Ursescu and N. V. Zamfir  
*Current status and highlights of the ELI-NP research programme*  
**Matter Radiat. Extremes (2019) submitted**

#### Original papers

3. Hao-Yang Lan, Xing-De Huang, Sheng-Qiang Zhao, Jian-Liang Zhou, Zhi-Chao Zhu, Yi Xu, Dimiter L. Balabanski, and Wen Luo  
*Nondestructive Inspection of Illicit Drugs via Nuclear Resonance Fluorescence*  
**Commun. Phys. (2019) submitted**
4. Le Tuan Anh, Phan Viet Cuong, Paul Constantin, Dimiter Balabanski, Bo Mei, Nguyen Hong Ha, Ho Thi Thao, Kim Tien Thanh, Nguyen The Vinh, Pham Duc Khue  
*Simulation for optimizing the design of cryogenic stopping cell for the IGISOL facility at ELI-NP*  
**Commun. Phys. 29 (2019) in print**
5. P.-A. Söderström, L. Capponi, V. Iancu, D. Lattuada, A. Pappalardo, G. V. Turturică, E. Açıksöz, D. L. Balabanski, P. Constantin, G. L. Guardo, M. Ilie, S. Ilie, C. Matei, D. Nichita, T. Petruse, A. Spataru  
*High-energy response and spectral unfolding of the ELIGANT LaBr<sub>3</sub>:Ce  $\gamma$ -ray detectors*  
**JINST (2019) in preparation**
6. Deyan T. Yordanov, Liss Vázquez Rodríguez, Dimiter L. Balabanski, Jacek Bieron, 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 Y. Xu, and Xiaofei F. Yang  
*New features of atomic nuclei from laser spectroscopy of tin*  
**Nature Physics (2019) submitted**
7. F. Boulay, G. S. Simpson, Y. Ichikawa, S. Kisyov, D. Bucurescu, A. Takemine, D. S. Ahn, K. Asahi, H. Baba, D. L. Balabanski, T. Egami, T. Fujita, N. Fukuda, C. Funayama, T. Furukawa, G. Georgiev, A. Gladkov, M. Hass, K. Imamura, N. Inabe, Y. Ishibashi, T. Kawaguchi, T. Kawamura, W. Kim, Y. Kobayashi, S. Kojima, A. Kusoglu, R. Lozeva, S. Momiyama, I. Mukul, M. Niikura, H. Nishibata, T. Nishizaka, A. Odahara, Y. Ohtomo, D. Ralet, T. Sato, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, L. C. Tao, Y. Togano, D. Tominaga, H. Ueno, H. Yamazaki, X. F. Yang, and J. M. Daugas  
*g-factor of the <sup>99</sup>Zr (7/2<sup>+</sup>) isomer: monopole evolution in shape coexisting region*  
**Phys. Rev. Lett. (2019) submitted**

8. G.V. Turturica, V. Iancu, A. Pappalardo, P.-A. Söderström, G. L. Guardo, D. Lattuada, P. Constantin, L. Capponi, E. Aciksoz, T. Petruse, D. Nichita, A. Spataru, S. Ilie, M. Ilie, M. Iovea, V. Fugaru, D. Balabanski, and C.A. Ur  
*Effective Z evaluation using proton induced mono-energetic gamma-rays and neural networks*  
**Eur. Phys. J Plus (2019) submitted**
9. P.-A. Söderström, L. Capponi, E. Açiksöz, D. L. Balabanski, G. L. Guardo, D. Lattuada, C. Matei, D. Nichita, A. Pappalardo, T. Petruse, and G. V. Turturică  
*Source commissioning of the ELIGANT-GG setup for  $\gamma$ -ray coincidence measurements at ELI-NP*  
**Rom. Rep. Phys. 71, 206 (2019)**
10. Doru Dinescu, Nikolay Djourellov, Dimiter L. Balabanski  
*Characterization of epitaxial GaN thin films by slow positrons*  
**U.P.B. Sci. Bull., Series A (2019) in print**
11. M. Munch, C. Matei, S.D. Pain, H.J. Karwowski, C.Aa. Diget, A. Pappalardo, M.T. Febbraro, S. Chesnevskaya, G.L. Guardo, D. Walter, D.L. Balabanski, F.D. Becchetti, C.R. Brune, K.Y. Chae, K.A. Chipps, J.A. Cizewski, J. Frost-Schenk, M.J. Kim, M.S. Kwag, M. La Cognata, D. Lattuada, R.G. Pizzone, G.G. Rapisarda, G.V. Turturica, C.A. Ur, and Y. Xu  
*First Measurement of the  ${}^7\text{Li}(\gamma, t){}^4\text{He}$  Ground-state Cross Section between 4.4 and 10 MeV*  
**Phys. Rev. C (2019) submitted**
12. Y. Ichikawa, H. Nishibata, Y. Tsunoda, A. Takamine, K. Imamura, T. Fujita, T. Sato, S. Momiyama, Y. Shimizu, D. S. Ahn, K. Asahi, H. Baba, D. L. Balabanski, F. Boulay, J. M. Daugas, T. Egami, N. Fukuda, C. Funayama, T. Furukawa, G. Georgiev, A. Gladkov, N. Inabe, Y. Ishibashi, T. Kawaguchi, T. Kawamura, Y. Kobayashi, S. Kojima, A. Kusoglu, I. Mukul, M. Niikura, T. Nishizaka, A. Odahara, Y. Ohtomo, T. Otsuka, D. Ralet, G. S. Simpson, T. Sumikama, H. Suzuki, H. Takeda, L. C. Tao, Y. Togano, D. Tominaga, H. Ueno, H. Yamazaki and X. F. Yang  
*Interplay between nuclear shell evolution and shape deformation revealed by magnetic moment of  ${}^{75}\text{Cu}$*   
**Nature Phys. 15, 321-325 (2019)**
13. D. Ralet, E. Clément, M. Rejmund, G. Georgiev, A. E. Stuchbery, P. Van Isacker, G. de France, A. Lemasson, B. Jacquot, C. Michelagnoli, A. Navin, D. L. Balabanski, L. Atanasova, G. Bocchi, R. Carroll, A. Dewald, J. Dudouet, E. Dupont, B. Fornal, S. Franchoo, C. Fransen, C. Müller-Gatermann, A. Goasduff, A. Gadea, P. R. John, D. Kocheva, T. Konstantinopoulos, A. Korichi, A. Kusoglu, S. M. Lenzi, S. Leoni, J. Ljungvall, R. Lozeva, A. Maj, R. Perez, N. Pietralla, C. Shand, O. Stezowski, D. Yordanov, D. Barrientos, P. Bednarczyk, B. Birkenbach, A. J. Boston, H. C. Boston, I. Burrows, B. Cederwall, M. Ciemala, J. Collado, F. Crespi, D. Cullen, H. J. Eberth, J. Goupil, L. Harkness, H. Hess, A. Jungclaus, W. Korten, M. Labiche, R. Menegazzo, D. Mengoni, B. Million, J. Nyberg, Zs. Podolyák, A. Pullia, B. Quintana Arnés, F. Recchia, P. Reiter, F. Saillant, M. D. Salsac, E. Sanchis, C. Theisen, J. Valiente Dobon, O. Wieland  
*First evidence of two phonon octopole-vibrational state of  ${}^{208}\text{Pb}$*   
**Phys. Lett. B 797, 134797 (2019)**
14. C. Gorges, L. V. Rodríguez, D. L. Balabanski, M. L. Bissel, M. L. Bissell, K. Blaum, R. F. Garcia Ruiz, G. Georgiev, W. Gins, H. Heylen, T. Kanellakopoulos, S. Kaufmann, M. Kowalska, V. Lagaki, S. Lechner, B. Maass, S. Malbrunot-Ettenauer, W. Nazarewicz, R. Neugart, G. Neyens, W. Nörtershäuser, P.-G. Reinhard, S. Sailer, R. Sánchez, S. Schmidt, L. Wehner, C. Wraith, Z. Y. Xu, X.F. Yang, and D. T. Yordanov  
*Laser spectroscopy of neutron-rich tin isotopes: A discontinuity in charge-radii across the N=82 shell closure*  
**Phys. Rev. Lett. 122, 192502 (2019); Editor's Suggestion; Featured in Physics, Physics Synopsis**
15. Filip D. Puicea, Dimiter L. Balabanski, Dana Niculae

*Experimental Set-up for Medical Radioisotopes Production at ELI-NP*

**U.P.B. Sci. Bull., Series A (2019) in preparation**

16. A. Spataru, T. Dickel, W. Plass, J. Winfield, P. Constantin, D.L. Balabanski, D. Nichita, A. Rotaru, A. State  
*Multi-nucleon transfer reactions in  $^{238}\text{U} + ^{64}\text{Ni}$  using the grazing model*  
**U.P.B. Sci. Bull., Series A (2019) in print**
17. D. Nichita, P. Constantin, D. L. Balabanski, B. Mei, A. Rotaru, T. Sava, A. Spataru, A. State, T. Dickel, B. Kindler, B. Lommel  
*Optimization of the photo-fission fragment production in the IGISOL setup at ELI-NP*  
**U.P.B. Sci. Bull., Series A (2019) in print**
18. A.T. Margaryan, V.H. Khachatryan, H.S. Vardanyan, N.K. Grigoryan, R.B. Ajvazyan, V.H. Kakoyan, P.A. Khachatryan, S.V. Zhamkochyan, D.L. Balabanski, J.R.M. Annand, K. Livingston, R. Montgomery, I. Filikh, A. Mohammad, B. Vlahovic  
*Active target for  $\alpha$ -particle condensation studies in  $^{16}\text{O}$*   
**J. Contemp. Phys. 54, 117 (2019)**
19. Andreea Bianca Serban, Vladimir-Lucian Ene, Cristina Constanta Gheorghiu, Dimiter L. Balabanski, Ecaterina Andronescu, Victor Leca  
*RF magnetron scattering of GaN on sapphire substrate*  
**U.P.B. Sci. Bull., Series B 81, 11 (2019)**
20. Adrian Rotaru, Gheorghe Căta-Danil, Paul Constantin, Dimiter L. Balabanski, Tiberiu Sava, Alexandru State, Anamaria Spătaru, Dragoş Nichita  
*Simulation of circular radio-frequency carpets for ion extraction from cryogenic stopping cells*  
**U.P.B. Sci. Bull., Series A 81, 197 (2019)**
21. Bo Mei, D.L. Balabanski, W. Hua, Y.H. Zhang, X.H. Zhou  
*Fusion reactions around the barrier for  $\text{Be} + ^{238}\text{U}$*   
**Phys. Rev. C (2019) submitted**
22. Alexandru State, Mihai Merisanu, Dimiter L. Balabanski, Paul Constantin, Tiberiu Sava, Adrian Rotaru, Traian Roman, Dragoş Nichita, Anamaria Spătaru, Wolfgang Plass  
*Ion Extraction from Gas Cells with Supersonic Jets Formed in Laval Nozzles*  
**U.P.B. Sci. Bull., Series A (2019) submitted**
23. G. V. Turturica, C. Matei, A. Pappalardo, D. L. Balabanski, S. Chesnevskaya, V. Iancu, C. A. Ur, H. J. Karwowski, K. A. Chipps, M. T. Febbraro, S. D. Pain, D. Walter, C. Aa. Diget, J. Frost-Schenk, M. K. Munch, G. L. Guardo, M. La Cognata, R. G. Pizzone, K. Y. Chae, M. Kim, M. Kwang  
*Investigation of Compton scattering from gamma beam intensity and perspectives for ELI-NP*  
**Nucl. Instrum. Meth. Phys. Res. A 921, 27-32 (2019)**

#### **Conference papers (peer refereed journals)**

24. D.L. Balabanski  
*Highlights of the day-one experimental program at the gamma-beam system of ELI-NP*  
Proceedings of the International Symposium on Exotic Nuclei (EXON-2018), Sept. 10<sup>th</sup>-14<sup>th</sup>, 2018, Petrozavodsk, Russia  
**Eurasian J. Phys. Funct. Materials 3, 18-23 (2019)**
25. Yuichi Ichikawa, Hiroki Nishibata, Yusuke Tsunoda, Aiko Takamine, Kei Imamura, Tomomi Fujita, Tomoya Sato, Satoru Momiyama, Yohei Shimizu, Deuksoon Ahn, Koichiro Asahi, Hidetada Baba, Dimiter L. Balabanski, Florent Boulay, Jean-Michel Daugas, Tsuyoshi Egami, Naoki Fukuda, Chikako Funayama, Takeshi Furukawa, Georgi Georgiev, Aleksey Gladkov, Naoto Inabe, Yoko Ishibashi, Takafumi Kawaguchi, Takayuki Kawamura, Yoshio Kobayashi, Shuichiro Kojima, Asli Kusoglu, Ish Mukul, Magumi Niikura, Taishi Nishizaka, Atsuko Odahara, Yuichi Ohtomo, Takaharu Otsuka,

Damian Ralet, Gary S. Simpson, Toshiyuki Sumikama, Hiroshi Suzuki, Hiroyuki Takeda, Longchun Tao, Yasuhiro Togano, Daiki Tominaga, Hideki Ueno, Hiroki Yamazaki and Xiaofei Yang  
*Magnetic moment of  $^{75m}\text{Cu}$  measured with a highly spin-aligned beam*  
Proceedings of the 13<sup>th</sup> International Conference on Nucleus-Nucleus Collisions, Dec. 4<sup>th</sup>-8<sup>th</sup>, 2018, Saitima, Japan

**JPS Conference Proceedings (2019) submitted**

26. P. Constantin, D. L. Balabanski, A. State, A. Rotaru, D. Nichita, A. Spataru, T. Dickel, W. R. Plaß, C. Scheidenberger

*The ELI-NP IGISOL radioactive ion beam facility*

Proceedings of the 13<sup>th</sup> European Conference on Accelerators in Applied Research and Technology (ECAART 13), May 5<sup>th</sup>-10<sup>th</sup>, 2019, Split, Croatia

**Nucl. Instrum. Meth. Phys. Res. B (2019) published online**

27. Deepika Choudhury, L. Csige, D.L. Balabanski, A. Oberstedt, A. Krasznahorkay, M. Csatlos, J. Gulyuas, P. Constantin

*High-resolution fission studies with the brilliant GBS facility at ELI-NP*

Proceedings of the 13<sup>th</sup> Vietnam Conference on Nuclear Science and Technology (VINANST-13), August 7<sup>th</sup>-9<sup>th</sup>, 2019, Ha Long City, Vietnam

**J. Nucl. Sci. Tech. (2018) submitted**

28. P.-A. Söderström, G. Suliman, C.A. Ur, D. Balabanski, T. Beck, L. Capponi, A. Dhal, V. Iancu, S. Ilie, M. Iovea, A. Kusoglu, C. Petcu, N. Pietralla, G.V. Turturica, E. Udup, J. Wilhelmy, A. Zilges

*High-resolution gamma-ray spectroscopy with ELIADe at the Extreme Light Infrastructure*

Zakopane Conference on Nuclear Physics “Extremes of the Nuclear Landscape”, August 26–September 2, 2018, Zakopane, Poland.

**Acta Phys. Pol. B 50, 329-338 (2019)**

29. P. Constantin, A. Rotaru, A. State, D. Nichita, A. Spataru, D. L. Balabanski, T. Sava, M. Merisanu, T. Roman, C. Scheidenberger, T. Dickel, W. R. Plass

*The cryogenic stopping cell of the IGISOL facility at ELI-NP*

Proceedings of the European Nuclear Physics Conference (EUNPC'18), Sept. 2<sup>nd</sup>-9<sup>th</sup>, 2018, Bologna, Italy

**Nuovo Cim. C 42:60 (2019)**

30. P.-A. Söderström, G. Suliman, C. A. Ur, D. Balabanski, L. Capponi, A. Dhal, V. Iancu, S. Ilie, A. Kuşoğlu, C. Petcu, G. V. Turturică, E. Udup

*Photonuclear spectroscopy with the ELIADe array at ELI-NP*

Proceedings of the European Nuclear Physics Conference (EUNPC'18), Sept. 2<sup>nd</sup>-9<sup>th</sup>, 2018, Bologna, Italy

**Nuovo Cim. C 42:73 (2019)**

31. Dimitre L. Balabanski, Paul Constantin, Adrian Rotaru, Alexandru State

*Status of ELI-NP and opportunities for hyperfine research*

International Conference on Hyperfine interactions and their applications (Hyperfine 2019), Feb. 11<sup>th</sup>-15<sup>th</sup>, 2019, Goa, India

**Hyperfine Int. 240:49 (2019); DOI: 10.1007/s10751-019-1594-7**

32. Jasmeet Kaur, D.L. Balabanski, G. Georgiev, P. Constantin

*Nuclear structure studies by photonuclear reactions at ELI-NP*

International Conference on Hyperfine interactions and their applications (Hyperfine 2019), Feb. 11<sup>th</sup>-15<sup>th</sup>, 2019, Goa, India

**Hyperfine Int. 240:57 (2019); DOI: 10.1007/s10751-019-1590-y**

33. Wolfgang Plaß, Timo Dickel, Israel Mardor, Stephane Pietri, Hans Geissel, Christoph Scheidenberger, Daler Amanbayev, Samuel Ayet San Andrés, Juha Äystö, Dimitre Balabanski,

Sönke Beck, Julian Bergmann, Olga Czerviakov, Paul Constantin, Tommi Eronen, Tuomas Grahn, Florian Greiner, Emma Haettner, Christine Hornung, Jean-Paul Hucka, Ari Jokinen, Anu Kankainen, Ivan Miskun, Iain D. Moore, Alexander Pikhitelev, Ilkka Pohjalainen, Sivaji Purushothman, Zygmunt Patyk, Moritz P. Reiter, Ann-Kathrin Rink, Sami Rinta-Antila, Anamaria Spataru, Helmut Weick, John S. Winfield, Mikhail I. Yavor

*The Science Case of the FRS Ion Catcher for FAIR Phase-0*

Proceedings of the 7<sup>th</sup> International Conference on Trapped Charged Particles and Fundamental Physics (TCP 2018), Sept. 30<sup>th</sup>- Oct. 5<sup>th</sup>, 2018, Traverse City, Michigan, USA

**Hyperfine Int. 240, 73 (2019); DOI:10.1007/s10751-019-1597-4**

34. Dimiter L. Balabanski, Adrian Rotaru, Alexandru State, Mihai Merisanu, Le Tuan Anh, Tiberiu Sava, Dan Ghita, Christoph Scheidenberger, Timo Dickel, Wolfgang R. Plaß

*The IGISOL Facility at ELI-NP*

Proceedings of the 10<sup>th</sup> International Conference on Nuclear Physics at Storage Rings (STORI'17), Nov. 13<sup>th</sup>-18<sup>th</sup>, 2017, Kanazawa, Japan

**JPS Conf. Proc. (2019) submitted**

35. M. Gai, D. Schweitzer, S.R. Stern, A.H. Young, R. Smith, M. Cwiok, J.S. Bihalowicz, H. Czyrkowski, R. Dabrowski, W. Dominik, A. Fijalkowska, Z. Janas, L. Janiak, A. Korgul, T. Matulewicz, C. Mazzocchi, M. Pfuetzner, M. Zaremba, D. Balabanski, I. Gheorge, C. Matei, O. Tesilenau, V.N. Zamfir, M.W. Ahmed, S.S. Henshaw, C.R. Howell, J.M. Mueller, L.S. Myers, S. Stave, C. Sun, H.R. Weller, Y.K. Wu, A. Breskin, V. Dangendorf, K. Tittelmeier

*Time Projection Chamber (TPC) Detectors for Nuclear Astrophysics Studies with Gamma Beams*

Proceedings of the Symposium on Radiation Measurements and Applications (SORMA XVIII), June 11<sup>th</sup>-14<sup>th</sup>, 2018, Ann Arbor, MI, USA

**Nucl. Instrum. Meth. Phys. Res. A (2019) in print**

**arXiv:1812.09536 [physics.ins-det]**

#### **Conference papers (conference series)**

36. Dimiter L. Balabanski

*Research programme with high-brilliance gamma beams at ELI-NP*

Proceedings of the 27<sup>th</sup> International Nuclear Physics Conference (INPC 2019), July 29<sup>th</sup>- Aug 2<sup>nd</sup>, 2019, Glasgow, UK

**J. Phys. Conf. Series (2019) submitted**

37. M. Krzysiek, E. Açıköz, D. Balabanski, F. Camera, L. Capponi, G. Ciocan, D. Ghita, H. Utsunomiya, and V. Varlamov

*Photoneutron measurements in the GDR region at ELI-NP*

Proceedings of the Carpathian Summer School of Physics 2018: Exotic Nuclei and Nuclear/Particle Astrophysics (VII). Physics with Small Accelerators, July 1<sup>st</sup>-14<sup>th</sup>, 2018, Sinaia, Romania

**AIP Conf. Proc. 2076, 04004 (2019)**

38. T. Petruse, G. L. Guardo, I. Indelicato, M. La Cognata, C. Matei, D. L. Balabanski, B. Becherini, S. Cheburini, M. Gulino, S. Hayakawa, L. Lamia, D. Lattuada, R. G. Pizzone, S. M. R. Puglia, G. G. Rapisarda, S. Romano, C. Spitaleri, O. Trippella, A. Tumino

*Preliminary results of the  $^{19}\text{F}(p,\alpha)^{16}\text{O}$  reaction, at astrophysical energies via the Trojan Horse Method*

Proceedings of the Carpathian Summer School of Physics 2018: Exotic Nuclei and Nuclear/Particle Astrophysics (VII). Physics with Small Accelerators, July 1<sup>st</sup>-14<sup>th</sup>, 2018, Sinaia, Romania

**AIP Conf. Proc. 2076, 060005 (2019)**

#### **Conference papers (books)**

39. G. L. Guardo, D. Balabanski, S. Chesnevskaia, M. La Cognata, D. Lattuada, C. Matei, T. Petruse, Rosario Gianluca Pizzone, G. G. Rapisarda, S. Romano, C. Spitaleri, Aurora Tumino, Y. Xu  
*Nuclear Astrophysics at ELI-NP: Preliminary Experiments with ELISSA Detector*  
Proceedings of the International Symposium Nuclei in Cosmos XV, June 24<sup>th</sup>-29<sup>th</sup>, 2018, Gran Sasso, Italy  
**Springer Proceedings in Physics, v. 219, eds. A. Formicola, M. Junker, L. Gialanella, G. Imbriani, (Springer, Cham, 2019) pp. 219-223**

#### **Patents**

40. A. Rotaru, D.L. Balabanski, P. Constantin, D. Nichita, T. Sava, A. Spataru, A. State  
*RF Carpet for ion collection with wrapped electrodes*  
**(2019) in preparation**

#### **Laboratory reports**

41. G.L. Guardo, M. La Cognata, D. Lattuada, T. Petruse, C. Spitaleri, D.L. Balabanski, E. Aciksoz, L. Acosta, L. Capponi, D. Carbone, S. Cherubini, D. Choudhury, G. D'Agata, A. Di Pietro, P. Figuera, M. Gulino, A. I. Kilik, M. La Commara, L. Lamia, C. Matei, S. Palmerini, R.G. Pizzone, S. Romano, P.-A. Soderstrom, R. Sparta, A. Tumino, S. Vinales Onses  
Direct measurement of the  $^{19}\text{F}(p,\alpha)^{16}\text{O}$  reaction using the LHASA detector array  
**LNS Activity Report 2018 (2019) submitted**

## **2018**

#### **Review papers**

42. S. Gales, K. A. Tanaka, D. L. Balabanski, F. Negoita, D. Stutman, O. Tesileanu, C. A. Ur, D. Ursescu, S. Ataman, M. O. Cernaianu, I. Dancus, B. Diaconescu, N. Djourellov, D. Filipescu, P. Ghenuche, C. Matei, K. Seto, L. D'Alessi, M. Zeng, N.V. Zamfir  
*The extreme light infrastructure – nuclear physics (ELI-NP) facility: New horizons in physics with 10-PW ultra-intense lasers and 20-MeV brilliant gamma beams*  
**Rep. Prog. Phys. 81, 094301 (2018)**

#### **Original papers**

43. H. Y. Lan, Y. Xu, W. Luo, D. L. Balabanski, S. Goriely, M. La Cognata, C. Matei, A. Anzalone, S. Chesnevskaia, G. L. Guardo, D. Lattuada, R. G. Pizzone, S. Romano, C. Spitaleri, A. Taffara, A. Tumino, and Z. C. Zhu  
*Determination of the photodisintegration reaction rates involving charged particles: Systematic calculations and proposed measurements based on the facility for Extreme Light Infrastructure– Nuclear Physics*  
**Phys. Rev. C 98, 054601 (2018)**
44. M. Hammen, W. Nortershauser, D. L. Balabanski, M. L. Bissell, K. Blaum, A. Blazhev, I. Budincevic, N. Frommgen, G. Georgiev, Ch. Geppert, H. Grawe, M. Kowalska, K. Kreim, A. Krieger, W. Nazarewicz, R. Neugart, G. Neyens, J. Papuga, P.-G. Reinhard, S. Schmidt and D. T. Yordanov  
*Nuclear Charge Radii of  $^{110-130}\text{Cd}$*   
**Phys. Rev. Lett. 121, 102501 (2018)**
45. D. T. Yordanov, D. L. Balabanski, M. L. Bissell, K. Blaum, A. Blazhev, I. Budincevic, N. Frommgen, Ch. Geppert, H. Grawe, M. Hammen, K. Kreim, R. Neugart, G. Neyens and W. Nortershauser  
*Spins and Electromagnetic Moments of  $^{101-109}\text{Cd}$*   
**Phys. Rev. C 98, 011303 (R) (2018)**
46. S. Chesnevskaia, D.L. Balabanski, D. Choudhury, P. Constantin, D.M. Filipescu, D.G. Ghita, G.L. Guardo, D. Lattuada, C. Matei, A. Rotaru and A. State  
*Performance studies of X3 silicon detectors for the future ELISSA array at ELI-NP*

**JINST 13, T05006 (2018)**

**Conference papers (peer refereed journals)**

47. Robert Ajvazyan, John R. M. Annand, Dimitter L. Balabanski, Nersik Grigoryan, Vanik Kakoyan, Patrik Khachatryan, Vachik Khachatryan, Kenneth Livingston, Rachel Montgomery, Henrik Vardanyan, Branislav Vlahovic, Simon Zhamkochyan and Amur Margaryan  
*Active Oxygen Target for Studies in Nuclear Astrophysics with Laser Compton Backscattered  $\gamma$ -ray Beams*  
Proceedings of the International Conference “The Modern Physics of Compact Stars and Relativistic Gravity 2017”, Sept. 18<sup>th</sup>-22<sup>nd</sup>, 2017, Yerevan, Armenia

**Particles 1, 010009 (2018)**

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50. G. L. Guardo, A. Anzalone, D. L. Balabanski, S. Chesnevskaya, V. Crucillà, D. Filipescu, M. Gulino, M. La Cognata, D. Lattuada, C. Matei, R. G. Pizzone, G. G. Rapisarda, S. Romano, C. Spitaleri, A. Taffara, A. Tumino, Y. Xu  
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51. D. Lattuada, M. La Cognata, A. Anzalone, D. L. Balabanski, S. Chesnevskaya, M. Costa, V. Crucillà, G. L. Guardo, M. Gulino, C. Matei, R.G. Pizzone, S. Romano, C. Spitaleri, A. Tumino, Y. Xu  
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52. Y. Xu, S. Goriely, D.L. Balabanski, S. Chesnevskaya, G.L. Guardo, M. La Cognata, H.Y. Lan, D. Lattuada, W. Luo and C. Matei  
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53. Bo Mei, Dimiter Balabanski, Paul Constantin, Tuan Anh Le and Phan Viet Cuong  
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54. F.C.L. Crespi, A. Bracco, A. Tamii, N. Blasi, F. Camera, O. Wieland, N. Aoi, D. Balabanski, S. Bassauer, A. S. Brown, M. P. Carpenter, J. J. Carroll, M. Ciemala, A. Czeszumska, P. J. Davies, L. Donaldson, Y. Fang, H. Fujita, G. Gey, T. H. Hoang, N. Ichige, E. Ideguchi, A. Inoue, J. Isaak, C. Iwamoto, D. G. Jenkins, O. H. Jin, T. Klaus, N. Kobayashi, T. Koike, M. Krzysiek, M. Kumar Raju, M. Liu, A. Maj, D. Montanari, L. Morris, S. Noji, S. G. Pickstone, D. Savran, M. Spieker, G. Steinhilber, C. Sullivan, B. Wasilewska, V. Werner, T. Yamamoto, Y. Yamamoto, X. Zhou, S. Zhu  
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55. Dimiter L. Balabanski  
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59. D.L. Balabanski, R. Popescu, D. Stutman, K. Tanaka, O. Tesileanu, C.A. Ur, D. Ursescu, N.V. Zamfir  
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63. Hua Wei, Zhang Yu-hu, Zhou Xiaohong, G. de France, D. L. Balabanski, G. Georgiev, Guo Yingxiang, Ma Fei, Lei Xiangguo, Liu Minliang, Li Guangshun, Guo Song, Qiang Yunhua, Han Lixiang, Yuan Cenxi

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66. D. Filipescu, D.L. Balabanski, F. Camera, I. Gheorghe, D. Ghita, T. Glodariu, J. Kaur, C.A. Ur, H. Utsunomiya, V.V. Varlamov

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67. D. Choudhury, D.L. Balabanski, A. Krasznahorkay, L. Csige, J. Gulyas, M. Csatlos, P. Constantin, S. Coban

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69. S. Chesnevskaia, D. L. Balabanski, D. Choudhury, M. La Cognata, P. Constantin, D. M. Filipescu, D. G. Ghita, G. L. Guardo, D. Lattuada, C. Matei, A. Rotaru, C. Spitaleri, A. State, and Y. Xu

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70. Giovanni Luca Guardo, Antonello Anzalone, Dimitre Balabanski, Svetlana Chesnevskaia, Walter Crucillà, Dan Filipescu, Marisa Gulino, Marco La Cognata, Dario Lattuada, Catalin Matei, Rosario Gianluca Pizzone, Giuseppe Rapisarda, Stefano Romano, Claudio Spitaleri<sup>1</sup>, Alessandra Taffara, Aurora Tumino, and Yi Xu

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*A fast and complete GEANT4 and ROOT Object-Oriented Toolkit: GROOT*

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72. Dimitre L. Balabanski

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73. Yi Xu, Wen Luo, Dimitre Balabanski, Stephane Goriely, Catalin Matei, and Ovidiu Tesileanu

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74. Alexandru Negret, Dimitre Balabanski, Paraskevi Dimitriou, Zoltan Elekes, Theo J. Mertzimekis, Sorin Pascu, and Janos Timar

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75. A. Cucoanes, D. Balabanski, F. Canova, P. Cuong, F. Negoita, F. Puicea, K. Tanaka

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76. D. Choudhury, D. Balabanski, A. Krasznahorkay, L. Csige, J. Gulyas, M. Csatlós, P. Constantin, S. Coban

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77. Y. Ichikawa, H. Nishibata, Y. Tsunoda, A. Takamine, K. Imamura, T. Fujita, T. Sato, S. Momiyama, Y. Shimizu, D. S. Ahn, K. Asahi, H. Baba, D. L. Balabanski, F. Boulay, J. M. Daugas, T. Egami, N. Fukuda, C. Funayama, T. Furukawa, G. Georgiev, A. Gladkov, N. Inabe, Y. Ishibashi, T. Kawaguchi, T. Kawamura, Y. Kobayashi, S. Kojima, A. Kusoglu, I. Mukul, M. Niikura, T. Nishizaka, A. Odahara, Y. Ohtomo, T. Otsuka, D. Ralet, G. S. Simpson, T. Sumikama, H. Suzuki, H. Takeda, L. C. Tao, Y. Togano, D. Tominaga, H. Ueno, H. Yamazaki, and X. F. Yang

*Competition between shell and shape in <sup>75</sup>Cu clarified by the novel magnetic moment measurement*

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78. Николае Виктор Замфир, Димитър Л. Балабански, Павел Петков

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**Българска наука 97, 87 (2017)**

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*New frontiers in nuclear physics with high-power lasers and brilliant monochromatic gamma beams*

**Phys. Scr. 91, 093004 (2016)**

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80. Wen Luo, Dimiter L. Balabanski, Dan Filipescu  
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81. M.O. Cernaianu, B. De Boisdeffre, D. Ursescu, F. Negoita, C.A. Ur, O. Tesileanu, D. Balabanski, T. Ivanoaica, M. Ciubancan, M. Toma, I. Dancus, S. Gales  
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82. D.L. Balabanski, F. Ibrahim, A. Krasznahorkay, I. Boztosun, D. Choudhury, S. Coban, P. Constantin, L. Csige, P.V. Cuong, T. Dickel, H. Djapo, I. Dobrin, S. Essabaa, D. Filipescu, S. Franchoo, G. Georgiev, I. Gheorghe, D. Ghita, T. Glodariu, M. Gupta, A. Jokinen, J. Kaur, N. Marginean, R. Marginean, I. Moore, H. Pentilla, C. Petcu, W. Plass, T. Sava, G. Savard, C. Scheidenberger, D. Yordanov  
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83. M. Bobeica, D. Niculae, D. Balabanski, D. Filipescu, I. Gheorghe, D.G. Ghita, W. Luo  
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84. A. Kusoglu, G. Georgiev, C. Sotty, D. L. Balabanski, A. Goasduff, Y. Ishii, Y. Abe, K. Asahi, M. Bostan, R. Chevrier, M. Chikamori, J. M. Daugas, T. Furukawa, H. Nishibata, Y. Ichikawa, Y. Ishibashi, R. Lozeva, H. Miyatake, D. Nagae, T. Nanao, M. Niikura, T. Niwa, S. Okada, A. Ozawa, Y. Saito, H. Shirai, H. Ueno, D.T. Yordanov, and N. Yoshida  
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86. D. T. Yordanov, D. L. Balabanski, M. L. Bissell, K. Blaum, I. Budinčević, B. Cheal, K. Flanagan, N. Frömmgen, G. Georgiev, Ch. Geppert, M. Hammen, M. Kowalska, K. Kreim, A. Krieger, J. Meng, R. Neugart, G. Neyens, W. Nörtershäuser, M. M. Rajabali, J. Papuga, S. Schmidt, and P. W. Zhao  
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88. T. Konstantinopoulos, S. F. Ashley, M. Axiotis, A. Spyrou, S. Harissopulos, A. Dewald, J. Litzinger, O. Möller, C. Müller-Gatterman, P. Petkov, D. R. Napoli, N. Marginean, G. de Angelis, C. A. Ur, D. Bazzacco, E. Farnea, S. M. Lenzi, R. Vlastou, and D. Balabanski  
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- Conference papers (peer refereed journals)**
89. C. Matei, D.L. Balabanski, O. Tesileanu, Y. Xu, M. La Cognata, C. Spitareli  
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90. W. Luo, M. Bobeica, D. Filipescu, I. Gheorghe, D. Niculae, D. Balabanski  
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Piaski, Poland

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91. V. Iancu, G. Suliman, G. V. Turturica, M. Iovea, I. Daito, H. Ohgaki, C. Matei, C. A. Ur, D. L. Balabanski  
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Proceedings of the Workshop on Applications of Novel Scintillators for Research and Industry 2016  
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**Book chapters**

93. D.L. Balabanski, B. Blümich, N. Gelli, V. Iancu, M. Iovea, A. Kriznar, M. Massi, A. Mazzinghi, I. Ortega-Feliu, M.A. Respaldiza, C. Ruberto, S. Scricano, G. Suliman, Z. Szókefalvi-Nagy, C.A. Ur, W. Zia

*Complementary methods:  $\gamma$ -beam techniques, X-ray fluorescence (XRF) and nuclear magnetic resonance (NMR)*

**Nuclear Physics for Cultural Heritage**, eds. Anna Macková, Douglas MacGregor, Faiçal Azaiez, Johan Nyberg, and Eli Piasetzky (EDP Sciences, Mulhouse, 2016) pp. 37-53

ISBN: 978-2-7598-2091-7

**2015**

**Review papers**

94. D. Filipescu, A. Anzalone, D.L. Balabanski, S. S. Belyshev, F. Camera, M. La Cognata, P. Constantin, L. Csige, P. V. Cuong, M. Cwiok, V. Derya, W. Dominik, M. Gai, S. Gales, I. Gheorghe, B.S. Ishkhanov, A. Krasznahorkay, A. A. Kuznetsov, C. Mazzocchi, V.N. Orlin, N. Pietralla, M. Sin, C. Spitaleri, K.A. Stopani, O. Tesileanu, C.A. Ur, I. Ursu, H. Utsunomiya, V.V. Varlamov, H.R. Weller, N.V. Zamfir, and A. Zilges

*Perspectives for photonuclear research at the Extreme Light Infrastructure - Nuclear Physics (ELI-NP) facility*

Proceedings of the 2<sup>nd</sup> Int. Workshop on Perspectives on Nuclear Data for the Next Decade "P(ND)<sup>2</sup>-2", Oct. 14-17, 2014, Bruyeres-la-Chatel, France

**Eur. Phys. J. A 51, 185 (2015)**

**Original papers**

95. C. Sotty, M. Zielińska, G. Georgiev, D. L. Balabanski, A. E. Stuchbery, A. Blazhev, N. Bree, R. Chevrier, S. Das Gupta, J. M. Daugas, T. Davinson, H. De Witte, J. Diriken, L. P. Gaffney, K. Geibel, K. Hadyńska-Klek, F. G. Kondev, J. Konki, T. Kröll, P. Morel, P. Napiorkowski, J. Pakarinen, P. Reiter, M. Scheck, M. Seidlitz, B. Siebeck, G. Simpson, H. Törnqvist, N. Warr, and F. Wenander

<sup>97</sup><sub>37</sub>Rb<sub>60</sub>: *The Cornerstone of the Region of Deformation around A ~ 100*

**Phys. Rev. Lett. 115, 209902 (2015)**

96. S. Bottoni, S. Leoni, B. Fornal, R. Raabe, K. Rusek, G. Benzoni, A. Bracco, F.C.L. Crespi, A. I. Morales, P. Bednarczyk, N. Cieplicka-Oryńczak, W. Królas, A. Maj, B. Szpak, M. Callens, J. Bouma, J. Elseviers, H. De Witte, F. Flavigny, R. Orlandi, P. Reiter, M. Seidlitz, N. Warr, B. Siebeck, S. Hellgartner, D. Mücher, J. Pakarinen, M. Vermeulen, C. Bauer, G. Georgiev, R.V.F. Janssens, D. Balabanski, M. Sferrazza, M. Kowalska, E. Rapisarda, D. Voulot, M. Lozano Benito, F. Wenander

*Cluster-transfer reactions with radioactive beams: A spectroscopic tool for neutron-rich nuclei*

**Phys. Rev. C 92, 024322 (2015)**

97. Nadja Frommgen, Dimitre L. Balabanski, Mark L. Bissell, Jacek Bieron, Klaus Blaum, Bradley Cheal, Kieran Flanagan, Stephan Fritzsche, Christopher Geppert, Michael Hammen, Magdalena Kowalska, Kim Kreim, Andreas Krieger, Rainer Neugart, Gerda Neyens, Mustafa M. Rajabali, Wilfried Nortershauser, Jasna Papuga, Deyan T. Yordanov

*Collinear laser spectroscopy of atomic cadmium: Extraction of nuclear magnetic dipole and electric quadrupole moments*

**Eur. Phys. J. D 69, 164 (2015)**

98. A. Kusoglu, A.E. Stuchbery, G. Georgiev, B. A. Brown, A. Goasduff, L. Atanasova, D.L. Balabanski, M. Bostan, M. Danchev, P. Detistov, K.A. Gladnishki, J. Ljungvall, I. Matea, D. Radeck, C. Sotty, I. Stefan, D. Verney, D. T. Yordanov

*Magnetism of an Excited Self-Conjugate Nucleus: Precise Measurement of the g Factor of the 2<sup>+</sup><sub>1</sub> State in <sup>24</sup>Mg*

**Phys. Rev. Lett. 114, 062501 (2015)**

**Conference papers (peer refereed journals)**

99. D. L. Balabanski and the ELI-NP Science Team

*Nuclear Physics Studies at ELI-NP*

Proceedings of the International Workshop “Shapes and Dynamics of Atomic Nuclei: Contemporary Aspects (SDANCA-15), Oct. 8-10, 2015, Sofia, Bulgaria

**Bulg. J. Phys. 42, 372–381 (2015)**

100. Dimitre L. Balabanski and the ELI-NP Science Team

*Photofission experiments at the ELI-NP facility*

Proceedings of the Conference on 75 years of Nuclear Fission: Present Status and Future Perspectives (Fission 75), May 8-10, 2014, Mumbai, India

**Pramana – J. Phys. 85, 473-481 (2015)**

101. C.A. Ur, D. Balabanski, G. Cata-Danil, S. Gales, I. Morjan, O. Tesileanu, D. Ursescu, I. Ursu, N.V. Zamfir

*The ELI-NP facility for nuclear physics*

Proc. 6<sup>th</sup> Int. Conference “Channeling 2014: Charged and Neutral Particles Channeling Phenomena”, Oct. 5<sup>th</sup>-10<sup>th</sup>, 2014, Capri, Italy

**Nucl. Instrum. Meth. Phys. Res. B 355, 198–202 (2015)**

102. C.A. Ur, D. Balabanski, G. Cata-Danil, S. Gales, I. Morjan, O. Tesileanu, D. Ursescu, I. Ursu, N.V. Zamfir

*New Frontiers in Nuclear Physics Research at ELI-NP*

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**Acta Phys. Pol. B 46, 743-752 (2015)**

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103. F. Negoita, M. Gugu, H. Petrascu, C. Petrone, D. Pietreanu, J. Fuchs, S. Chen, D. Higginson, L. Vassura, F. Hannachi, M. Tarisien, M. Versteegen, P. Antici, D. Balabanski, S. Balascuta, M. Cernaianu, I. Dancus, S. Gales, L. Neagu, C. Petcu, M. Risca, M. Toma, E. Turcu, D. Ursescu  
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Proceedings of the International Conference on Nuclear Structure and Dynamics III, June 14<sup>th</sup>-19<sup>th</sup>, 2015, Portorož, Slovenija.  
**AIP Conf. Proc. 1681, 030002 (2015)**
105. Dimiter L. Balabanski and the ELI-NP Science Team  
*Future Experiments with Intense Laser Beams and Brilliant Gamma Beams at the ELI-NP Facility*  
Proceedings of the NUBA Conference Series - 1: Nuclear Physics and Astrophysics, Sept. 15-21, 2014, Adrasan, Turkey  
**J. Phys. Conf. Series 590, 012005 (2015)**
106. Pavel Detistov and Dimiter L. Balabanski  
*Monte-Carlo study of the influence of backscattered electrons on the transmission of a mini-orange  $\beta$  spectrometer*  
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**J. Phys. Conf. Series 590, 012027 (2015)**
107. A Kusoglu, A.E. Stuchbery, G. Georgiev, A. Goasduff, L. Atanasova, D.L. Balabanski, M. Bostan, M. Danchev, P. Detistov, K. Gladnishki, J. Ljungvall, I. Matea, D. Radeck, C. Sotty, I. Stefan, D. Verney, D.T. Yordanov  
*Nuclear g-factor measurement with time-dependent recoil in vacuum in radioactive-beam geometry*  
Proceedings of the NUBA Conference Series - 1: Nuclear Physics and Astrophysics, Sept. 15<sup>th</sup>-21<sup>st</sup>, 2014, Adrasan, Turkey  
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## 2014

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108. N. Blasi, L. Atanasova, D. Balabanski, S. Das Gupta, K. Gladinski, L. Guerro, S. Nardelli, A. Saltarelli  
*E0 decay from the first  $0^+$  state in  $^{156}\text{Dy}$  and  $^{160}\text{Er}$*   
**Phys. Rev. C 90, 044317 (2014)**

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109. Dimiter L. Balabanski and the ELI-NP Science Team  
*Physics studies with brilliant narrow-width  $\gamma$ -beams at the new ELI-NP Facility*  
Proceedings of the DAE Symposium on Nuclear Physics, Dec. 2-6, 2013, Mumbai, India  
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110. S. Bottoni, S. Leoni, B. Fornal, R. Raabe, G. Benzoni, A. Bracco, F.C.L. Crespi, A. Morales, B. Bednarczyk, N. Cieplicka, W. Królas, A. Maj, B. Szpak, M. Callens, J. Bouma, J. Elseviers, F. Falvigny, R. Orlandi, K. Rusek, P. Reiter, M. Seidlitz, S. Klupp, D. Mücher, G. Georgiev, D. Balabanski, M. Sferrazza, M. Kowalska, E. Rapisarda

*γ Spectroscopy of Neutron-rich Nuclei with A ≈ 100 Produced by Cluster Transfer Reactions at REX-ISOLDE*

Proceeding of the XXXIV<sup>th</sup> Mazurian Lakes Conference on Physics: Frontiers in Nuclear Physics, Sept. 6-13, 2013, Piaski, Poland

**Acta Phys. Pol. B 45, 343-347 (2014)**

111. D.L. Balabanski, G. Cata-Danil, D. Filipescu, S. Gales, O. Tesileanu, C.A. Ur, I. Ursu, N.V. Zamfir  
*The Extreme Light Infrastructure Nuclear Physics Facility: Towards Experiments with Brilliant γ-Ray Beams*

Proceedings of the XXXIV Mazurian Lakes Conference on Physics: Frontiers in Nuclear Physics, Sept. 6<sup>th</sup>-13<sup>th</sup>, 2013, Piaski, Poland

**Acta Phys. Pol. B 45, 383-390 (2014)**

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112. D. L. Balabanski, G. Cata-Danil, D. Filipescu, S. Gales, F. Negoita, O. Tesileanu, C. A. Ur, I. Ursu, N. V. Zamfir, and the ELI-NP Science Team

*Towards experiments at the new ELI-NP facility*

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**EPJ Web of Conferences 78, 06001 (2014)**

113. S. Bönig, S. Ilieva, T. Kröll, M. Scheck, D. Balabanski, C. Bauer, A. Blazhev, T. Bloch, D. Deleanu, J. Diriken, P. Fernier, R. Gernhäuser, K. Hadynska-Klek, A. Jungclaus, R. Lutter, A. Negret, K. Nowak, R. Orlandi, J. Pakarinen, G. Rainovski, T.R. Rodríguez, M. von Schmid, M. Seidlitz, B. Siebeck, G.S. Simpson, A. Illana Sisón, R. Stegmann, T. Stora, P.G. Thirolf, M. Thürauf, M.J. Vermeulen, D. Voulot, N. Warr, F. Wenander, H. De Witte, and MINIBALL Collaboration

*Quadrupole collectivity in neutron-rich Cd isotopes*

Proceedings of the International Nuclear Physics Conference, June 2-7, 2013, Florence, Italy

**EPJ Web of Conferences 66, 02012 (2014)**

## 2013

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114. D. T. Yordano v, D. L. Balabanski, J. Bieron, M. L. Bissell, K. Blaum, I. Budinčević, S. Fritzsche, N. Frömmgen, G. Georgiev, Ch. Geppert, M. Hammen, M. Kowalska, K. Kreim, A. Krieger, R. Neugart, W. Nörtershäuser, J. Papuga, and S. Schmidt,

*Spins, Electromagnetic Moments and Isomers in <sup>107-129</sup>Cd*

**Phys. Rev. Lett. 110, 192501 (2013), Featured in Physics, Editor's Suggestion, Physics Viewpoint**

115. D. Deleanu, D. L. Balabanski, Ts. Venkova, D. Bucurescu, N. Mărginean, E. Ganioglu, Gh. Căta-Danil, L. Atanasova, I. Căta-Danil, P. Detistov, D. Filipescu, D. Ghiță, T. Glodariu, M. Ivașcu, R. Mărginean, C. Mihai, A. Negret, S. Pascu, T. Sava, L. Stroe, G. Suliman, and N. V. Zamfir

*Excited states in <sup>129</sup>I*

**Phys. Rev. C 87, 014329 (2013)**

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116. H. Törnqvist, C. Sotty, D. Balabanski, A. Dhal, G. Georgiev, M. Hass, A. Heinz, Y. Hirayama, N. Imai, H. Johansson, M. Kowalska, A. Kusoglu, T. Nilsson, A. Stuchbery, F. Wenander, D.T. Yordanov  
*Tilted foils polarization at REX-ISOLDE*

Proceedings of the XVI<sup>th</sup> International Conference on Electromagnetic Isotope Separators and Techniques Related to their Applications, December 2–7, 2012, Matsue, Japan

**Nucl. Instrum. Meth. Phys. Res. B 317, 685–688 (2013)**

117. Y. Ichikawa, H. Ueno, Y. Ishii, T. Furukawa, A. Yoshimi, D. Kameda, H. Watanabe, N. Aoi, K. Asahi, D.L. Balabanski, R. Chevrier, J.M. Daugas, N. Fukuda, G. Georgiev, H. Hayashi, H. Iijima, N. Inabe, T. Inoue, M. Ishihara, T. Kubo, T. Nanao, T. Ohnishi, K. Suzuki, M. Tsuchiya, H. Takeda, and M.M. Rajabali  
*Spin-aligned RI beams via two-step fragmentation reactions*  
Proceedings of the XVI<sup>th</sup> International Conference on Electromagnetic Isotope Separators and Techniques Related to their Applications, December 2–7, 2012, Matsue, Japan  
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*Half-life measurements of highly charged radionuclides*  
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Proceedings of the 4<sup>th</sup> Joint International Conference on Hyperfine Interactions and International Symposium on Nuclear Quadrupole Interactions (HFI/NQI), September 10–14, 2012, Beijing, China  
**Hyperfine Int. 220, 47–51 (2013)**
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**ISBN: 978-981-4417-94-5**
121. R. Chevrier, J. M. Daugas, L. Gaudefroy, Y. Ichikawa, H. Ueno, M. Hass, H. Haas, S. Cottenier, N. Aoi, K. Asahi, D. L. Balabanski, N. Fukuda, T. Furukawa, G. Georgiev, H. Hayashi, H. Iijima, N. Inabe, T. Inoue, M. Ishihara, Y. Ishii, D. Kameda, T. Kubo, T. Nanao, G. Neyens, T. Ohnishi, M. M. Rajabali, K. Suzuki, H. Takeda, M. Tsuchiya, N. Vermeulen, H. Watanabe, and A. Yoshimi  
*Nuclear moments of  $\mu$ -second isomeric fragments at BigRIPS*  
Proceedings of the French-Japanese Symposium on Nuclear Structure Problems, January 5-8, 2011, Wako, Japan, eds. H. Otsu, T. Motobayashi, P. Roussel-Chomaz, and T. Otsuka  
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*Quadrupole moment of the  $7/2_1$  isomer state of  $^{43m}\text{S}$*   
Proceedings of the International Symposium on Exotic Nuclei (EXON-2012), Oct. 1<sup>st</sup>-6<sup>th</sup>, 2012, Vladivostok, Russia, Eds. Yu. E. Penionzhkevich and Yu. G. Sobolev  
**(World Scientific, Singapore, 2013) pp. 59-66**

**ISBN: 978-981-4508-85-8**

123. S. Kisyov, D. Ivanova, S. Lalkovski, N. Marginean, D. Balabanski, D. Bucurescu, Gh. Cata-Danil, I. Cata-Danil, D. Deleanu, D. Filipescu, I. Gheorghe, D. Ghita, T. Glodariu, R. Lica, R. Marginean, C. Mihai, A. Negret, T. Sava, E. Stefanova, L. Stroe, R. Suvaila, S. Toma, O. Yordanov, N.V. Zamfir  
*Structure of the Low-Lying Excited States in  $^{99,101,103}\text{Ru}$  from In-Beam Fast-Timing Measurements*  
Proceedings of the 32<sup>nd</sup> Int. Workshop on Nuclear Theory, Rila Mountains, Bulgaria, 2012, eds. A.Georgieva, N.Minkov  
**NUCLEAR THEORY, Vol. 32 (Heron Press, Sofia, 2013), pp. 187-194**  
**ISSN 1313-2822**

124. P. Detistov, D.L. Balabanski  
*Simulations of the Mini-Orange  $\beta$  Spectrometer Transmission Curves in Different Magnets Configurations*  
Proceedings of the 32<sup>nd</sup> Int. Workshop on Nuclear Theory, Rila Mountains, Bulgaria, 2012, eds. A.Georgieva, N.Minkov  
**NUCLEAR THEORY, Vol. 32 (Heron Press, Sofia, 2013), pp. 164-169**  
**ISSN 1313-2822**

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125. Daniel Ursescu, Ovidiu Tesileanu, Dimitre Balabanski, Gheorghe Cata-Danil, Constantin Ivan, Ioan Ursu, Sydney Gales, Nicolae V. Zamfir  
*Extreme light infrastructure nuclear physics (ELI-NP): present status and future perspectives*  
Conference on High-Power, High-Energy, and High-Intensity Laser Technology, and Research Using  
Proceedings of the Workshop on Extreme Light: Entering New Frontiers with Petawatt-Class Lasers, April 15<sup>th</sup>, 2013, Prague, Czech Republic, eds. Joachim Hein, Georg Korn, Luis O. Silva  
**Proc. SPIE 8780, 87801H (2013)**

## **2012**

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*Producing spin-handled rare-isotope beams*  
**Nature Phys. 8, 918-922 (2012)**
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*Is the  $7/2_1$  isomeric state of  $^{43}\text{S}$  spherical?*  
**Phys. Rev. Lett. 108, 162501 (2012)**
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*First  $g(2^+)$  measurement on neutron-rich  $^{72}\text{Zn}$  and the high-velocity transient field technique for radioactive heavy-ion beams*  
**Phys. Rev. C 85, 034334 (2012)**
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*Triaxial shapes in  $^{192}\text{Au}$*   
**Phys. Rev. C 86, 054305 (2012)**
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*Half-life measurements of stored fully-ionized and hydrogen-like  $^{122}\text{I}$  atoms*  
**Eur. Phys. J. A 48, 22 (2012)**
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*Storage ring facility at HIE-ISOLDE*  
**Eur. Phys. J. Special Topics 207, 1-117 (2012)**
133. S.Akkoyun, A.Algora, B.Alikhani, F.Ameil, G.de Angelis, L.Arnold, A.Astier, A.Atac, Y.Aubert, C.Aufranc, A.Austin, S.Aydin, F.Azaiez, S.Badoer, D.L.Balabanski, D.Barrientos, G. Baulieu, R.Baumann, D.Bazzacco, F.A.Beck, T.Beck, P.Bednarczyk, M.Bellato, M.A.Bentley, G.Benzoni, R.Berthier, L.Berti, R.Beunard, G.LoBianco, B.Birkenbach, P.G. Bizzeti, A.M.Bizzeti-Sona, F.LeBlanc, J.M.Blasco, N.Biasi, D.Bloor, C.Boiano, M. Borsato, D.Bortolato, A.J.Boston, H.C.Boston, P.Bourgault, P.Boutachkov, A.Bouty, A. Bracco, S.Brambilla, I.P.Brawn, A.Brondi, S.Broussard, B.Bruyneel, D.Bucurescu, I.Burrows, A.Burger, S.Cabaret, B.Cahan, E.Calore, F.Camera, A.Capsoni, F.Carrio, G. Casati, M.Castoldi, B.Cederwall, J.-L.Cercus, V.Chambert, M.El Chambit, R.Chapman, L.

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*AGATA—Advanced GAMMA Tracking Array*

**Nucl. Instrum. Meth. Phys. Res. A 668, 26-58 (2012)**

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134. S.Kisyov, S.Lalkovski, N.Marginean, D.Bucurescu, L.Atanasova, D.Balabanski, Gh.Cata-Danil, I.Cata-Danil, D.Deleanu, P.Detistov, D.Filipescu, D.Ghita, T.Glodariu, R. Marginean, C.Mihai, A.Negret, S.Pascu, T.Sava, L.Stroe, G.Suliman, N.V.Zamfir, M.Zhekova

*Fast-timing measurements in <sup>95,96</sup>Mo*

Proceedings of the XIX International School on Nuclear Physics, Neutron Physics and Applications (VARNA 2011) 19–25 September 2011, Varna, Bulgaria

**J. Phys. Conf. Series 366, 012027 (2012)**

135. Y. Ichikawa, H. Ueno, Y. Ishii, T. Furukawa, A. Yoshimi, D. Kameda, H. Watanabe, N. Aoi, K. Asahi, D. L. Balabanski, R. Chevrier, J. M. Daugas, N. Fukuda, G. Georgiev, H. Hayashi, H. Iijima, N. Inabe, T. Inoue, M. Ishihara, T. Kubo, T. Nanao, T. Ohnishi, K. Suzuki, M. Tsuchiya, H. Takeda, M. M. Rajabali

*Production of spin-aligned RI beam via two-step fragmentation with dispersion matching*

Proceedings of the Rutherford Centennial Conference on Nuclear Physics, Aug. 8<sup>th</sup>-12<sup>th</sup>, 2011, Manchester, UK

**J. Phys. Conf. Series 381, 012090 (2012)**

136. A.Krasznahorkay, L.Stuhl, M. Csatlos, A.Algora, J.Gulyas, J.Timar, N.Paar, D.Vretenar, K.Boretzky, M.Heil, Yu.A.Litvinov, D.Rossi, C.Scheidenberger, H.Simon, H.Weick, A.Bracco, S.Brambilla, N.Blasi, F.Camera, A.Giaz, B.Million, L.Pellegrini, S.Riboldi, O.Wieland, S.Altstadt, M.Fonseca, J.Glorius, K.Gobel, T.Heftrich, A.Koloczek, S. Krackmann, C.Langer, R.Plag, M.Pohl, G.Rastrepina, R.Reifarh, S.Schmidt, K.Sonnabend, M.Weigand, M.N.Harakeh, N.Kalantar-Nayestanaki, C.Rigollet, S.Bagchi, M.A.Najafi, T.Aumann, L.Atar, M.Heine, M.Holl, A.Movsesyan, P.Schrock, V.Volkov, F.Wamers, E.Fiori, B.Loher, J.Marganec, D.Savran, H.T.Johansson, P.Diaz Fernandez, U.Garg, D.L.Balabanski *Neutron-skin thickness from the study of the anti-analog giant dipole resonance*

Proceedings of the International Conference on Nuclear Structure and Dynamics II, July 9<sup>th</sup>-13<sup>th</sup>, 2012, Opatija, Croatia

**AIP Conf. Proc. 1491, 190 (2012)**

#### Patents

137. S. N. Abadjiev, E. M. Apostolov, D. L. Balabanski, J. Gerl, I. M. Kojouharov  
*Housing for segmented germanium detector*  
**EP 2442140 A2**, publication date 18.04.2012

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138. R.L.Lozeva, D.L.Balabanski, G.P.Georgiev, G.Audi, S.Cabaret, J-M.Daugas, T.Faul, M.Ferraton, E.Fiori, C.Gaulard, F.Ibrahim, P.Morel, L.Risegari, D.Verney, D.T.Yordanov  
*Quadrupole moment of the 6<sup>+</sup> isomeric state in <sup>66</sup>Cu: Interplay between different nuclear deformation driving forces*  
**Phys.Lett. 694B, 316-321 (2011)**
139. D.L.Balabanski, M.Ionescu-Bujor, A.Iordachescu, D.Bazzacco, F.Brandolini, D.Bucurescu, S.Chmel, M.Danchev, M. de Poli, G.Georgiev, H.Haas, H.Hubel, N.Marginean, R.Menegazzo, G.Neyens, P.Pavan, C.Rossi Alvarez, C.Ur, K.Vyvey, S.Frauendorf  
*Spin, Quadrupole Moment and Deformation of the Magnetic-Rotational Band Head in <sup>193</sup>Pb*  
**Phys. Rev. C 83, 014304 (2011)**
140. S.Kisyov, S.Lalkovski, N.Marginean, D.Bucurescu, L.Atanasova, D.L.Balabanski, Gh.Cata-Danil, I.Cata-Danil, J.-M.Daugas, D.Deleanu, P.Detistov, D.Filipescu, G.Georgiev, D.Ghita, T.Glodariu, J.Jolie, D.S.Judson, R.Lozeva, R. Marginean, C.Mihai, A.Negret, S.Pascu, D.Radulov, J.-M.Regis, T.Sava, L.Stroe, G.Suliman, N.V.Zamfir, K.O.Zell, M.Zhekova  
*In-beam fast-timing measurements in <sup>103,105,107</sup>Cd*  
**Phys. Rev. C 84, 014324 (2011)**
141. S.J.Steer, Zs.Podolyak, S.Pietri, M.Gorska, H.Grawe, K.H.Maier, P.H.Regan, D.Rudolph, A.B.Garnsworthy, R.Hoischen, J.Gerl, H.J.Wollersheim, F.Becker, P.Bednarczyk, L.Caceres, P.Doornenbal, H.Geissel, J.Grebosz, A.Kelic, I.Kojouharov, N.Kurz, F.Montes, W.Prokopwicz, T.Saito, H.Schaffner, S.Tashenov, A.Heinz, M. Pfutzner, T.Kurtukian-Nieto, G.Benzoni, A.Jungclaus, D.L.Balabanski, M.Bowry, C.Brandau, A.Brown, A.M.Bruce, W.N.Catford, I.J.Cullen, Zs.Dombradi, M.E.Estevez, W.Gelletly, G.Ilie, J.Jolie, G.A.Jones, M.Kmiecik, F.G.Kondev, R.Krucken, S.Lalkovski, Z.Liu, A.Maj, S.Myalski, S.Schwertel, T.Shizuma, P.M.Walker, E.Werner-Malento, O.Wieland  
*Isomeric states observed in heavy neutron-rich nuclei populated in the fragmentation of a <sup>208</sup>Pb beam*  
**Phys. Rev. C 84, 044313 (2011)**
142. E.Rapisarda, I.Stefanescu, D.L.Balabanski, B.Bastin, N.Bree, M.Danchev, T.Davinson, P.Delahaye, J.Diriken, J.Eberth, G.Georgiev, D.Fedorov, V.N.Fedosseev, E.Fiori, S.Franchoo, K.Gladnishki, K.Hadynska, K.Heyde, M.Huyse, O.Ivanov, J.Iwanicki, J.Jolie, M.Kalkuehler, Th.Kroll, R.Krucken, U.Koster, G. LoBianco, R. Lozeva, B.A.Marsh, S.Nardelli, F.Nowacki, N.Patronis, P. Reiter, M.Seidlitz,

K.Sieja, N.Smirnova, J.Srebrny, J.Van de Walle, P.Van Duppen, S.Zemlyanoi, N.Warr, F.Wenander, K.Wimmer, K.Wrzosek, M.Zielinska

*Coulomb excitation of the  $3^-$  isomer in  $^{70}\text{Cu}$*

**Phys. Rev. C 84, 064323 (2011)**

143. R.Hoischen, D.Rudolph, H.L.Ma, P.Montuenga, M.Hellstrom, S.Pietri, Zs.Podolyak, P.H.Regan, A.B.Garnsworthy, S.J.Steer, F.Becker, P.Bednarczyk, L.Caceres, P.Doornenbal, J.Gerl, M.Gorska, J.Grebosz, I.Kojouharov, N.Kurz, W.Prokopowicz, H.Schaffner, H.J.Wollersheim, L.-L.Andersson, L.Atanasova, D.L.Balabanski, M.A.Bentley, A.Blazhev, C.Brandau, J.R.Brown, C.Fahlander, E.K.Johansson

*Isomeric mirror states as probes for effective charges in the lower pf shell*

**J. Phys. G 38, 035104 (2011)**

144. W.Rother, A.Dewald, G.Pascovici, C.Fransen, G.Friessner, M.Hackstein, G.Ilie, H.Iwasaki, J.Jolie, B.Melon, P.Petkov, M.Pfeiffer, Th.Pissulla, K.-O.Zell, U.Jakobsson, R.Julin, P.Jones, S.Ketelhut, P.Nieminen, P.Peura, P.Rahkila, J.Uusitalo, C.Scholey, S.Harissopulos, A.Lagoyannis, T.Konstantinopoulos, T.Grahn, D.Balabanski

*A new Recoil Distance Technique using low energy Coulomb Excitation in Inverse Kinematics*

**Nucl. Instrum. Meth. Phys. Res. A 654, 196 (2011)**

#### **Conference papers (conference series)**

145. G.Lo Bianco, D.L.Balabanski, S.Nardelli, S.Das Gupta, A.Saltarelli, N.Blasi, K.A.Gladnishki, L.Fortunato

*$E0$  decay of the  $0^+_2$  levels in  $^{156}\text{Dy}$  and  $^{160}\text{Er}$*

Proceedings of the 10<sup>th</sup> International Spring Seminar on Nuclear Physics: New Quests in Nuclear Structure, May 21<sup>st</sup>-25<sup>th</sup>, 2010, Vietri sul Mare, Italy

**J. Phys. Conf. Series 267, 012054 (2011)**

#### **Conference papers (books)**

146. D.L.Balabanski, G.Lo Bianco, L.Atanasova, N.Blasi, S.Das Gupta, K.Gladnishki, L.Fortunato, S.Nardelli, A.Saltarelli

*$E0$  Decay of  $0^+_2$  States in the Rare-Earth Region: The Case of  $^{156}\text{Dy}$  and  $^{160}\text{Er}$*

Proceedings of the 30<sup>th</sup> Int. Workshop on Nuclear Theory, Rila Mountains, Bulgaria, June 27<sup>th</sup>-July 2<sup>nd</sup>, 2011, eds. A.Georgieva, N.Minkov

**NUCLEAR THEORY, Vol. 30 (Heron Press, Sofia, 2011), pp. 247-254**

**ISSN 1313-2822**

147. S.Kisyov, S.Lalkovski, M. Zhekova, D. Bucurescu, N. Marginean, I. Cata-Danil, Gh. Cata-Danil, D. Deleanu, D. Filipescu, D. Ghita, T. Glodariu, R. Marginean, C. Mihai, A. Negret, S. Pascu, T.Sava, L. Stroe, G. Suliman, N. V. Zamfir, L. Atanasova, D. Balabanski, P. Detistov

*Fast-timing measurements in  $^{95,96}\text{Mo}$*

Proceedings of the 30<sup>th</sup> Int. Workshop on Nuclear Theory, Rila Mountains, Bulgaria, June 27<sup>th</sup>-July 2<sup>nd</sup>, 2011, eds. A.Georgieva, N.Minkov

**NUCLEAR THEORY, Vol. 30 (Heron Press, Sofia, 2011), pp. 61-62**

**ISSN 1313-2822**

148. Dimiter L. Balabanski

*Novel detectors for nuclear research*

**Proceedings of the XXIII Int. Symp. Nucl. Electronics & Computing NEC'11, Varna, Sept. 11<sup>th</sup> – 19<sup>th</sup>, 2011 (Dubna Publ., 2011) pp. 42-51**

**ISBN 978-5-9530-0313-1**

#### **Laboratory reports**

149. Y. Ichikawa, H. Ueno, Y. Ishii, T. Furukawa, A. Yoshimi, D. Kameda, H. Watanabe, N. Aoi, K. Asahi, D. L. Balabanski, R. Chevrier, J. M. Daugas, N. Fukuda, G. Georgiev, H. Hayashi, H. Iijima, N. Inabe, T. Inoue, T. Kubo, T. Nanao, T. Ohnishi, K. Suzuki, M. Tsuchiya, H. Takeda, M. Rajabali, M. Ishihara

*Production of spin-aligned RI beam via two step fragmentation*

**RIKEN Accelerator Progress Report 2010, vol. 44, p.21 (2011)**

150. E.Fiori, G.Georgiev, A.E. Stuchbery, D.L.Balabanski, R.Alba, A.Blazhev, S.Cabaret, M.Hass, J.Ljungvall, C.Maiolino, T.J. Mertzimekis, K.Moschner, G.Neyens, M.M.Rajabali, D.Santonocito, C. Sotty

*Extension and limitations of the high-velocity transient-field (HVTF) technique for the measurement of magnetic moments*

**LNS Activity Report 2010, 53-56 (2011)**

**ISSN 1837-1561**

## 2010

### Original papers

151. L.Atanasova, D.L.Balabanski, S.K.Chamoli, M.Hass, D.Bazzacco, F.Becker, P.Bednarczyk, G.Benzoni, N.Biasi, A.Blazhev, A.Bracco, C.Brandau, L.Caceres, F.Camera, F.C.L.Crespi, P.Detistov, P.Doornenbal, C.Fahlander, E.Farnea, G.Georgiev, J.Gerl, K.A.Gladnishki, M.Gorska, J.Grebosz, R.Hoischen, G.Ilie, M. Ionescu-Bujor, A.Iordachescu, A.Jungclaus, G.Lo Bianco, M. Kmiecik, I.Kojouharov, N.Kurz, S.Lakshmi, R.Lozeva, A.Maj, D.Montanari, G.Neyens, M.Pfutzner, S. Pietri, Zs.Podolyak, W.Prokopowicz, D.Rudolph, G.Rusev, T.R.Saito, A.Saltarelli, H.Schaffner, R.Schwengner, G.Simpson, S.Tashenov, J.J.Valiente-Dobon, N.Vermeulen, J.Walker, E.Werner-Malento, O.Wieland, H.J.Wollersheim, H.Grawe, M.Hjorth-Jensen

*g-factor measurements at RISING: The cases of  $^{127}\text{Sn}$  and  $^{128}\text{Sn}$*

**Europhys. Lett. 91, 42001 (2010)**

152. G.Ilie, G.Neyens, G.S.Simpson, J.Jolie, A.Blazhev, H.Grawe, R.L.Lozeva, N.Vermeulen, L.Atanasova, D.L.Balabanski, F.Becker, P.Bednarczyk, C.Brandau, L.Caceres, S.K.Chamoli, J.M.Daugas, P.Doornenbal, J.Gerl, M.Gorska, J.Grebosz, M.Hass, M.Kmiecik, I.Kojouharov, N.Kurz, M.Ionescu-Bujor, A.Jungclaus, A.Maj, S.Mallion, O.Perru, M.Pfutzner, Zs.Podolyak, W.Prokopowicz, M.De Rydt, T.R.Saito, H.Schaffner, K.Turzo, J.Walker, E.Werner-Malento, H.-J. Wollersheim

*g factor measurement of the  $7^-$  isomer in  $^{126}\text{Sn}$  and first observation of spin-alignment in relativistic fission*

**Phys. Lett. 687B, 305-309 (2010)**

153. G.Mukherjee, P.Chowdhury, F.G.Kondev, P.M.Walker, G.D.Dracoulis, R.D'Alarcao, I.Shestakova, K.Abu Saleem, I.Ahmad, M.P.Carpenter, A.Heinz, R.V.F.Janssens, T.L.Khoo, T.Lauritsen, C.J.Lister, D.Seweryniak, I.Wiedenhofer, D.M.Cullen, C.Wheldon, D.L.Balabanski, M.Danchev, T.M.Goon, D.J.Hartley, L.L.Riedinger, O.Zeidan, M.A.Riley, R.A.Kaye, G.Sletten

*K-hindered decay of a six-quasiparticle isomer in  $^{176}\text{Hf}$*

**Phys. Rev. C 82, 054316 (2010)**

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*Coulomb excitation of  $^{73}\text{Ga}$*

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*Spin-alignment and g-factor measurement of  $\Gamma=12^+$  isomer in  $^{192}\text{Pb}$  produced in the relativistic-energy fragmentation of a  $^{238}\text{U}$  beam*

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*In-beam measurements of sub-nanosecond nuclear lifetimes with a mixed array of HPGe and  $\text{LaBr}_3:\text{Ce}$  detectors*

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157. R. L. Lozeva, D. L. Balabanski, G. P. Georgiev, G. Audi, A. Blazhev, S. Cabaret, J.-M. Daugas, T. Faul, M. Ferraton, E. Fiori, C. Gaulard, K. Hauschilda, F. Ibrahim, J. Jolie, A. Lopez-Martens, P. Morel, K. Moschner, L. Risegari, O. Roig, S. Szilner, D. Verney, D. T. Yordanov, and K.-O. Zell

*Single and Multi-Nucleon Transfer Reactions for Nuclear Moment Studies Toward Radioactive-Ion Beams*

Proceedings of the International Symposium on Exotic Nuclei (EXON'09), Sept. 28<sup>th</sup>-Oct. 2<sup>nd</sup>, 2009, Sochi, Russia, eds. Yu.E. Penionzhkevich and S.M. Lukyanov

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*Investigating the Structure of  $^{128}\text{I}$*

Proceedings of the 28<sup>th</sup> Int. Workshop on Nuclear Theory, Rila Mountains, Bulgaria, 2009, eds. A.Georgieva, N.Minkov

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*$^{128}\text{Xe}$ : Test for  $E(5)$  Symmetry through DDCM and GOSIA Analysis*

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*Search for E(5) Symmetry in  $^{102}\text{Pd}$*   
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163. K. Hadynska-Klek, D. Balabanski, M. Ciemala, E. Clément, A. Dijon, A.K. Gourishetty, M. Kicinska-Habior, M. Kisielinski, S. Kisyov, M. Kmiecik, M. Kowalczyk, S. Lalkovski, A. Maj, W. Mezynski, M. Moszynski, P.J. Napiorkowski, D.A. Pietak, J. Srebrny, L. Swiderski, D. Wolski, K. Wrzosek-Lipska, M. Zielinska, M. Zieblinska  
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*Shell Erosion and Shape Coexistence in  $^{43}_{16}\text{S}_{27}$*

**Phys. Rev. Lett. 102, 092501 (2009); Featured in Physics, Physics Viewpoint**

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*Weakly deformed oblate structures in  $^{198}_{76}\text{Os}^{122}$*

**Phys. Rev. C 79, 031305(R) (2009)**

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*Isomeric decay studies in neutron-rich  $N \approx 126$  nuclei*

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*The PARIS project*

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*Development of a New Recoil Distance Technique Using Coulomb Excitation in Inverse Kinematics*  
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*Yrast Isomers in the Vicinity of  $^{132}\text{Sn}$*

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*Probing High-Velocity Transient-Field Strength Using Heavy-ions Traversing Fe and Gd*

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*Transfer Reactions on Neutron-rich Nuclei at REX-ISOLDE*

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*A RISING g-factor measurement of the 19/2<sup>+</sup> isomer in <sup>127</sup>Sn*

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*First results from the stopped RISING campaign at GSI: The mapping of isomeric decays in highly exotic nuclei*

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