

Calem R. Hoffman

- EDUCATION** Ph.D., Physics, Florida State University, Spring 2009
 B.S., Physics, Florida State University, Fall 2003
- POSITIONS HELD** **Physicist**
 Physics Division, Argonne National Laboratory, April 2017 - Present
Assistant Physicist
 Physics Division, Argonne National Laboratory, August 2012 - March 2017
Argonne Director's Fellow
 Physics Division, Argonne National Laboratory, October 2010 - August 2012
Postdoctoral Researcher
 Physics Division, Argonne National Laboratory, May 2009 - October 2010
Graduate Research Assistant
 Department of Physics, Florida State University, May 2005 - May 2009
Graduate Teaching Assistant
 Department of Physics, Florida State University, January 2005 - May 2005
 Department of Physics & Astronomy, Michigan State University, September 2004 - December 2004
- AWARDS** **Dissertation Award in Nuclear Physics**
 American Physical Society Division of Nuclear Physics, February 2010
John D. Fox Award in Nuclear Physics
 Department of Physics, Florida State University, April 2007
- RESEARCH INTERESTS** Low-energy nuclear structure physics, with a focus on the evolution of the single-particle shell structure from stability towards the limits of nucleon binding.
- PEER-REVIEWED PUBLICATIONS**
- 2018
1. **Sub-shell closure and shape coexistence in the transitional nucleus ^{98}Zr**
W. Witt, V. Werner, N. Pietralla, M. Albers, A. D. Ayangeakaa, B. Bucher, M. P. Carpenter, D. Cline, H. M. David, A. Hayes, [C. Hoffman](#), R. V. F. Janssens, B. P. Kay, F. G. Kondev, W. Korten, T. Lauritsen, O. Mller, G. Rainovski, G. Savard, D. Seweryniak, J. Smith, R. Stegmann, S. Zhu, and C. Y. Wu
[Phys. Rev. C **98**, 041302\(R\), \(2018\)](#)
 2. **Two-neutron and core-excited states in ^{210}Pb : Tracing $E3$ collectivity and evidence for a new β -decaying isomer in ^{210}Tl**
R. Broda, L. W. Iskra, R. V. F. Janssens, B. A. Brown, B. Fornal, J. Wrzesinski, N. Cieplicka-Orynczak, M. P. Carpenter, C. J. Chiara, [C. R. Hoffman](#), F. G. Kondev, G. J. Lane, T. Lauritsen, Zs. Podolyak, D. Seweryniak, W. B. Walters, and S. Zhu
[Phys. Rev. C **98**, 024324 \(2018\)](#)
 3. **Experimental study of the effective nucleon-nucleon interaction using the $^{21}\text{F}(d,p)^{22}\text{F}$ reaction**
J. Chen, [C. R. Hoffman](#), T. Ahn, K. Auranen, M. L. Avila, B. B. Back, D. W. Bardayan, D. Blankstein, P. Copp, D. Gorelov, B. P. Kay, S. A. Kuvin, J. P. Lai, D. G. McNeel, P. D. O'Malley,

A. M. Rogers, D. Santiago-Gonzalez, J. P. Schiffer, J. Sethi, R. Talwar, and J. R. Winkelbauer
[Phys. Rev. C **98**, 014325 \(2018\)](#)

4. **Novel $\Delta J = 1$ Sequence in ^{78}Ge : Possible Evidence for Triaxiality**

A. M. Forney, W. B. Walters, C. J. Chiara, R. V. F. Janssens, A. D. Ayangeakaa, J. Sethi, J. Harker, M. Alcorta, M. P. Carpenter, G. Gurdal, [C. R. Hoffman](#), B. P. Kay, F. G. Kondev, T. Lauritsen, C. J. Lister, E. A. McCutchan, A. M. Rogers, D. Seweryniak, I. Stefanescu, and S. Zhu
[Phys. Rev. Lett. **120**, 212501 \(2018\)](#)

5. **Position-sensitive, Fast Ionization Chambers**

J. Lai, L. Afanasieva, J.C. Blackmon, C.M. Deibel, H.E. Gardiner, A. Lauer, L.E. Linhardt, K.T. Macon, B.C. Rasco, C. Williams, D. Santiago-Gonzalez, S.A. Kuvin, S. Almaraz-Calderon, L.T. Baby, J. Baker, J. Belarge, I. Wiedenherver, E. Need, M.L. Avila, B.B. Back, B. DiGiovine, and [C.R. Hoffman](#)
[Nucl. Instr. Meth. A **890**, 119 \(2008\)](#)

6. **Experimental study of $^{38}\text{Ar} + \alpha$ reaction cross sections relevant to the ^{41}Ca abundance in the solar system**

R. Talwar, M. J. Bojazi, P. Mohr, K. Auranen, M. L. Avila, A. D. Ayangeakaa, J. Harker, [C. R. Hoffman](#), C. L. Jiang, S. A. Kuvin, B. S. Meyer, K. E. Rehm, D. Santiago-Gonzalez, J. Sethi, C. Ugalde, and J. R. Winkelbauer
[Phys. Rev. C **97**, 055801 \(2018\)](#)

7. **Masses and β -Decay Spectroscopy of Neutron-Rich Odd-Odd $^{160,162}\text{Eu}$ Nuclei: Evidence for a Subshell Gap with Large Deformation at $N = 98$**

D. J. Hartley, F. G. Kondev, R. Orford, J. A. Clark, G. Savard, A. D. Ayangeakaa, S. Bottoni, F. Buchinger, M. T. Burkey, M. P. Carpenter, P. Copp, D. A. Gorelov, K. Hicks, [C. R. Hoffman](#), C. Hu, R. V. F. Janssens, J. W. Klimes, T. Lauritsen, J. Sethi, D. Seweryniak, K. S. Sharma, H. Zhang, S. Zhu, and Y. Zhu
[Phys. Rev. Lett. **120**, 182502 \(2018\)](#)

8. **Probing the Single-Particle Character of Rotational States in ^{19}F Using a Short-Lived Isomeric Beam**

D. Santiago-Gonzalez, K. Auranen, M. L. Avila, A. D. Ayangeakaa, B. B. Back, S. Bottoni, M. P. Carpenter, J. Chen, C. M. Deibel, A. A. Hood, [C. R. Hoffman](#), R. V. F. Janssens, C. L. Jiang, B. P. Kay, S. A. Kuvin, A. Lauer, J. P. Schiffer, J. Sethi, R. Talwar, I. Wiedenhover, J. Winkelbauer, and S. Zhu
[Phys. Rev. Lett. **120**, 122503 \(2018\)](#)

9. **Reaction rate for carbon burning in massive stars**

C. L. Jiang, D. Santiago-Gonzalez, S. Almaraz-Calderon, K. E. Rehm, B. B. Back, K. Auranen, M. L. Avila, A. D. Ayangeakaa, S. Bottoni, M. P. Carpenter, C. Dickerson, B. DiGiovine, J. P. Greene, [C. R. Hoffman](#), R. V. F. Janssens, B. P. Kay, S. A. Kuvin, T. Lauritsen, R. C. Pardo, J. Sethi, D. Seweryniak, R. Talwar, C. Ugalde, S. Zhu, D. Bourgin, S. Courtin, F. Haas, M. Heine, G. Fruet, D. Montanari, D. G. Jenkins, L. Morris, A. Lefebvre-Schuhl, M. Alcorta, X. Fang, X. D. Tang, B. Bucher, C. M. Deibel, and S. T. Marley
[Phys. Rev. C **97**, 012801\(R\) \(2018\)](#)

2017

10. **Nucleon correlations and the structure of $^{71}_{30}\text{Zn}^{41}$,**

S. Bottoni, S. Zhu, R. V. F. Janssens, M. P. Carpenter, Y. Tsunoda, T. Otsuka, A. O. Macchiavelli, D. Cline, C. Y. Wu, A. D. Ayangeakaa, B. Bucher, M. Q. Buckner, C. M. Campbell, C. J. Chiara, H. L. Crawford, M. Cromaz, H. M. David, P. Fallon, A. Gade, J. P. Greene, J. Harker, A. B. Hayes, [C. R. Hoffman](#), B. P. Kay, A. Korichi, T. Lauritsen, J. Sethi, D. Seweryniak, W. B. Walters, D.

Weisshaar, A. Wiens
[Phys. Lett. B **775**, 271 \(2017\)](#)

11. **Effect of Weak Binding on the Apparent Spin-Orbit Splitting in Nuclei**
B. P. Kay, [C. R. Hoffman](#), and A. O. Macchiavelli
[Phys. Rev. Lett. **119**, 182502 \(2017\)](#)
12. **α decay of the $T = 1$, 2^+ state in ^{10}B and isospin symmetry breaking in the $A = 10$ triplet**
S. A. Kuvin, A. H. Wuosmaa, C. J. Lister, M. L. Avila, [C. R. Hoffman](#), B. P. Kay, D. G. McNeel, C. Morse, E. A. McCutchan, D. Santiago-Gonzalez, and J. R. Winkelbauer
[Phys. Rev. C **96**, 041301\(R\) \(2017\)](#)
13. **γ spectroscopy of states in ^{32}Cl relevant for the $^{31}\text{S}(p,\gamma)^{32}\text{Cl}$ reaction rate**
L. Afanasieva, J. C. Blackmon, C. M. Deibel, J. Lai, L. E. Linhardt, B. C. Rasco, D. Seweryniak, M. Alcorta, M. P. Carpenter, J. A. Clark, [C. R. Hoffman](#), R. V. F. Janssens, and S. Zhu
[Phys. Rev. C **96**, 035801 \(2017\)](#)
14. **Study of the $^{26}\text{Al}^m(d,p)^{27}\text{Al}$ Reaction and the Influence of the $^{26}\text{Al} 0^+$ isomer on the Destruction of ^{26}Al in the Galaxy**
S. Almaraz-Calderon, K. E. Rehm, N. Gerken, M. L. Avila, B. P. Kay, R. Talwar, A. D. Ayangeakaa, S. Bottoni, A. A. Chen, C. M. Deibel, C. Dickerson, K. Hanselman, [C. R. Hoffman](#), C. L. Jiang, S. A. Kuvin, O. Nusair, R. C. Pardo, D. Santiago-Gonzalez, J. Sethi, and C. Ugalde
[Phys. Rev. Lett. **119**, 072701 \(2017\)](#)
15. **In-beam γ -ray spectroscopy studies of medium-spin states in the odd-odd nucleus ^{186}Re**
D. A. Matters, F. G. Kondev, N. Aoi, Y. Ayyad, A. P. Byrne, M. P. Carpenter, J. J. Carroll, C. J. Chiara, P. M. Davidson, G. D. Dracoulis, Y. D. Fang, [C. R. Hoffman](#), R. O. Hughes, E. Ideguchi, R. V. F. Janssens, S. Kanaya, B. P. Kay, T. Kibedi, G. J. Lane, T. Lauritsen, J. W. McClory, P. Nieminen, S. Noji, A. Odahara, H. J. Ong, A. E. Stuchbery, D. T. Tran, H. Watanabe, A. N. Wilson, Y. Yamamoto, and S. Zhu
[Phys. Rev. C **96**, 014318 \(2017\)](#)
16. **Doubly magic ^{208}Pb : High-spin states, isomers, and $E3$ collectivity in the yrast decay**
R. Broda, R. V. F. Janssens, L. W. Iskra, J. Wrzesinski, B. Fornal, M. P. Carpenter, C. J. Chiara, N. Cieplicka-Orynczak, [C. R. Hoffman](#), F. G. Kondev, W. Krolas, T. Lauritsen, Zs. Podolyak, D. Seweryniak, C. M. Shand, B. Szpak, W. B. Walters, S. Zhu, and B. A. Brown
[Phys. Rev. C **95**, 064308 \(2017\)](#)
17. **Study of and reactions with a Multi-Sampling Ionization Chamber**
M. L. Avila and 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
[Nucl. Instr. Meth. A **859**, 63 \(2017\)](#)
18. **Direct Evidence for Octupole Deformation in ^{146}Ba and the Origin of Large $E1$ Moment Variations in Reflection-Asymmetric Nuclei**
B. Bucher, S. Zhu, C. Y. Wu, R. V. F. Janssens, R. N. Bernard, L. M. Robledo, T. R. Rodriguez, D. Cline, A. B. Hayes, A. D. Ayangeakaa, M. Q. Buckner, C. M. Campbell, M. P. Carpenter, J. A. Clark, H. L. Crawford, H. M. David, C. Dickerson, J. Harker, [C. R. Hoffman](#), B. P. Kay, F. G. Kondev, T. Lauritsen, A. O. Macchiavelli, R. C. Pardo, G. Savard, D. Seweryniak, and R. Vondrasek
[Phys. Rev. Lett. **118**, 152504 \(2017\)](#)

19. **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 \(2016\)](#)
20. **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 \(2016\)](#)
21. **Single-particle and collective excitations in ^{62}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 \(2016\)](#)
22. **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 \(2016\)](#)
23. **Population and decay of a $K^\pi = 8^-$ two-quasineutron isomer in ^{244}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\(R\) \(2016\)](#)
24. **Change of nuclear configurations in the neutrinoless double- β decay of $^{130}\text{Te} \rightarrow ^{130}\text{Xe}$ and $^{136}\text{Xe} \rightarrow ^{136}\text{Ba}$**
J. P. Entwisle, B. P. Kay, A. Tamii, S. Adachi, N. Aoi, J. A. Clark, S. J. Freeman, H. Fujita, Y. Fujita, T. Furuno, T. Hashimoto, C. R. Hoffman, E. Ideguchi, T. Ito, C. Iwamoto, T. Kawabata, B. Liu, M. Miura, H. J. Ong, J. P. Schiffer, D. K. Sharp, G. Susoy, T. Suzuki, S. V. Szwece, M. Takaki, M. Tsumura, and T. Yamamoto
[Phys. Rev. C **93**, 064312 \(2016\)](#)
25. **Independent measurement of the Hoyle state β feeding from ^{12}B using Gammasphere**
M. Munch, M. Alcorta, H. O. U. Fynbo, M. Albers, S. Almaraz-Calderon, M. L. Avila, A. D. Ayangeakaa, B. B. Back, P. F. Bertone, P. F. F. Carnelli, M. P. Carpenter, C. J. Chiara, J. A. Clark, B. DiGiovine, J. P. Greene, J. L. Harker, C. R. Hoffman, N. J. Hubbard, C. L. Jiang, O. S. Kirsebom, T. Lauritsen, K. L. Laursen, S. T. Marley, C. Nair, O. Nusair, D. Santiago-Gonzalez, J. Sethi, D. Seweryniak, R. Talwar, C. Ugalde, and S. Zhu
[Phys. Rev. C **93**, 065803 \(2016\)](#)
26. **Structure of ^{14}C and ^{14}B from the $^{14,15}\text{C}(d,^3\text{He})^{13,14}\text{B}$ reactions**
S. Bedoor, A. H. Wuosmaa, M. Albers, M. Alcorta, Sergio Almaraz-Calderon, B. B. Back, P. F. Bertone, C. M. Deibel, C. R. Hoffman, J. C. Lighthall, S. T. Marley, D. G. Meneel, R. C. Pardo, K.

E. Rehm, J. P. Schiffer, and D. V. Shetty
[Phys. Rev. C **93**, 044323 \(2016\)](#)

27. **Shape coexistence and the role of axial asymmetry in ^{72}Ge**
A. D. Ayangeakaa, R. V. F. Janssens, C. Y. Wu, J. M. Allmond, J. L. Wood, S. Zhu, M. Albers, S. Almaraz-Calderon, B. Bucher, M. P. Carpenter, C. J. Chiara, D. Cline, H.L. Crawford, H. M. David, J. Harker, A.B. Hayes, [C. R. Hoffman](#), B. P. Kay, K. Kolos, A. Korichi, T. Lauritsen, A. O. Macchiavelli, A. Richard, D. Seweryniak and A. Wiens
[Phy. Lett. B **754**, 254 \(2016\)](#)
28. **Direct Evidence of Octupole Deformation in Neutron-Rich ^{144}Ba**
B. Bucher, S. Zhu, C. Y. Wu, R. V. F. Janssens, D. Cline, A. B. Hayes, M. Albers, A. D. Ayangeakaa, P. A. Butler, C. M. Campbell, M. P. Carpenter, C. J. Chiara, J. A. Clark, H. L. Crawford, M. Cromaz, H. M. David, C. Dickerson, E. T. Gregor, J. Harker, [C. R. Hoffman](#), B. P. Kay, F. G. Kondev, A. Korichi, T. Lauritsen, A. O. Macchiavelli, R. C. Pardo, A. Richard, M. A. Riley, G. Savard, M. Scheck, D. Seweryniak, M. K. Smith, R. Vondrasek, and A. Wiens
[Phys. Rev. Lett. **116**, 112503 \(2016\)](#)
29. **In-beam γ -ray spectroscopy of ^{63}Mn** T. Baugher, A. Gade, R. V. F. Janssens, S. M. Lenzi, D. Bazin, M. P. Carpenter, C. J. Chiara, A. N. Deacon, S. J. Freeman, G. F. Grinyer, [C. R. Hoffman](#), B. P. Kay, F. G. Kondev, T. Lauritsen, E. M. Lunderberg, S. McDaniel, K. C. Meierbachtol, A. Ratkiewicz, S. R. Stroberg, K. A. Walsh, D. Weisshaar, and S. Zhu
[Phys. Rev. C **93**, 014313 \(2016\)](#)
30. **Decay and Fission Hindrance of Two- and Four-Quasiparticle K Isomers in ^{254}Rf**
H. M. David, J. Chen, D. Seweryniak, F. G. Kondev, J. M. Gates, K. E. Gregorich, I. Ahmad, M. Albers, M. Alcorta, B. B. Back, B. Baartman, P. F. Bertone, L. A. Bernstein, C. M. Campbell, M. P. Carpenter, C. J. Chiara, R. M. Clark, M. Cromaz, D. T. Doherty, G. D. Dracoulis, N. E. Esker, P. Fallon, O. R. Gothe, J. P. Greene, P. T. Greenlees, D. J. Hartley, K. Hauschild, [C. R. Hoffman](#), S. S. Hota, R. V. F. Janssens, T. L. Khoo, J. Konki, J. T. Kwarsick, T. Lauritsen, A. O. Macchiavelli, P. R. Mudder, C. Nair, Y. Qiu, J. Rissanen, A. M. Rogers, P. Ruotsalainen, G. Savard, S. Stolze, A. Wiens, and S. Zhu
[Phys. Rev. Lett. **115**, 132502 \(2015\)](#)
31. **Analogous intruder behavior near Ni, Sn, and Pb isotopes**
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 **92**, 024319 \(2015\)](#)
32. **Persistence of collective behavior at high spin in the $N = 88$ nucleus ^{153}Tb**
D. J. Hartley, M. A. Riley, X. Wang, S. Miller, R. V. F. Janssens, E. S. Paul, J. M. Rees, J. Simpson, L. L. Riedinger, A. D. Ayangeakaa, M. P. Carpenter, C. J. Chiara, U. Garg, P. Hampson, [C. R. Hoffman](#), F. G. Kondev, T. Lauritsen, P. J. Mason, J. T. Matta, P. J. Nolan, J. Ollier, M. Petri, D. C. Radford, J. P. Revill, S. Zhu, and I. Ragnarsson, [Phys. Rev. C **91**, 057301 \(2015\)](#)
33. **Core excitations across the neutron shell gap in ^{207}Tl**
E. Wilson, Zs. Podolyak, H. Grawe, B. A. Brown, C. J. Chiara, S. Zhu, B. Fornal, R. V. F. Janssens, C. M. Shand, M. Bowry, M. Bunce, M. P. Carpenter, N. Cieplicka-Orynczak, A. Y. Deo, G. D. Dracoulis, [C. R. Hoffman](#), R. S. Kempley, F. G. Kondev, G. J. Lane, T. Lauritsen, G. Lotay,

M. W. Reed, P. H. Regan, C. Rodriguez Triguero, D. Seweryniak, B. Szpak and P.M. Walker, Phys. Lett. B (2015)

34. **High-spin terminating states in the $N=88$ ^{155}Ha and ^{156}Er isotones**
J. M. Rees, E. S. Paul, J. Simpson, M. A. Riley, A. D. Ayangeakaa, M. P. Carpenter, C. J. Chiara, U. Garg, P. Hampson, D. J. Hartley, C. R. Hoffman, R. V. F. Janssens, F. G. Kondev, T. Lauritsen, P. J. R. Mason, J. Matta, S. L. Miller, P. J. Nolan, J. Ollier, M. Petri, D. C. Radford, J. P. Revill, X. Wang, S. Zhu, J. Gellanki, and I. Ragnarsson, Phys. Rev. C **91**, 054301 (2015)
35. **Role of the $\nu g_{9/2}$ orbital in the development of collectivity in the $A \approx 60$ region: The case of ^{61}Co**
A. D. Ayangeakaa, S. Zhu, R. V. F. Janssens, M. P. Carpenter, M. Albers, M. Alcorta, T. Baugher, P. F. Bertone, 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, D. S. Moerland, C. Nair, A. M. Rogers, and D. Seweryniak, Phys. Rev. C **91**, 044327 (2015)
36. **Identification of deformed intruder states in semi-magic ^{70}Ni**
C. J. Chiara, D. Weisshaar, R. V. F. Janssens, Y. Tsunoda, T. Otsuka, J. L. Harker, W. B. Walters, F. Recchia, M. Albers, M. Alcorta, V. M. Bader, T. Baugher, D. Bazin, J. S. Berryman, P. F. Bertone, C. M. Campbell, M. P. Carpenter, J. Chen, H. L. Crawford, H. M. David, D. T. Doherty, A. Gade, C. R. Hoffman, M. Honma, F. G. Kondev, A. Korichi, C. Langer, N. Larson, T. Lauritsen, S. N. Liddick, E. Lunderberg, A. O. Macchiavelli, S. Noji, C. Prokop, A. M. Rogers, D. Seweryniak, N. Shimizu, S. R. Stroberg, S. Suchyta, Y. Utsuno, S. J. Williams, K. Wimmer, and S. Zhu, Phys. Rev. C **91**, 044309 (2015)
- 2014
37. **Fission Barrier of Superheavy Nuclei and Persistence of Shell Effects at High Spin: Cases of ^{254}No and ^{220}Th**
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 (2014)
38. **Stretched states in $^{12,13}\text{B}$ with the (d,α) reaction**
A. H. Wuosmaa, J. P. Schiffer, S. Bedoor, M. Albers, M. Alcorta, S. Almaraz-Calderon, B. B. Back, P. F. Bertone, C. M. Deibel, C. R. Hoffman, J. C. Lighthall, S. T. Marley, R. C. Pardo, K. E. Rehm, and D. V. Shetty, Phys. Rev. C **90**, 061301(R) (2014)
39. **Multiple excitation modes in ^{163}Hf**
R. B. Yadev, 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 (2014)
40. **$N=151$ 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. DÓlympia, 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. B **739**, 13 (2014)

41. **Neutron s states in loosely bound nuclei**
C. R. Hoffman, B. P. Kay, J. P. Schiffer, Phys. Rev. C **89**, 061305(R) (2014)
42. **Direct measurement of the $^{23}\text{Na}(\alpha,p)^{26}\text{Mg}$ reaction cross section at energies relevant for the production of galactic ^{26}Al**
 S. Almaraz-Calderon, P.F. Bertone, M. Alcorta, M. Albers, C.M. Deibel, C. R. Hoffman, C.L. Jiang, S.T. Marley, K.E. Rehm, and C. Ugalde, Phys. Rev. Lett. **112**, 152701 (2014)
43. **Nuclear Structure Towards $N=40$ ^{60}Ca : In-Beam γ -ray Spectroscopy of $^{58,60}\text{Ti}$**
 A. Gade, R. V. F. Janssens, D. Weisshaar, B. A. Brown, E. Lunderberg, M. Albers, M. V. Bader, T. Baugher, D. Bazin, J. S. Berryman, C. M. Campbell, M. P. Carpenter, C. J. Chiara, H. L. Crawford, M. Cromaz, U. Garg, C. R. Hoffman, F. G. Kondev, C. Langer, T. Lauritsen, I. Y. Lee, S. M. Lenzi, T. J. Matta, F. Nowacki, F. Recchia, K. Sieja, S. R. Stroberg, J. A. Tostevin, S. J. Williams, K. Wimmer, S. Zhu, Phys. Rev. Lett. **112**, 112503 (2014)
44. **Determining the $^7\text{Li}(n,\gamma)$ cross section via Coulomb dissociation of ^8Li**
 R. Izsák, Á. Horváth, Á. Kiss, Z. Seres, A. Galonsky, C. A. Bertulani, Zs. Fülöp, T. Baumann, D. Bazin, K. Ieki, K. C. Bordeanu, N. Carlin, M. Csanád, F. Deák, P. DeYoung, N. Frank, T. Fukuchi, A. Gade, D. Galaviz, C. R. Hoffman, W. A. Peters, H. Schelin, M. Thoennessen, and G. I. Veres, Phys. Rev. C **88**, 065808 (2013)
45. **In-beam γ -ray spectroscopy of $^{34,36,38}\text{Mg}$ – Merging the $N=20$ and $N=28$ shell quenching**
 P. Doornenbal, H. Scheit, S. Takeuchi, N. Aoi, K. Li, M. Matsushita, D. Steppenbeck, H. Wang, H. Baba, H. Crawford, C. R. Hoffman, R. Hughes, E. Ideguchi, N. Kobayashi, Y. Kondo, J. Lee, S. Michimasa, T. Motobayashi, H. Sakurai, M. Takechi, Y. Togano, R. Winkler, and K. Yoneda, Phys. Rev.Lett. **111**, 212502 (2013)
46. **Single-particle and collective excitations in ^{63}N**
 M. Albers, S. Zhu, R. V. F. Janssens, J. Gellanki, I. Ragnarsson, M. Alcorta, T. Baugher, P. F. Bertone, M. P. Carpenter, C. J. Chiara, P. Chowdhury, A. N. Deacon, A. Gade, B. DiGiovine, C. R. Hoffman, F. G. Kondev, T. Lauritsen, C. J. Lister, E. A. McCutchan, D. S. Moerland, C. Nair, A. M. Rogers, and D. Seweryniak, Phys. Rev. C **88**, 054314 (2013)
47. **Identification of triaxial strongly deformed bands in ^{164}Hf**
 J. C. Marsh, W. C. Ma, G. B. Hagemann, R. V. F. Janssens, R. Bengtsson, H. Ryde, M. P. Carpenter, G. Gürdal, D. J. Hartley, C. R. Hoffman, Q. A. Ijaz, F. G. Kondev, T. Lauritsen, S. Mukhopadhyay, L. L. Riedinger, R. B. Yadav, and S. Zhu, Phys. Rev. C **88**, 041306(R) (2013)
48. **Low-lying $T=0$ states in the odd-odd $N=Z$ nucleus ^{62}Ga**
 H. M. David, P. J. Woods, G. Lotay, D. Seweryniak, M. Albers, M. Alcorta, M. P. Carpenter, C. J. Chiara, T. Davinson, D. T. Doherty, C.R. Hoffman, R. V. F. Janssens, T. Lauritsen, A. M. Rogers, and S. Zhu, Phys. Lett. B **726**, 665 (2013)
49. **Configuration mixing and relative transition rates between low-spin states in ^{68}Ni**
 F. Recchia, C. J. Chiara, R. V. F. Janssens, D. Weisshaar, A. Gade, W. B. Walters, M. Albers, M. Alcorta, V. M. Bader, T. Baugher, D. Bazin, J. S. Berryman, P. F. Bertone, B. A. Brown, C. M. Campbell, M. P. Carpenter, J. Chen, H. L. Crawford, H. M. David, D. T. Doherty, C. R. Hoffman, F. G. Kondev, A. Korichi, C. Langer, N. Larson, T. Lauritsen, S. N. Liddick, E. Lunderberg, A. O. Macchiavelli, S. Noji, C. Prokop, A. M. Rogers, D. Seweryniak, S. R. Stroberg, S. Suchyta, S. Williams, K. Wimmer, and S. Zhu, Phys. Rev. C **88**, 041302(R) (2013)
50. **Single-neutron excitations in ^{18}N**
C. R. Hoffman, M. Albers, M. Alcorta, S. Almaraz-Calderon, B. B. Back, S. I. Baker, S. Bedoor, P.

F. Bertone, B. P. Kay, J. C. Lighthall, T. Palchan, R. C. Pardo, G. Perdikakis, K. E. Rehm, A. M. Rogers, D. Santiago-Gonzalez, Cenxi Yuan, and J. P. Schiffer, *Phys. Rev. C* **88**, 044317 (2013)

51. **Quadrupole moments of coexisting collective shapes at high spin in ^{154}Er**
J. P. Reville, E. S. Paul, X. Wang, M. A. Riley, J. Simpson, R. V. F. Janssens, J. Ollier, A. J. Boston, M. P. Carpenter, C. J. Chiara, C. R. Hoffman, F. G. Kondev, T. Lauritsen, P. J. Nolan, J. M. Rees, S. V. Rigby, C. Unsworth, S. Zhu, and I. Ragnarsson, *Phys. Rev. C* **88**, 031304 (2013)
52. **Structure of ^{14}B and the evolution of $N=9$ single-neutron isotones**
S. Bedoor, A. H. Wuosmaa, J. C. Lighthall, M. Alcorta, B. B. Back, P. F. Bertone, B. A. Brown, C. M. Deibel, C. R. Hoffman, S. T. Marley, R. C. Pardo, K. E. Rehm, A. M. Rogers, J. P. Schiffer, and D. V. Shetty, *Phys. Rev. C* **88**, 011304(R) (2013)
53. **Valence nucleon populations in the Ni isotopes**
J. P. Schiffer, C. R. Hoffman, B. P. Kay, J. A. Clark, C. M. Deibel, S. J. Freeman, M. Honma, A. M. Howard, A. J. Mitchell, T. Otsuka, P. D. Parker, D. K. Sharp, and J. S. Thomas, *Phys. Rev. C* **87**, 034306 (2013)
54. **Neutron single-particle strength outside the $N=50$ core**
D. K. Sharp, B. P. Kay, J. S. Thomas, S. J. Freeman, J. P. Schiffer, B. B. Back, S. Bedoor, T. Bloxham, J. A. Clark, C. M. Deibel, C. R. Hoffman, A. M. Howard, J. C. Lighthall, S. T. Marley, A. J. Mitchell, T. Otsuka, P. D. Parker, K. E. Rehm, D. V. Shetty, and A. H. Wuosmaa, *Phys. Rev. C* **87**, 014312 (2013)
- 2012
55. **Yrast structure of ^{206}Bi : Isomeric states and one-proton-particle, three-neutron-hole excitations**
N. Cieplicka, K. H. Maier, B. Fornal, B. Szpak, R. V. F. Janssens, M. Alcorta, R. Broda, M. P. Carpenter, C. J. Chiara, C. R. Hoffman, B. P. Kay, F. G. Kondev, W. and Królas, T. Lauritsen, C. J. Lister, E. A. McCutchan, T. Pawlat, A. M. Rogers, D. Seweryniak, N. Sharp, W. B. Walters, J. Wrzesiński, J. and S. Zhu, *Phys. Rev. C* **86**, 054322 (2012)
56. **Neutron unbound states in ^{28}Ne and ^{25}F**
J. K. Smith, T. Baumann, B. A. Brown, G. Christian, J. E. Finck, C. R. Hoffman, Z. Kohley, S. Mosby, J. F. Novak, S. J. Quinn, J. Snyder, A. Spyrou, M. J. Strongman, and M. Thoennessen, *Phys. Rev. C* **86**, 057302 (2012)
57. **Well Developed Deformation in ^{42}Si**
S. Takeuchi, M. Matsushita, N. Aoi, P. Doornenbal, K. Li, T. Motobayashi, H. Scheit, D. Steppenbeck, H. Wang, H. Baba, D. Bazin, L. Càceres, H. Crawford, P. Fallon, R. Gernhäuser, J. Gibelin, S. Go, S. Grévy, C. Hinke, C. R. Hoffman, R. Hughes, E. Ideguchi, D. Jenkins, N. Kobayashi, Y. Kondo, R. Krücken, T. Le Bleis, J. Lee, G. Lee, A. Matta, S. Michimasa, T. Nakamura, S. Ota, M. Petri, T. Sako, H. Sakurai, S. Shimoura, K. Steiger, K. Takahashi, M. Takechi, Y. Togano, R. Winkler, and K. Yoneda, *Phys. Rev. Lett.* **109**, 182501 (2012)
58. **Low-spin states and the non-observation of a proposed 2202-keV, 0^+ isomer in ^{68}Ni**
C. J. Chiara, R. Broda, W. B. Walters, R. V. F. Janssens, M. Albers, M. Alcorta, P. F. Bertone, M. P. Carpenter, C. R. Hoffman, T. Lauritsen, T. A. M. Rogers, D. Seweryniak, S. Zhu, F. G. Kondev, B. Fornal, W. Królas, J. Wrzesiński, N. Larson, S. N. Liddick, C. Prokop, S. Suchyta, H. M. David, and D. T. Doherty, *Phys. Rev. C* **86**, 041304(R) (2012)

59. **Competing single-particle and collective behavior in ^{71}Se**
A. R. Howe, R. A. Haring-Kaye, J. Döring, N. R. Baker, S. J. Kuhn, S. L. Tabor, S. R. Arora, J. K. Bruckman, and C. R. Hoffman, Phys. Rev. C **86**, 014328 (2012)
60. **Lifetime of the 2_1^+ state in ^{10}C**
E. A. McCutchan, C. J. Lister, Steven C. Pieper, R. B. Wiringa, D. Seweryniak, J. P. Greene, P. F. Bertone, M. P. Carpenter, C. J. Chiara, G. Gürdal, C. R. Hoffman, R. V. F. Janssens, T. L. Khoo, T. Lauritsen, and S. Zhu, Phys. Rev. C **86**, 014312 (2012)
61. **Band structures and shape coexistence in ^{187}Pt**
D. Hojman, M. A. Cardona, B. Roussi ere, J. Sauvage, M. A. Riley, S. L. Tabor, C. R. Hoffman, A. Aguilar, W. T. Cluff, T. Hinnners, K. Lagergren, S. Lee, M. Perry, A. Pipidis, and V. Tripathi, Eur. Phys. J A **48**, 83 (2012)
62. **Experimental study of the $^{19}\text{O}(d,p)^{20}\text{O}$ reaction in inverse kinematics**
C. R. Hoffman, B. B. Back, B. P. Kay, J. P. Schiffer, M. Alcorta, S. I. Baker, S. Bedoor, P. F. Bertone, J. A. Clark, C. M. Deibel, B. DiGiovine, S. J. Freeman, J. P. Greene, J. C. Lighthall, S. T. Marley, R. C. Pardo, K. E. Rehm, A. Rojas, D. Santiago-Gonzalez, D. K. Sharp, D. V. Shetty, J. S. Thomas, I. Wieden over, and A. H. Wuosmaa, Phys. Rev. C **85**, 054318 (2012)
63. **Multi-intruder structures in ^{34}P**
P. C. Bender, S. L. Tabor, Vandana Tripathi, C. R. Hoffman, L. Hamilton, A. Volya, R. M. Clark, P. Fallon, A. O. Macchiavelli, S. Paschalis, M. Petri, M. P. Carpenter, R. V. F. Janssens, T. Lauritsen, E. A. McCutchan, D. Seweryniak, S. Zhu, C. J. Chiara, X. Chen, W. Reviol, D. G. Sarantites, and Y. Toh, Phys. Rev. C. **85**, 044305 (2012)
64. **Test of sum rules in nucleon transfer reactions**
J. P. Schiffer, C. R. Hoffman, B. P. Kay, J. A. Clark, C. M. Deibel, S. J. Freeman, A. M. Howard, A. J. Mitchell, P. D. Parker, D. K. Sharp, and J. S. Thomas, Phys. Rev. Lett. **108**, 022501 (2012)
65. **Seniority, collectivity, and $B(E2)$ enhancement in ^{72}Ni**
C. J. Chiara, W. B. Walters, I. Stefanescu, M. Alcorta, M. P. Carpenter, B. Fornal, G. G urdal, C. R. Hoffman, R. V. F. Janssens, B. P. Kay, F. G. Kondev, W. Kr olas, W. T. Lauritsen, C. J. Lister, E. A. McCutchan, T. Pawlat, A. M. Rogers, D. Seweryniak, N. Sharp, J. Wrzesi nski, and S. Zhu, Phys. Rev. C **84**, 037304 (2011)
66. **Single-neutron energies outside ^{136}Xe**
B. P. Kay, J. P. Schiffer, S. J. Freeman, C. R. Hoffman, B. B. Back, S. I. Baker, S. Bedoor, T. Bloxham, J. A. Clark, C. M. Deibel, A. M. Howard, J. C. Lighthall, S. T. Marley, K. E. Rehm, D. K. Sharp, D. V. Shetty, J. S. Thomas, and A. H. Wuosmaa, Phys. Rev. C **84**, 024325 (2011)
67. **Fusion Reactions with the One-Neutron Halo Nucleus ^{15}C**
M. Alcorta, K. E. Rehm, B. B. Back, S. Bedoor, P. F. Bertone, C. M. Deibel, B. DiGiovine, H. Esbensen, J. P. Greene, C. R. Hoffman, C. L. Jiang, J. C. Lighthall, S. T. Marley, R. C. Pardo, M. Paul, A. M. Rogers, C. Ugalde, and A. H. Wuosmaa, Phys. Rev. Lett. **106**, 172701 (2011)
68. **Transition strengths and the role of the $f_{7/2}$ orbital in ^{71}As**
R. A. Kaye, C. J. Drover, S. L. Tabor, J. D oring, Y.-C. Yang, Y. Sun, S. R. Arora, N. R. Baker, J. K. Bruckman, T. A. Hinnners, C. R. Hoffman, and S. Lee, Phys. Rev. C **83**, 044316 (2011)
69. **Observation of a two-neutron cascade from a resonance in ^{24}O**
C. R. Hoffman, T. Baumann, J. Brown, P. A. DeYoung, J. E. Finck, N. Frank, J. D. Hinnefeld,

S. Mosby, W. A. Peters, W. F. Rogers, A. Schiller, J. Snyder, A. Spyrou, S. L. Tabor, and M. Thoennessen, Phys. Rev. C **83**, 031303 (2011)

2010

70. **$^{15}\text{C}(d,p)^{16}\text{C}$ Reaction and Exotic Behavior in ^{16}C**
A. H. Wuosmaa, B. B. Back, S. Baker, B. A. Brown, C. M. Deibel, P. Fallon, C. R. Hoffman, B. P. Kay, H. Y. Lee, J. C. Lighthall, A. O. Macchiavelli, S. T. Marley, R. C. Pardo, K. E. Rehm, J. P. Schiffer, D. V. Shetty, and M. Wiedeking, Phys. Rev. Lett. **105**, 132501 (2010)
71. **Collectivity at $N = 40$ in neutron-rich ^{64}Cr**
A. Gade, R. V. F. Janssens, T. Baugher, D. Bazin, B. A. Brown, M. P. Carpenter, C. J. Chiara, A. N. Deacon, S. J. Freeman, G. F. Grinyer, C. R. Hoffman, B. P. Kay, F. G. Kondev, T. Lauritsen, S. McDaniel, K. Meierbachtol, A. Ratkiewicz, S. R. Stroberg, K. A. Walsh, D. Weisshaar, R. Winkler, and S. Zhu, Phys. Rev. C **81**, 051304(R) (2010)
72. **First Experiment with HELIOS: The Structure of ^{13}B**
B. B. Back, S. I. Baker, B. A. Brown, C. M. Deibel, S. J. Freeman, B. J. DiGiovine, C. R. Hoffman, B. P. Kay, H. Y. Lee, J. C. Lighthall, S. T. Marley, R. C. Pardo, K. E. Rehm, J. P. Schiffer, D. V. Shetty, A. W. Vann, J. Winkelbauer, and A. H. Wuosmaa, Phys. Rev. Lett. **104**, 132501 (2010)
73. **Cross-shell excitations in ^{30}Al and ^{30}Si at high spin**
D. Steppenbeck, A. N. Deacon, S. J. Freeman, R. V. F. Janssens, M. P. Carpenter, C. R. Hoffman, B. P. Kay, T. Lauritsen, C. J. Lister, D. O'Donnell, J. Ollier, D. Seweryniak, J. F. Smith, K.-M. Spohr, S. L. Tabor, V. Tripathi, P. T. Wady, and S. Zhu, Nuc. Phys. A **847**, 149 (2010)
74. **Reply: Comment on “Intruder Configurations in the $A=33$ Isobars: ^{33}Mg and ^{33}Al ”**
V. Tripathi, S. L. Tabor, P. F. Mantica, Y. Utsuno, P. C. Bender, J. Cook, C. R. Hoffman, Sangjin Lee, T. Otsuka, J. Pereira, M. Perry, K. Pepper, J. S. Pinter, J. Stoker, A. Volya, and D. Weisshaar, Phys. Rev. Lett. **104**, 129202 (2010)
75. **First observation of excited states in ^{12}Li**
C. C. Hall, E. M. Lunderberg, P. A. DeYoung, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, B. A. Brown, J. Brown, G. Christian, D. H. Denby, J. Finck, N. Frank, A. Gade, J. Hinnefeld, C. R. Hoffman, B. Luther, S. Mosby, W. A. Peters, A. Spyrou, and M. Thoennessen, Phys. Rev. C **81**, 021302(R) (2010)

2009

76. **Disappearance of the $N = 14$ shell**
M. J. Strongman, A. Spyrou, C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, P. A. DeYoung, J. E. Finck, N. Frank, S. Mosby, W. F. Rogers, G. F. Peaslee, W. A. Peters, A. Schiller, S. L. Tabor, and M. Thoennessen, Phys. Rev. C **80**, 021302(R) (2009)
77. **Approaching the “island of inversion”: ^{34}P**
P. C. Bender, C. R. Hoffman, M. Wiedeking, J. M. Allmond, L. A. Bernstein, J. T. Burke, D. L. Bleuel, R. M. Clark, P. Fallon, B. L. Goldblum, T. A. Hinners, H. B. Jeppesen, Sangjin Lee, I.-Y. Lee, S. R. Leshner, A. O. Macchiavelli, M. A. McMahan, D. Morris, M. Perry, L. Phair, N. D. Scielzo, S. L. Tabor, Vandana Tripathi, and A. Volya, Phys. Rev. C **80**, 014302 (2009)
78. **Low-energy structure of ^{61}Mn populated following beta decay of ^{61}Cr**
H. L. Crawford, P. F. Mantica, J. S. Berryman, R. Broda, B. Fornal, C. R. Hoffman, N. Hoteling, R. V. F. Janssens, S. M. Lenzi, J. Pereira, J. B. Stoker, S. L. Tabor, W. B. Walters, X. Wang and S. Zhu, Phys. Rev. C **79**, 054320 (2009)

2008

79. **Evidence for a doubly magic ^{24}O**
C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, D. H. Denby, P. A. DeYoung, J. E. Finck, N. Frank, J. Hinnefeld, S. Mosby, W. A. Peters, W. F. Roger, A. Schiller, A. Spyrou, M. J. Scott, S. L. Tabor, M. Thoennessen, and P. Voss, Phys. Lett. B **672**, 17 (2009)
80. **Ground State Energy and Width of ^7He from ^8Li Proton Knockout**
 D.H. Denby, P.A. DeYoung, T. Baumann, D. Bazin, E. Breitbach, J. Brown, N. Frank, A. Gade, C.C. Hall, J. Hinnefeld, C.R. Hoffman, R. Howes, R.A. Jenson, B. Luther, S.M. Mosby, C.W. Olson, W.A. Peters, A. Schiller, A. Spyrou, and M. Thoennessen, Phys. Rev. C **78**, 044303 (2008)
81. **Linear polarization measurements and negative-parity states in ^{80}Sr**
 R. A. Kaye, C. S. Myers, J. Döring, S. L. Tabor, S. M. Gerbick, T. D. Baldwin, D. B. Campbell, C. Chandler, M. W. Cooper, M. A. Hallstrom, C. R. Hoffman, J. Pavan, L. A. Riley, and M. Wiedeking, Phys. Rev. C **78**, 037303 (2008)
82. **Intruder configurations in the $A = 33$ isobars of ^{33}Mg and ^{33}Al**
 Vandana Tripathi, S. L. Tabor, P. F. Mantica, Y. Utsuno, P. Bender, J. Cook, C. R. Hoffman, Sangjin Lee, T. Otsuka, J. Pereira, M. Perry, K. Pepper, J. S. Pinter, J. Stoker, A. Volya, and D. Weisshaar, Phys. Rev. Lett. **101**, 142504 (2008)
83. **Determination of the $N = 16$ shell closure at the oxygen drip line**
C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, P. A. DeYoung, J. E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears, E. Mosby, S. Mosby, J. Reith, B. Rizzo, W. F. Rogers, G. Peaslee, W. A. Peters, A. Schiller, M. J. Scott, S. L. Tabor, M. Thoennessen, P. J. Voss, and T. Williams, Phys. Rev. Lett. **100**, 152502 (2008)
84. **Excited intruder states in ^{32}Mg**
 Vandana Tripathi, S. L. Tabor, P. Bender, C. R. Hoffman, Sangjin Lee, K. Pepper, M. Perry, P. F. Mantica, J. M. Cook, J. Pereira, J. S. Pinter, J. B. Stoker, D. Weisshaar, Y. Utsuno, and T. Otsuka, Phys. Rev. C **77**, 034310 (2008)
85. **Complementary studies of $T = 2$ ^{30}Al and the systematics of intruder states**
 T. A. Hinnners, Vandana Tripathi, S. L. Tabor, A. Volya, P. C. Bender, C. R. Hoffman, Sangjin Lee, M. Perry, P. F. Mantica, A. D. Davies, S. N. Liddick, W. F. Mueller, A. Stolz, and B. E. Tomlin, Phys. Rev. C **77**, 034305 (2008)
86. **β decay of neutron-rich $^{53-56}\text{Ca}$**
 P. F. Mantica, R. Broda, H. L. Crawford, A. Damaske, B. Fornal, A. A. Hecht, C. Hoffman, M. Horoi, N. Hoteling, R. V. F. Janssens, J. Pereira, J. S. Pinter, J. B. Stoker, S. L. Tabor, T. Sumikama, W. B. Walters, X. Wang, and S. Zhu, Phys. Rev. C **77**, 014313 (2008)
87. **Production of nuclei in neutron unbound states via primary fragmentation of ^{48}Ca**
 G. Christian, W.A. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P.L. Cole, D. Denby, P.A. DeYoung, J.E. Finck, N. Frank, A. Fritsch, C. Hall, A.M. Hayes, J. Hinnefeld, C.R. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla, P.V. Pancella, G. Peaslee, W.F. Rogers, A. Schiller, M.J. Strongman, M. Thoennessen, and L.O. Wagner, Nucl. Phys. A **801**, 101 (2008)
88. **Electromagnetic transitions in neutron-rich ^{22}F**
 Sangjin Lee, S. L. Tabor, A. Volya, A. Aguilar, P. C. Bender, T. A. Hinnners, C. R. Hoffman, M. Perry, and Vandana Tripathi, Phys. Rev. C **76**, 034308 (2007)

2007

89. **Competition between normal and intruder states inside the “island of inversion”**
Vandana Tripathi, S. L. Tabor, P. F. Mantica, Y. Utsuno, P. Bender, J. Cook, C. R. Hoffman, Sangjin Lee, T. Otsuka, J. Pereira, M. Perry, K. Pepper, J. S. Pinter, J. Stoker, A. Volya, and D. Weisshaar, Phys. Rev. C **76**, 021301(R) (2007)
90. **Transition strengths and degree of deformation in ^{79}Sr**
R. A. Kaye, Y. K. Ryu, S. R. Arora, S. L. Tabor, J. Döring, Y. Sun, T. D. Baldwin, D. B. Campbell, C. Chandler, M. W. Cooper, S. M. Gerbick, O. Grubor-Urosevic, C. R. Hoffman, J. Pavan, L. A. Riley, and M. Wiedeking, Phys. Rev. C **75**, 034311 (2007)
- 2006
91. **Astrophysical Reaction Rate for the Neutron-Generator Reaction $^{13}\text{C}(\alpha, n)^{16}\text{O}$ in Asymptotic Giant Branch Stars**
E. D. Johnson, G. V. Rogachev, A. M. Mukhamedzhanov, L. T. Baby, S. Brown, W. T. Cluff, A. M. Crisp, E. Diffenderfer, V. Z. Goldberg, B. W. Green, T. Hinners, C. R. Hoffman, K. W. Kemper, O. Momotyuk, P. Peplowski, A. Pipidis, R. Reynolds, and B. T. Roeder, Phys. Rev. Lett. **97**, 192701 (2006)
92. **β -delayed γ spectroscopy of neutron rich $^{27,28,29}\text{Na}$**
Vandana Tripathi, S. L. Tabor, C. R. Hoffman, M. Wiedeking, A. Volya, P. F. Mantica, A. D. Davies, S. N. Liddick, W. F. Mueller, A. Stolz, B. E. Tomlin, T. Otsuka, and Y. Utsuno, Phys. Rev. C **73**, 054303 (2006)
93. **Structure of ^{26}Na from the $^{14}\text{C}(^{14}\text{C}, d)$ reaction**
Sangjin Lee, S. L. Tabor, T. Baldwin, D. B. Campbell, I. Calderin, C. Chandler, M. W. Cooper, C. R. Hoffman, K. W. Kemper, J. Pavan, A. Pipidis, M. A. Riley, and M. Wiedeking, Phys. Rev. C **73**, 044321 (2006)
- 2005
94. **Observation of Proton Radioactivity of the (21^+) High-Spin Isomer in ^{94}Ag**
I. Mukha, E. Roeckl, J. Döring, L. Batist, A. Blazhev, H. Grawe, C. R. Hoffman, M. Huyse, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, S. L. Tabor, P. Van Duppen, and M. Wiedeking, Phys. Rev. Lett. **95**, 022501 (2005)
95. **Spectroscopy of ^{25}Ne and the $N = 16$ magic number**
S. W. Padgett, Vandana Tripathi, S. L. Tabor, P. F. Mantica, C. R. Hoffman, M. Wiedeking, A. D. Davies, S. N. Liddick, W. F. Mueller, A. Stolz, and B. E. Tomlin, Phys. Rev. C **72**, 064330 (2005)
96. **^{29}Na : Defining the Edge of the Island of Inversion for $Z = 11$**
Vandana Tripathi, S. L. Tabor, P. F. Mantica, C. R. Hoffman, M. Wiedeking, A. D. Davies, S. N. Liddick, W. F. Mueller, T. Otsuka, A. Stolz, B. E. Tomlin, Y. Utsuno, and A. Volya, Phys. Rev. Lett. **94**, 162501 (2005)
97. **p - sd Shell Gap Reduction in Neutron-Rich Systems and Cross-Shell Excitations in ^{20}O**
M. Wiedeking, S. L. Tabor, J. Pavan, A. Volya, A. L. Aguilar, I. J. Calderin, D. B. Campbell, W. T. Cluff, E. Diffenderfer, J. Fridmann, C. R. Hoffman, K. W. Kemper, S. Lee, M. A. Riley, B. T. Roeder, C. Teal, V. Tripathi, and I. Wiedenhover, Phys. Rev. Lett. **94**, 132501 (2005)
- 2004
98. **β -delayed proton decay of a high-spin isomer in ^{94}Ag**
I. Mukha, L. Batist, E. Roeckl, H. Grawe, J. Döring, A. Blazhev, C. R. Hoffman, Z. Janas, R. Kirchner, M. La Commara, S. Dean, C. Mazzocchi, C. Plettner, S. L. Tabor, and M. Wiedeking, Phys. Rev. C **70**, 044311 (2004)

99. **Collective excitations and shape changes in ^{80}Y**
 R. A. Kaye, O. Grubor-Urosevic, S. L. Tabor, J. Döring, Y. Sun, R. Palit, J. A. Sheikh, T. Baldwin, D. B. Campbell, C. Chandler, M. W. Cooper, S. M. Gerbick, C. R. Hoffman, J. Pavan, L. A. Riley, and M. Wiedeking, Phys. Rev. C **69**, 064314 (2004)
100. **On the β -decaying (21^+) spin gap isomer in ^{94}Ag**
 C. Plettner, H. Grawe, I. Mukha, J. Döring, F. Nowacki, L. Batist, A. Blazhev, C. R. Hoffman, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, E. Roeckl, R. Schwengner, S. L. Tabor, and M. Wiedeking, Nuc. Phys. A **733**, 20 (2004)

- 2003
101. **Structure of $T = 2$ ^{24}Ne from ^{14}C on ^{14}C**
C. R. Hoffman, S. L. Tabor, M. W. Cooper, T. Baldwin, D. B. Campbell, C. Chandler, K. W. Kemper, J. Pavan, A. Pipidis, M. A. Riley, M. Wiedeking, and B. A. Brown, Phys. Rev. C **68**, 034304 (2003)

- 2002
102. **$T = \frac{5}{2}$ ^{27}Na from $^{14}\text{C}+^{14}\text{C}$, and the $N = 16$ shell gap**
 M. W. Cooper, S. L. Tabor, T. Baldwin, D. B. Campbell, C. Chandler, C. R. Hoffman, K. W. Kemper, J. Pavan, A. Pipidis, M. A. Riley, and M. Wiedeking, Phys. Rev. C **65**, 051302 (2002)

INVITED TALKS

- 2017
- An MRI Scan of the Nucleus**
 APS Fall DNP Meeting, Pittsburgh, PA, October 2017
- The Role of Weakly-Bound S States Across the Chart**
 Nuclear Chemistry Gordon Research Conference, Colby-Sawyer College, New London, NH, June 2017
- 2016
- The Role Weak Binding Plays on the Ordering of the sd States in Light Nuclei**
 III Topical Workshop on Modern Aspects in Nuclear Structure, Bormio, Italy, February 2016
- 2014
- A search for unexpected bound states in ^{15}B**
 Joint APS-JPS Fall DNP Meeting, HI, October 2014
- Recent results from HELIOS**
 CAARI, San Antonio, TX, May 2014
- Near threshold s -states**
 EMMI, Nuclear at the threshold workshop, GSI, Darmstadt, Germany, February 2014
- 2013
- Structure of $p - sd$ shell nuclei with HELIOS**
 INPC 2013, Florence, Italy, June 2013
- Nuclear spectroscopy with HELIOS**
 APS April Meeting, Denver, CO, April 2013
- 2012
- Characterizing neutron $0p - 1s0d$ single-particle evolution in neutron-rich nuclei**
 INT Workshop on the Structure of Light Nuclei,
 University of Washington, WA, October 8-12, 2012
- On the evolution of the neutron $0d_{5/2}$ and $1s_{1/2}$ orbitals in neutron-rich $0p - 1s0d$ shell nuclei**
 Nuclear Structure 2012, Argonne National Laboratory, Argonne, IL, August 13-17, 2012

- 2010 **Two-neutron cascade at the oxygen drip line**
Nuclear Structure 2010, Clark-Kerr Campus, U. C. Berkeley, CA, August 8-13, 2010
- Dissertation award in nuclear physics**
American Physical Society April Meeting, Washington, D. C., February 13-16, 2010
- 2009 **Shell evolution at the oxygen drip line**
VIII Latin American Symposium on Nuclear Physics and Applications,
Universidad de Chile, Santiago, Chile, December 15-19, 2009
- 2008 **Spectroscopy of unbound states at the oxygen drip line**
Unbound Nuclei Workshop, INFN, Pisa, Italy, November 3-5, 2008
- Investigating the $N = 16$ shell closure at the oxygen drip line**
Nuclear Structure 2008, Michigan State University, East Lansing, MI, June 3-6, 2008
- 2007 **First Observation of ^{25}O**
National Superconducting Cyclotron Laboratory User Workshop, East Lansing, MI, August 16-17,
2007
- Unbound states of neutron-rich Oxygen isotopes**
JUSTIPEN-EFES workshop on shell structure of exotic nuclei 4th workshop by the DOE project
JUSTIPEN and the JSPS core-to-core project EFES, RIKEN, Tokyo, Japan, June 23, 2007
- Unbound States of neutron-rich oxygen isotopes: Investigation into the $N = 16$ shell
gap**
Nuclear Structure: New Pictures in the Extended Isospin Space, Yukawa Institute for Theoretical
Physics, Kyoto University, Kyoto, Japan, June 11-14, 2007
- Unbound states of neutron-rich oxygen isotopes: Investigation into the $N = 16$ shell
gap**
Direct Reactions with Exotic Beams, RIKEN, Tokyo, Japan, May 30 - June 2, 2007
- CONTRIBUTED
TALKS **The role of s -States on the levels in light nuclei**
C.R. Hoffman, APS DNP Fall Meeting, Santa Fe (2015)
- Changes in the single-neutron shell spacing of light nuclei**
C.R. Hoffman, B. P. Kay, and J. P. Schiffer, APS DNP Fall Meeting, Hawaii (2014)
- Study of the $^{19}\text{O}(d, p)$ reaction in inverse kinematics with HELIOS**
C.R. Hoffman, APS DNP Fall Meeting, East Lansing (2011)
- Digital Data Acquisition for Gammasphere**
C.R. Hoffman, APS DNP Fall Meeting, East Lansing (2011)
- Digital Data Acquisition for Gammasphere**
C.R. Hoffman, J.T. Anderson, M.P. Carpenter, T.A. Hayden, R.V.F. Janssens, A. Kreps, T. Lauritsen,
C.J. Lister, D. Seweryniak, P. Wilt, S. Zhu, M. Cromaz, C. Lionberger, and I.Y. Lee, APS
DNP Fall Meeting, Santa Fe, N. M., Bull. Am. Phys. Soc. **55**, No. 14 (2010)
- Two-neutron cascade at the oxygen drip line**
C. R. Hoffman, Argonne National Laboratory Post-Doc Symposium, Argonne, IL, Fall (2010)
- Unbound States of Neutron-Rich Oxygen Isotopes: Investigation into the $N = 16$ Shell
Gap**
C. R. Hoffman, S. L. Tabor, T. Baumann, W. A. Peters, H. Scheit, A. Schiller, M. Thoennessen, N.
Frank, P. A. DeYoung, and J. Hinfefeld, APS Spring Meeting, Jacksonville, F. L., Bull. Am. Phys.
Soc. **52**, No. 3 (2007)

POSTER
PRESENTATIONS

Nuclear Structure with HELIOS: Distribution of the Neutron Single-Particle Strength in ^{20}O

Physical Sciences and Engineering Review, September 2011, Argonne National Laboratory

Structure of $T = 2$ ^{24}Ne from ^{14}C on ^{14}C

Frontiers of Nuclear Structure, Fall 2002, Berkeley, CA

Structure of $T = 2$ ^{24}Ne from ^{14}C on ^{14}C

Conference Experience for Undergraduates, APS Meeting, Fall 2001, Maui, HI

SEMINARS AND
COLLOQUIA

Florida State University, Summer 2015

TRIUMF, Summer 2014

Argonne National Laboratory, Fall 2013

National Superconducting Cyclotron and Michigan State University, Fall 2013

Argonne National Laboratory, Spring 2012

Central Michigan University, Spring 2012

Argonne National Laboratory, Fall 2011

Florida State University, Fall 2010

Argonne National Laboratory, Fall 2008

Florida State University, Fall 2006

Florida State University, Spring 2003

ACTIVITIES

Referee for Physics Letters B

January 2012 - Present

Referee for the Physical Review Journals

American Physical Society, January 2011 - Present

Argonne PS&E Diversity & Inclusion Committee

January 2018 - Present

FRIB Users Organization Committee Member

January 2016 - Present

NSCL Operations Sub-Committee Member

January 2016 - Present

ANL Physics Division Seminar Co-Chair

August 2016 - May 2017

APS Division of Nuclear Physics Conference Organizing Committee Member

January 2015 - January 2017

ANL Physics Division Colloquium Committee Member

September 2014 - August 2015

Lecturer at Exotic Beam Summer School on Transfer Reactions

Oak Ridge National Laboratory, July 2014

ANL Physics Division Heavy-Ion Discussion Group Chair

September 2013 - May 2014

ANL Physics Division Colloquium Committee Member

September 2010 - August 2011

Participated in Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)

RIKEN, Tokyo, Japan, October 2010

Participated in Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)

RIKEN, Tokyo, Japan, June 2007

Attended The Fourth Rare Isotope Accelerator Summer School
Lawrence Berkeley National Laboratory, Berkeley, CA, Summer 2005

Attended The Third Rare Isotope Accelerator Summer School
Argonne National Laboratory, Argonne, IL, Summer 2004