**Physics Division Published Journal Articles, July-December 2014**

PHY-13696-ME-2014

Probing the Repulsive Core of the Nucleon-Nucleon Interaction Via the 4He (*e*,*e*′*pN*) Triple-Coincidence Reaction

 I. Korover *et al.* (Jefferson Lab Hall A Collaboration)

 Phys. Rev. Lett. **113**, 022501/1-5 (2014)

PHY-13752-HI-2014

Fusion Hindrance for a Positive-*Q*-Value System - 24Mg + 30Si

C. L. Jiang, A. M. Stefanini, H. Esbensen, K. E. Rehm, S. Almaraz-Calderon, B. B. Back,
L. Corradi, E. Fioretto, G. Montagnoli, F. Scarlassara, D. Montanari, S. Courtin, D. Bourgin, F. Haas, A. Goasduff, S. Szilner, and T. Mijatovic

 Phys. Rev. Lett. **113**, 02270/1-5 (2014)

PHY-13946-ME-2014

Strangeness Suppression of *q*$\overbar{q}$ Creation Observed in Exclusive Reactions

 M. D. Mestayer *et al.* (CLAS Collaboration)

 Phys. Rev. Lett. **113**, 152004/1-6 (2014)

PHY-13852-HI-2014

Fission Barrier of Super-Heavy Nuclei and Persistence of Shell Effects at High Spins: Cases of 254No and 220Th

Greg Henning, T. L. Khoo, A. Lopez-Martens, D. Seweryniak, M. Alcorta, M. Asai,
B. B. Back, P. F. Bertone, D. Boilley, M. P. Carpenter, C. J. Chiara, P. Chowdhury, B. Gall, P. T. Greenlees, G. Gürdal, K. Hauschild, A. Heinz, C. R. Hoffman, R. V. F. Janssens,
A. V. Karpov, B. P. Kay, F. G. Kondev, S. Lakshmi, T. Lauritsen, C. J. Lister,
E. A. McCutchan, C. Nair, J. Piot, D. Potterveld, P. Reiter, A. M. Rogers, N. Rowley, and
S. Zhu

 Phys. Rev. Lett. **113**, 262505/1-6 (2014)

PHY-13887-HI-2014

*N* = 151 Pu, Cm and Cf Nuclei Under Rotational Stress: Role of Higher-Order Deformations

S. S. Hota, P. Chowdhury, T. L. Khoo, M. P. Carpenter, R. V. F. Janssens, Y. Qiu, I. Ahmad, J. P. Greene, S. K. Tandel, D. Seweryniak, S. Zhu, P. F. Bertone, C. J. Chiara, A. Y. Deo,
N. D'Olympia, S. Gros, C. J. Guess, T. Harrington, D. J. Hartley, G. Henning,
C. R. Hoffman, E. G. Jackson, F. G. Kondev, S. Lakshmi, T. Lauritsen, C. J. Lister,
E. A. McCutchan, K. Moran, C. Nair, D. Peterson, U. Shirwadkar, and I. Stefanescu

 Phys. Lett. **B739**, 13-18 (2014)

PHY-13880-HI-2014

Low-Lying Isomeric States in 80Ga from the *β*− Decay of 80Zn

R. Lica, N. Marginean, D. G. Ghita, H. Mach, L. M. Fraile, G. S. Simpson, A. Aprahamian, C. Bernards, J. A. Briz, B. Bucher, C. J. Chiara, Z. Dlouhy, I. Gheorghe, P. Hoff, J. Jolie,
U. Koster, W. Kurcewicz, R. Marginean, B. Olaizola,V. Paziy, J. M. Regis, M. Rudigier,
T. Sava, M. Stanoiu, L. Stroe, and W. B. Walters

 Phys. Rev. C **90**, 014320/1-7 (2014)

PHY-13748-HI-2014

High-Spin Structure of Odd-Odd 172Re

D. J. Hartley, R. V. F. Janssens, L. L. Riedinger, M. A. Riley, X. Wang, S. Miller,
A. D. Ayangeakaa, M. P. Carpenter, J. J. Carroll, J. Cavey, C. J. Chiara, P. Chowdhury,
U. Garg, S. S. Hota, E. G. Jackson, F. G. Kondev, T. Lauritsen, M. Litz, W. C. Ma, J. Matta, E. S. Paul, E. E. Pedicini, J. Simpson, J. R. Vanhoy, and S. Zhu

 Phys. Rev. C **90**, 017301/1-5 (2014)

PHY-13761-TH-2014

Quantum Monte Carlo Calculations of Electromagnetic Transitions in 8Be with Meson-Exchange Currents Derived from Chiral Effective Field Theory

 S. Pastore, R. B. Wiringa, Steven C. Pieper, and R. Schiavilla

 Phys. Rev. C **90**, 024321/1-12 (2014)

PHY-13755-HI-2014

Revised Level Structure of 120Te

Somnath Nag, Purnima Singh, A. K. Singh, A. Bürger, M. P. Carpenter, S. Chmel, P. Fallon, G. B. Hagemann, B. Herskind, H. Hübel, R. V. F. Janssens, K. Juhász, T. L. Khoo,
F. G. Kondev, A. Korichi, T. Lauritsen, B. M. Nyakó, I. Ragnarsson, J. Rogers, G. Sletten,
J. Timár, A. N. Wilson, and S. Zhu

 Phys. Rev. C **90**, 037302/1-5 (2014)

PHY-13793-HI-2014

Characterization of Octupole-Type Structure in 221Th

W. Reviol, R. V. F. Janssens, S. Frauendorf, D. G. Sarantites, M. P. Carpenter, X. Chen,
C. J. Chiara, D. J. Hartley, K. Hauschild, T. Lauritsen, A. Lopez-Martens, M. Montero,
O. L. Pechenaya, D. Seweryniak, J. B. Snyder, and S. Zhu

 Phys. Rev. C **90**, 044318/1-18 (2014)

PHY-13903-TH-2014

Fusion of 28Si + 28,30Si: Different Trends at Sub-Barrier Energies

G. Montagnoli, A. M. Stefanini, H. Esbensen, C. L. Jiang, L. Corradi, S. Courtin, E. Fioretto, J. Grebosz, F. Haas, H. M. Jia, M. Mazzocco, C. Michelagnoli, T. Mijatović, D. Montanari, C. Parascandolo, F. Scarlassara, E. Strano, S. Szilner, and D. Torresi

 Phys. Rev. C **90**, 044608/1-8 (2014)

PHY-13891-HI-2014

Multiple Excitation Modes in 163Hf

R. B. Yadav, W. C. Ma, J. C. Marsh, Q. A. Ijaz, R. V. F. Janssens, M. P. Carpenter,
C. R. Hoffman, T. Lauritsen, S. Zhu, F. G. Kondev, G. Gürdal, G. B. Hagemann,
D. J. Hartley, L. L. Riedinger, and S. Mukhopadhyay

 Phys. Rev. C **90**, 054325/1-12 (2014)

PHY-13708-TH-2014

Finite-Volume Hamiltonian Method for Coupled-Channels Interactions in Lattice QCD

 Jia-Jun Wu, T.-S. H. Lee, A. W. Thomas, and R. D. Young

 Phys. Rev. C **90**, 055206/1-14 (2014)

PHY-13843-TH-2014

Dynamical Coupled-Channels Model of *K*−*p* Reactions: Determination of Partial-Wave Amplitudes

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

 Phys. Rev. C **90**, 065204/1-40 (2014)

PHY-13787-TH-2014

Parton Distribution Amplitudes of Light Vector Mesons

 Fei Gao, Lei Chang, Yu-Xin Liu, Craig D. Roberts, and Sebastian M. Schmidt

 Phys. Rev. D **90**, 014011/1-14 (2014)

PHY-13780-ME-2014

Transverse Polarisation of Λ Hyperons from Quasireal Photoproduction on Nuclei

 A. Airapetian *et al.* (HERMES Collaboration)

 Phys. Rev. D **90**, 072007/1-7 (2014)

PHY-13697-RI-2014

Design and Multiphysics Analysis of a 176 MHz Continuous-Wave Radio-Frequency Quadrupole

S. V. Kutsaev, B. Mustapha, P. N. Ostroumov, A. Barcikowski, D. Schrage, J. Rodnizki, and D. Berkovits

 Phys. Rev. ST-AB **17**, 072001/1-11 (2014)

PHY-13800-TH-2014

Non-Exponential and Oscillatory Decays in Quantum Mechanics

 Murray Peshkin, Alexander Volya, and Vladimir Zelevinsky

 Europhysics Letters **107**, 40001/1-7 (2014)

PHY-13889-TH-2014

Nucleon and *Δ* Elastic and Transition Form Factors

 Jorge Segovia, Ian C. Cloët, Craig D. Roberts, and Sebastian M. Schmidt

 Few-Body Syst. **55**, 1185-1222 (2014)

PHY-13429-ME-2013

Measurement of the 12C(e,e′p)11B Two-Body Breakup Reaction at High Missing Momentum

 P. Monaghan *et al.*

 J. Phys. G. **41**, 105109/1-11 (2014)

PHY-13882-HI-2014

First Application of the *γ*-Summing Technique in Inverse Kinematics

S. J. Quinn, A. Spyrou, A. Simon, A. Battaglia, M. Bowers, B. Bucher, C. Casarella,
M. Couder, P. A. DeYoung, A. C. Dombos, J. P. Greene, J. Gorres, A. Kontos, Q. Li,
A. Long, M. Moran, N. Paul, J. Pereira, D. Robertson, K. Smith, and M. K. Smith

 Nucl. Instrum. Methods **A757**, 62-66 (2014)

PHY-13883-HI-2014

The X-Array and SATURN: A New Decay-Spectroscopy Station for CARIBU

A. J. Mitchell, P. F. Bertone, B. DiGiovine, C. J. Lister, M. P. Carpenter, P. Chowdhury,
J. A. Clark, N. D'Olympia, A. Y. Deo, F. G. Kondev, E. A. McCutchan, J. Rohrer, G. Savard, D. Seweryniak, and S. Zhu

 Nucl. Instrum. Methods **A763**, 232-239 (2014)

PHY-13884-HI-2014

Extraction of Thermalized Projectile Fragments from a Large Volume Gas Cell

K. Cooper, C. S. Sumithrarachchi, D. J. Morrissey, A. Levand, J. A. Rodriguez, G. Savard,
S. Schwarz, and B. Zabransky

 Nucl. Instrum. Methods **A763**, 543-546 (2014)

PHY-13970-ME-2014

The Large-Area Hybrid-Optics CLAS12 RICH Detector: Tests of Innovative Components

M. Contalbrigo, N. Baltzell, F. Benmokhtar, L. Barion, E. Cisbani, A. El Alaoui, K. Hafidi, M. Hoek, V. Kubarovsky, L. Lagamba, V. Lucherini, R. Malaguti, M. Mirazita,
R. Montgomery, A. Movsisyan, P. Musico, D. Orecchini, A. Orlandi, L. L. Pappalardo,
S. Pereira, R. Perrino, J. Phillips, S. Pisano, P. Rossi, S. Squerzanti, S. Tomassini,
M. Turisini, and A. Viticchiè

 Nucl. Instrum. Methods **A766**, 22-27 (2014)

PHY-13630-TH-2013

Explanation and Prediction of Observables Using Continuum Strong QCD

 Ian C. Cloët and Craig D. Roberts

 Prog. Part. Nucl. Phys. **77**, 1-69 (2014)