

Physics Division Published Journal Articles, July-December 2016

PHY-14239-ME-2016

Electroexcitation of the  $\Delta^+$  (1232) at Low Momentum Transfer

A. Blomberg *et al.*

Phys. Lett. **B760**, 267-272 (2016)

PHY-14278-HI-2016

Population and Decay of a  $K^\pi = 8^-$  Two-Quasineutron Isomer in  $^{244}\text{Pu}$

S. S. Hota, S. K. Tandel, P. Chowdhury, I. Ahmad, M. P. Carpenter, C. J. Chiara, J. P. Greene, C. R. Hoffman, E. G. Jackson, R. V. F. Janssens, B. P. Kay, T. L. Khoo, F. G. Kondev, S. Lakshmi, S. Lalkovski, T. Lauritsen, C. J. Lister, E. A. McCutchan, K. Moran, D. Peterson, U. Shirwadkar, D. Seweryniak, I. Stefanescu, Y. Toh, and S. Zhu  
Phys. Rev. C **94**, 021303(R)/1-5 (2016)

PHY-14283-TH-2016

Radii of Neutron Drops Probed Via the Neutron Skin Thickness of Nuclei

P. W. Zhao and S. Gandolfi

Phys. Rev. C **94**, 041302(R)/1-6 (2016)

PHY-14320-TH-2016

Isospin Decomposition of  $\gamma N \rightarrow N^*$  Transitions with a Dynamical Coupled-Channels Model

H. Kamano, S. X. Nakamura, T.-S. H. Lee, and T. Sato

Phys. Rev. C **94**, 015201/1-14 (2016)

PHY-14328-HI-2016

Ordering of the  $0d_{5/2}$  and  $1s_{1/2}$  Proton Levels in Light Nuclei

C. R. Hoffman, B. P. Kay, and J. P. Schiffer

Phys. Rev. C **94**, 024330/1-8 (2016)

PHY-14311-HI-2016

Single-Particle and Collective Excitations in  $^{62}\text{Ni}$

M. Albers, S. Zhu, A. D. Ayangeakaa, R. V. F. Janssens, J. Gellanki, I. Ragnarsson, M. Alcorta, T. Baugher, P. F. Bertone, M. P. Carpenter, C. J. Chiara, P. Chowdhury, H. M. David, A. N. Deacon, B. DiGiovine, A. Gade, C. R. Hoffman, F. G. Kondev, T. Lauritsen, C. J. Lister, E. A. McCutchan, C. Nair, A. M. Rogers, and D. Seweryniak  
Phys. Rev. C **94**, 034301/1-10 (2016)

PHY-14304-HI-2016

Observation of High-Spin Bands with Large Moments of Inertia in  $^{124}\text{Xe}$

Somnath Nag, A. K. Singh, G. B. Hagemann, G. Sletten, B. Herskind, T. Døssing, I. Ragnarsson, H. Hübel, A. Bürger, S. Chmel, A. N. Wilson, J. Rogers, M. P. Carpenter, R. V. F. Janssens, T. L. Khoo, F. G. Kondev, T. Lauritsen, S. Zhu, A. Korichi, E. A. Stefanova, P. Fallon, B. M. Nyakó, J. Timár, and K. Juhász  
Phys. Rev. C **94**, 034307/1-10 (2016)

PHY-14310-HI-2016

One-Neutron Transfer Study of  $^{137}\text{Xe}$  and Systematics of  $13/2_1^+$  and  $13/2_2^+$  Levels in  $N = 83$  Nuclei

W. Reviol, D. G. Sarantites, J. M. Elson, J. E. Kinnison, A. Gargano, S. Bottoni, R. V. F. Janssens, J. M. Allmond, A. D. Ayangeakaa, M. P. Carpenter, H. M. David, A. Galindo-Uribarri, N. Itaco, T. Lauritsen, E. Padilla-Rodal, and S. Zhu  
Phys. Rev. C **94**, 034309/1-10 (2016)

PHY-14284-TH-2016

Flavor Dependence of the Pion and Kaon Form Factors and Parton Distribution Functions

Parada T. P. Hutauruk, Ian C. Cloet, and Anthony W. Thomas  
Phys. Rev. C **94**, 035201/1-10 (2016)

PHY-14324-TH-2016

Configuration Interaction in Symmetry-Conserving Covariant Density Functional Theory

P. W. Zhao, P. Ring, and J. Meng  
Phys. Rev. C **94**, 041301/1-6 (2016)

PHY-14312-TH-2016

Two-Dimensional Collective Hamiltonian for Chiral and Wobbling Modes

Q. B. Chen, S. Q. Zhang, P. W. Zhao, R. V. Jolos, and J. Meng  
Phys. Rev. C **94**, 044301/1-13 (2016)

PHY-14288-HI-2016

Moments of Fusion-Barrier Distributions

K. E. Rehm, H. Esbensen, C. L. Jiang, B. B. Back, A. M. Stefanini, and G. Montagnoli  
Phys. Rev. C **94**, 044612/1-8 (2016)

PHY-14352-TH-2016

Local Chiral Potentials with  $\Delta$ -Intermediate States and the Structure of Light Nuclei

M. Piarulli, L. Girlanda, R. Schiavilla, A. Kievsky, A. Lovato, L. E. Marcucci, Steven C. Pieper, M. Viviani, and R. B. Wiringa  
Phys. Rev. C **94**, 054007/1-12 (2016)

PHY-14365-HI-2016

Rearrangement of Valence Neutrons in the Neutrinoless Double- $\beta$  Decay of  $^{136}\text{Xe}$

S. V. Szwece, B. P. Kay, T. E. Cocolios, J. P. Entwisle, S. J. Freeman, L. P. Gaffney, V. Guimarães, F. Hammache, P. P. McKee, E. Parr, C. Portail, J. P. Schiffer, N. de Séréville, D. K. Sharp, J. F. Smith, and I. Stefan  
Phys. Rev. C **94**, 054314/1-7 (2016)

PHY-14403-HI-2016

Neutron Single-Particle Strengths at  $N = 40, 42$ : Neutron Knockout from  $^{68,70}\text{Ni}$  Ground and Isomeric States

F. Recchia, D. Weisshaar, A. Gade, J. A. Tostevin, R. V. F. Janssens, M. Albers, V. M. Bader, T. Baugher, D. Bazin, J. S. Berryman, B. A. Brown, C. M. Campbell, M. P. Carpenter, J. Chen, C. J. Chiara, H. L. Crawford, C. R. Hoffman, F. G. Kondev, A. Korichi, C. Langer, T. Lauritsen, S. N. Liddick, E. Lunderberg, S. Noji, C. Prokop, S. R. Stroberg, S. Suchyta, K. Wimmer, and S. Zhu  
Phys. Rev. C **94**, 054324/1-9 (2016)

PHY-14375-HI-2016

First Observation of Rotational Structures in  $^{168}\text{Re}$

D. J. Hartley, R. V. F. Janssens, L. L. Riedinger, M. A. Riley, X. Wang, S. L. Miller, A. D. Ayangeakaa, P. F. Bertone, M. P. Carpenter, C. J. Chiara, P. Chowdhury, U. Garg, G. Gürdal, S. S. Hota, F. G. Kondev, T. Lauritsen, W. C. Ma, J. Matta, E. A. McCutchan, S. Mukhopadhyay, E. E. Pedicini, J. R. Vanhoy, and S. Zhu  
Phys. Rev. C **94**, 054329/1-7 (2016)

PHY-14416-ME-2017

Target and Beam-Target Spin Asymmetries in Exclusive  $\pi^+$  and  $\pi^-$  Electroproduction with 1.6 to 5.7 GeV Electrons

P. E. Bosted *et al.* (CLAS Collaboration)  
Phys. Rev. C **94**, 055201/1-25 (2016)

PHY-14382-HI-2016

Configurations and Decay Hindrances of High- $K$  States in  $^{180}\text{Hf}$

S. K. Tandel, P. Chowdhury, F. G. Kondev, R. V. F. Janssens, T. L. Khoo, M. P. Carpenter, T. Lauritsen, C. J. Lister, D. Seweryniak, S. Zhu, A. Deacon, S. J. Freeman, N. J. Hammond, G. D. Jones, E. F. Moore, and J. F. Smith  
Phys. Rev. C **94**, 064304/1-8 (2016)

PHY-14306-HI-2016

Triaxial-Band Structures and Evidence for Chiral Rotation in  $^{133}\text{La}$

C. M. Petrache, Q. B. Chen, S. Guo, A. D. Ayangeakaa, U. Garg, J. T. Matta, B. K. Nayak, D. Patel, J. Meng, M. P. Carpenter, C. J. Chiara, R. V. F. Janssens, F. G. Kondev, T. Lauritsen, D. Seweryniak, S. Zhu, S. S. Ghugre, and R. Palit  
Phys. Rev. C **94**, 064309/1-14 (2016)

PHY-14358-HI-2016

Experimental Study of the Astrophysically Important  $^{23}\text{Na}(\alpha,p)^{26}\text{Mg}$  and  $^{23}\text{Na}(\alpha,n)^{26}\text{Al}$  Reactions

M. L. Avila, K. E. Rehm, S. Almaraz-Calderon, A. D. Ayangeakaa, C. Dickerson, C. R. Hoffman, C. L. Jiang, B. P. Kay, J. Lai, O. Nusair, R. C. Pardo, D. Santiago-Gonzalez, R. Talwar, and C. Ugalde  
Phys. Rev. C **94**, 065804/1-5 (2016)

PHY-14415-HI-2017

Erratum: Analogous Intruder Behavior Near Ni, Sn, and Pb Isotopes [Phys. Rev. C **92**, 024319 (2015)]

S. N. Liddick, W. B. Walters, C. J. Chiara, R. V. F. Janssens, B. Abromeit, A. Ayres, A. Bey, C. R. Bingham, M. P. Carpenter, L. Cartegni, J. Chen, H. L. Crawford, I. G. Darby, R. Grzywacz, J. Harker, C. R. Hoffman, S. Ilyushkin, F. G. Kondev, N. Larson, M. Madurga, D. Miller, S. Padgett, S. V. Paulauskas, M. M. Rajabali, K. Rykaczewski, D. Seweryniak, S. Suchyta, and S. Zhu  
Phys. Rev. C **94**, 069904(E)/1 (2016)

PHY-14414-ME-2017

Electron-Ion Collider: The Next QCD Frontier

A. Accardi *et al.*  
Eur. Phys. J. A **52**, 268/1-100 (2016)

PHY-14322-TH-2016

Perspective on the Origin of Hadron Masses

Craig D. Roberts  
Few-Body Syst. **5**/1-12 (2016)

PHY-14315-HI-2016

Characterization of a Gamma-Ray Tracking Array: A Comparison of GRETINA and Gammasphere Using a  $^{60}\text{Co}$  Source

T. Lauritsen, A. Korichi, S. Zhu, A. N. Wilson, D. Weisshaar, J. Dudouet, A. D. Ayangeakaa, M. P. Carpenter, C. M. Campbell, E. Clément, H. L. Crawford, M. Cromaz, P. Fallon, J. P. Greene, R. V. F. Janssens, T. L. Khoo, N. Lalović, I. Y. Lee, A. O. Macchiavelli, R. M. Perez-Vidal, S. Pietri, D. C. Radford, D. Ralet, L. A. Riley, D. Seweryniak, and O. Stezowski  
Nucl. Instrum. Methods **A836**, 46-56 (2016)