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Education

Ph.D., Nuclear Physics, Florida State University, 1998
M.S., Physics, Florida State University, 1995
B.S., Physics, Florida State University, 1992 (Mathematics, Computer Science Minors)

Ph.D. thesis title: *Nuclear Structure of Odd–Odd ^{78}Rb and Lifetime Measurements of $A = 86$ Nuclei*. Advisor: Prof. Sam Tabor, Florida State University

Professional Appointments

Professor of Physics, Westmont College, August 2020–present
Professor of Physics and Astronomy, Ohio Wesleyan University, 2014–2020
Associate Professor of Physics and Astronomy, Ohio Wesleyan University, 2008–2014
Assistant Professor of Physics and Astronomy, Ohio Wesleyan University, 2004–2008
Associate Professor of Physics (tenured), Purdue University Calumet, 2003–2004
Research Fellow, Florida State University, June–August 2001
Assistant Professor of Physics, Purdue University Calumet, 1999–2003
Postdoctoral Research Associate, Argonne National Laboratory, 1998–1999

Professional Activities and Memberships (Selected)

American Physical Society (including Division of Nuclear Physics), 1994–present
Far-West Section of American Physical Society, August 2020–present
American Association of Physics Teachers, 2006–present
Physics Editor, American Journal of Undergraduate Research, 2002–2014
Advanced Laboratory Physics Association, 2007–present
Modular Neutron Array (MoNA) Research Collaboration member, 2009–present (Executive Director, 2012–2013)

Professional Awards and Honors

Summer Faculty Research Fellowship, Florida State University, 2001 (\$7,430)
Grant Proposal Development Award, Purdue University Calumet, 2001 (\$4,000)
National Finalist for the Society of Physics Students Outstanding Chapter Advisor Award, 2009

Courses Taught at Ohio Wesleyan University

ASTR 110	Elementary Astronomy
PHYS 110L	General Physics Laboratory I – calculus based
PHYS 111L	General Physics Laboratory II – calculus based
PHYS 115	Principles of Physics I with laboratory – algebra based
PHYS 116	Principles of Physics II with laboratory – algebra based
PHYS 275	Analog Electronics
PHYS 280L	Contemporary Physics Laboratory (designed and implemented)
PHYS 345	Advanced Physics Laboratory
PHYS 375	Digital Electronics
PHYS 498	Junior Seminar
PHYS 499	Senior Research (with bi-monthly seminar)

Courses Taught at Purdue University Calumet

PHYS 152	Mechanics with associated laboratory – calculus based
PHYS 311	Quantum Physics I
PHYS 322	Optics
PHYS 342	Modern Physics
PHYS 343	Modern Physics Laboratory
PHYS 380	Advanced Physics Laboratory (designed and implemented)
SCI 112	Introduction to Physical Science I

Research Interests

Structure of atomic nuclei at the limits of spin and binding deduced from gamma-ray spectroscopy

Mentoring of Undergraduate Research

1. *Lifetime Measurements in ^{73}Se* , Dexter Allen, 2019 Ohio Wesleyan University (OWU) Summer Science Research Program (SSRP). Presented results at an undergraduate poster session at the Annual Meeting of the American Physical Society (APS) Division of Nuclear Physics (DNP), Crystal City, VA, October 2019.
2. *Lifetime Measurements in ^{74}As* , Colin Hawes (Ohio Wesleyan University), 2019 National Science Foundation (NSF) Research Experiences for Undergraduates (REU) Program. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Crystal City, VA, October 2019.
3. *Lifetime Measurements in ^{73}As* , Grace Klausen (University of Missouri at Kansas City), 2019 NSF-REU Program.
4. *The Search for $\pi f_{7/2}$ Intruder States in ^{73}As* , Amelia Doetsch (Wayne State University), 2018 NSF-REU Program. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2018.
5. *Level Structure and Spin Assignments in ^{70}Ga* , Michael Heeschen, 2018 OWU SSRP. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2018.
6. *Confirmation of Irregular Signature Splitting in ^{74}As* , Bojana Ivanic (University of Texas at Dallas), 2018 NSF-REU Program. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2018.
7. *Linear Polarization Measurements in ^{70}Ge* , Brianna Harbin (Northern Kentucky University), 2017 NSF-REU Program. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Pittsburgh, PA, October 2017.
8. *Linear Polarization Measurements in ^{70}Ga* , Diego Venegas Vargas, 2017 OWU SSRP. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Pittsburgh, PA, October 2017.
9. *Search for Intruder States in ^{73}As* , Savannah Gowen (Mt. Holyoke College), 2015 NSF-REU Program.
10. *Evidence for Deformation in ^{70}Ga* , Chin Lung Tan, 2015 OWU SSRP and 2015-2016 Senior Research Project. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Santa Fe, NM, October 2015.
11. *Evolution of Collectivity with Spin in ^{70}As* , Rob Elder, 2013 OWU SSRP, 2013-2015 OWU Honors Thesis Project. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Newport News, VA, October 2013, and at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2014.

12. *Transition Strengths in ^{67}Ga* , Kamali Jones, 2014 NSF-REU Program, Fall 2014 Directed Independent Study, and 2015-2016 Senior Research Project. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2014.
13. *Search for Tetrahedral Symmetry in ^{70}Ge* , Khanh Le, 2014 OWU SSRP and Fall 2014 Directed Independent Study. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2014.
14. *Beta Decay of ^{144}Cs to ^{144}Ba* , Richard Scotten, Senior Research Project, 2013–2014. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Newport News, VA, October 2013.
15. *Search for Rigid Triaxial Deformation in ^{70}Ge* , Sylvia Morrow (Houghton College), 2013 NSF-REU Program. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Newport News, VA, October 2013.
16. *Neutron-Unbound States in ^{24}O* , Taimur Islam, Senior Honors Thesis Project, 2012–2013.
17. *Composition of the ^{24}O Ground-State Wave Function*, Richard Scotten (Fullerton College and OWU), 2012 NSF-REU Program and Fall 2012 Directed Individual Study. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Newport Beach, CA, October 2012.
18. *Simulating Neutron Interactions in MoNA Using MCNPX*, April Ploeger (University of Pennsylvania), 2012 NSF-REU Program. Presented results at an undergraduate poster session at the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Conference, University of Washington, Seattle, WA, October 2012.
19. *Selective Population and Decay of Neutron-Unbound States in ^{13}Be* , Ben Pigg, Senior Research Project, 2011–2012.
20. *Selective Population and Decay of Neutron-Unbound States in ^{13}Be* , James McGugan (Colorado College), 2011 NSF-REU Program.
21. *Selective Population and Decay of Neutron-Unbound States in ^{23}O* , Taimur Islam, 2011 OWU SSRP and 2011–2012 Directed Individual Study.
22. *Competing Collective and Single-Particle Behavior in ^{71}Se* , Alex Howe, 2009 OWU SSRP and 2010–2011 Senior Honors Thesis Project. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2009 and the Ohio-Region Section Meeting of the APS at OWU in October 2009. **Alex was also a national finalist for the APS LeRoy Apker Award for outstanding undergraduate research in 2011.**
23. *Probing the Horizontal Spatial Extent of Cosmic-Ray Muon Showers*, Taimur Islam, Independent Research Project, Fall 2010.
24. *Constructing Detectors for the Large-area multi-Institutional Scintillator Area (LISA)*, Robert Anthony and Alex Howe, funded by a NSF Major Research Instrumentation Grant, Summer 2010.
25. *Spin Assignments in ^{70}As* , Hengzhi Chen, 2010 OWU SSRP.
26. *Spin Assignments in ^{71}Se* , Stephen Kuhn (Earlham College), 2010 NSF-REU Program.
27. *Lifetime Measurements in ^{70}As* , Lisa Brodsky (Hampton University), 2009 NSF-REU Program.
28. *Lifetime Measurements in ^{71}As* , Chris Drover, 2008–2009 Senior Research Project.
29. *Evolution of Collective Structure in Odd-Odd ^{70}As* , Jonathan Bruckman (Monmouth College), 2008 NSF-REU Program. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Oakland, CA, October 2008.
30. *Evidence for Multiple Negative-Parity Band Structure in ^{71}Se* , Nick Baker, 2008 OWU SSRP and 2008–2009 Senior Research Project. Presented results at an undergraduate poster session

- at the Ohio-Region Section Meeting of the APS in October 2008 and the Annual APS DNP meeting in Oakland, CA in October 2008.
31. *Parity Measurements in ^{80}Sr* , Cory Myers, OWU SSRP and 2007–2008 Senior Research Project. Presented results at an undergraduate poster session at the Ohio-Region Section Meeting of the APS in October 2007 and the Annual APS DNP meeting in Newport News, VA in October 2007.
 32. *Parity Measurements in ^{79}Sr and ^{80}Y* , Megan Hallstrom (Case Western Reserve University), 2007 NSF-REU Program.
 33. *Lifetime Measurements and Deformation in ^{79}Sr* , Yun Kyoung (Claire) Ryu, 2006 OWU SSRP. She presented a poster summarizing her results at the Ohio-Region Section Meeting of the APS in October 2006, the Annual APS DNP meeting in October 2006, and the Annual Meeting of the Sigma Xi National Research Society in November 2006 (for which she received a “Superior Poster Presentation” Award). She also gave an oral presentation of her results at an Undergraduate Research Session at the April Meeting of the APS in 2007 and at the International Conference of Physics Students (ICPS) in London, England in August 2007. Claire attended the ICPS as a result of winning a 2007 Outstanding Student for Undergraduate Research Award sponsored by the National Chapter of the Society of Physics Students (SPS), and was one of only two other students representing the United States at this conference. In addition to fully funding her travel and lodging to this conference, the award also consisted of a \$500 personal stipend for Claire and a \$500 contribution to the OWU SPS Chapter.
 34. *Lifetime Measurements in ^{79}Sr* , Sanjay Arora, 2005 OWU SSRP. Presented results at the Ohio-Region Section Meeting of the APS, Cleveland State University, October 2005.
 35. *Lifetime Measurements in ^{80}Y* , Ognjen Grubor-Urosevic (Purdue Calumet), 2002–2003 Directed Independent Study. Presented results at an undergraduate poster session at the Annual APS DNP meeting, Tucson, AZ, October 2002.
 36. *Linear Polarization Measurements in ^{80}Sr* , Scott Gerbick (Purdue Calumet), 2001–2002 Directed Independent Study. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Maui, HI, October 2001.
 37. *Lifetime Measurements of Mass 23 Nuclei*, Barbara Truett (Purdue Calumet), 2001–2002 Directed Independent Study. Presented results at an undergraduate poster session at the Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Maui, HI, October 2001.
 38. *Nuclear Structure of ^{80}Sr* , Troy Sienko (Purdue Calumet), 2000–2001 Directed Independent Study.
 39. *Lifetime Measurements in ^{81}Y* , Cathy Truett Rastovski (Purdue Calumet), 2000–2001 Directed Independent Study. Contributed to poster presentation at the Nuclear Structure 2000 Conference, East Lansing, MI, August 2000.

Publications in Refereed Journals While At OWU and PUC (mentored undergraduates underlined)

1. *High spin states of the normally deformed bands of ^{83}Y* , W. Rodriguez, F. Cristancho, S.L. Tabor, A. Kardan, I. Ragnarsson, **R.A. Haring-Kaye**, J. Döring, D.G. Sarantites, and A. Garzón, Phys. Rev. C **100**, 024327 (2019).
2. *Multiple band structures in ^{70}Ge* , **R.A. Haring-Kaye**, S.I. Morrow, J. Döring, S.L. Tabor, K.Q. Le, P.R.P. Allegro, P.C. Bender, R.M. Elder, N.H. Medina, J.R.B. Oliveira, and Vandana Tripathi, Phys. Rev. C **97**, 024308 (2018).
3. *Coexisting single-particle and collective excitations in ^{70}As* , **R.A. Haring-Kaye**, R.M. Elder, J. Döring, S.L. Tabor, A. Volya, P.R.P. Allegro, P.C. Bender, N.H. Medina, S.I. Morrow, J.R.B. Oliviera, and V. Tripathi, Phys. Rev. C **92**, 044325 (2015).

4. *Unbound excited states of the $N=16$ closed shell nucleus ^{24}O* , W.F. Rogers, S. Garrett, A. Grovom, R.E. Anthony, A. Aulie, A. Barker, T. Baumann, J.J. Brett, J. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, A. Hamann, **R.A. Haring-Kaye**, A.R. Howe, N.T. Islam, M.D. Jones, A.N. Kuchera, J. Kwiatkowski, E.M. Lunderberg, B. Luther, D.A. Meyer, S. Mosby, A. Palmisano, R. Parkhurst, A. Peters, J. Smith, J. Snyder, A. Spyrou, S.L. Stephenson, M. Strongman, B. Sutherland, N.E. Taylor, and M. Thoennessen, *Phys. Rev. C* **92**, 034316 (2015).
5. *Further insights into the reaction $^{14}\text{Be}(\text{CH}_2, X)^{10}\text{He}$* , M.D. Jones, Z. Kohley, T. Baumann, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, **R.A. Haring-Kaye**, A.N. Kuchera, B. Luther, S. Mosby, J.K. Smith, J. Snyder, A. Spyrou, S.L. Stephenson, and M. Thoennessen, *Phys. Rev. C* **91**, 044312 (2015).
6. *First observation of ^{15}Be* , J. Snyder, T. Baumann, G. Christian, **R.A. Haring-Kaye**, P.A. DeYoung, Z. Kohley, B. Luther, M. Mosby, S. Mosby, A. Simon, J.K. Smith, A. Spyrou, S. Stephenson, and M. Thoennessen, *Phys. Rev. C* **88**, 031303(R) (2013).
7. *The unresolved question of the ^{10}He ground state resonance*, Z. Kohley, J. Snyder, T. Baumann, G. Christian, P.A. DeYoung, J.E. Finck, **R.A. Haring-Kaye**, M. Jones, E. Lunderberg, B. Luther, S. Mosby, A. Simon, J.K. Smith, A. Spyrou, S.L. Stephenson, and M. Thoennessen, *Phys. Rev. Lett.* **109**, 232501 (2012).
8. *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).
9. *Transition strengths and the role of the $f_{7/2}$ orbital in ^{71}As* , **R.A. Kaye**, C.J. Drover, S.L. Tabor, J. Döring, Y.-C. Yang, Y. Sun, S.R. Arora, N.R. Baker, J.K. Bruckman, T.A. Hinnens, C.R. Hoffman, and S. Lee, *Phys. Rev. C* **83**, 044316 (2011).
10. *K-hindered decay of a six-quasiparticle isomer in ^{176}Hf* , 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. Wiedenhoever, 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**, and G. Sletten, *Phys. Rev. C* **82**, 054316 (2010).
11. *Lowest $l=0$ proton resonance in ^{26}Si and implications for nucleosynthesis of ^{26}Al* , P.N. Peplowski, L.T. Baby, I. Wiedenhöver, S.E. Dekat, E. Diffenderfer, D.L. Gay, O. Grubor-Urosevic, P. Hoflich, **R.A. Kaye**, N. Keeley, A. Rojas, and A. Volya, *Phys. Rev. C* **79**, 032801 (2009).
12. *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).
13. *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, *Physical Review C* **75**, 034311 (2007).
14. *Observation of states beyond band termination in $^{156, 157, 158}\text{Er}$ and strongly deformed structures in $^{173, 174, 175}\text{Hf}$* , M.A. Riley, M.K. Djongolov, A.O. Evans, D.J. Hartley, R.V.F. Janssens, E.S. Paul, A. Pipidis, J. Simpson, A.A. Aguilar, D.E. Appelbe, C.R. Bingham, D.B. Campbell, M.P. Carpenter, P. Chowdhury, P.T.W. Choy, R.M. Clark, M. Cromaz, D.M. Cullen, M. Danchev, G.D. Dracoulis, P. Fallon, A. Gorgen, G.B. Hagemann, D.T. Joss, J. Goon, **R.A. Kaye**, T.L. Khoo, F.G. Kondev, R.W. Laird, K. Lagergren, T. Lauritsen, A.O. Macchiavelli, B. McClain, E.F. Moore, G. Mukherjee, E. Ngijoi-Yogo, P.J. Nolan, H.I. Park, L.L. Riedinger, G. Sletten, S.K. Tandel, P.M. Walker, D. Ward, I. Ragnarsson, F. Saric, J. Zhang, *Phys. Scr.* **T125**, 123 (2006).

15. *Beyond band termination in ^{157}Er and the search for wobbling excitations in strongly deformed ^{174}Hf* , M.A. Riley, M.K. Djongolov, A.O. Evans, D.J. Hartley, R.V.F. Janssens, E.S. Paul, J. Simpson, A.A. Aguilar, D.E. Appelbe, C.R. Bingham, D.B. Campbell, M.P. Carpenter, P. Chowdhury, P.T.W. Choy, R.M. Clark, M. Cromaz, D.M. Cullen, M. Danchev, G.D. Dracoulis, P. Fallon, A. Gorgen, G.B. Hagemann, D.T. Joss, J. Goon, **R.A. Kaye**, T.L. Khoo, F.G. Kondev, R.W. Laird, K. Lagergren, T. Lauritsen, A.O. Macchiavelli, B. McClain, E.F. Moore, G. Mukherjee, E. Ngijoi-Yogo, P.J. Nolan, H.I. Park, A. Pipidis, L.L. Riedinger, G. Sletten, S.K. Tandel, P.M. Walker, D. Ward, I. Ragnarsson, F. Saric, J. Zhang, *J. Phys. (London) G* **31**, S1735 (2005).
16. *Wobbling excitations in strongly deformed Hf nuclei?*, D.J. Hartley, M.K. Djongolov, L.L. Riedinger, G.B. Hagemann, R.V.F. Janssens, F.G. Kondev, E.F. Moore, M.A. Riley, A. Aguilar, C.R. Bingham, D.B. Campbell, M.P. Carpenter, P. Chowdhury, M. Cromaz, D.M. Cullen, M. Danchev, G.D. Dracoulis, P. Fallon, J. Goon, **R.A. Kaye**, T.L. Khoo, R.W. Laird, T. Lauritsen, A.O. Macchiavelli, B. McClain, G. Mukherjee, E. Ngijoi-Yogo, H.I. Park, G. Sletten, S.K. Tandel, P.M. Walker, and J.-Y. Zhang, *Phys. Lett. B* **608**, 31 (2005).
17. *Highly deformed bands in ^{175}Hf* , D.T. Scholes, D.M. Cullen, F.G. Kondev, R.V.F. Janssens, M.P. Carpenter, D.J. Hartley, M.K. Djongolov, G. Sletten, G. Hagemann, C. Wheldon, P.M. Walker, K. Abu Saleem, I. Ahmad, D.L. Balabanski, P. Chowdhury, M. Danchev, G.D. Dracoulis, H.M. El-Masri, J. Goon, A. Heinz, **R.A. Kaye**, T.L. Khoo, T. Lauritsen, C.J. Lister, E.F. Moore, L.L. Riedinger, M.A. Riley, D. Seweryniak, I. Shestakova, I. Wiedenhöver, O. Zeidan, and J.-Y. Zhang, *Phys. Rev. C* **70**, 054314 (2004).
18. *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, *Physical Review C* **69**, 064314 (2004).
19. *Highly deformed bands in ^{175}Hf* , D.T. Scholes, D.M. Cullen, F.G. Kondev, R.V.F. Janssens, M.P. Carpenter, D.J. Hartley, M.K. Djongolov, G. Sletten, G. Hagemann, C. Wheldon, P.M. Walker, K. Abu Saleem, I. Ahmad, D.L. Balabanski, P. Chowdhury, M. Danchev, G.D. Dracoulis, H.M. El-Masri, J. Goon, A. Heinz, **R.A. Kaye**, T.L. Khoo, T. Lauritsen, C.J. Lister, E.F. Moore, L.L. Riedinger, M.A. Riley, D. Seweryniak, I. Shestakova, I. Wiedenhöver, O. Zeidan, and J.-ye. Zhang, *Phys. Rev. C* **70**, 054314 (2004).
20. *High-spin structure of normal-deformed bands in ^{84}Zr* , R. Cardona, F. Cristancho, S.L. Tabor, **R.A. Kaye**, G.Z. Solomon, J. Döring, G.D. Johns, M. Devlin, F. Lerma, D.G. Sarantites, I.-Y. Lee, A.O. Macchiavelli, and I. Ragnarsson, *Phys. Rev. C* **68**, 024303 (2003).
21. *Extending the region of triaxial superdeformation: candidate TSD bands in ^{174}Hf* , M.K. Djongolov, D.J. Hartley, L.L. Riedinger, F.G. Kondev, R.V.F. Janssens, K. Abu Saleem, I. Ahmad, D.L. Balabanski, M.P. Carpenter, P. Chowdhury, D.M. Cullen, M. Danchev, G.D. Dracoulis, H. El-Masri, J. Goon, A. Heinz, **R.A. Kaye**, T.L. Khoo, T. Lauritsen, C.J. Lister, E.F. Moore, M.A. Riley, D. Seweryniak, I. Shestakova, G. Sletten, P.M. Walker, C. Wheldon, I. Wiedenhover, O. Zeidan, and J.-Y. Zhang, *Phys. Lett. B* **560**, 24 (2003).
22. *Rotational and vibrational excitations in ^{84}Zr studied through in-beam and ^{84}Nb β -decay spectroscopy*, J. Döring, **R.A. Kaye**, A. Aprahamian, M.W. Cooper, J. Daly, C.N. Davids, R.C. de Haan, J. Gorres, S.R. Leshner, J.J. Ressler, D. Seweryniak, E.J. Stech, A. Susalla, S.L. Tabor, J. Uusitalo, W.B. Walters, and M. Wiescher, *Phys. Rev. C* **67**, 014315 (2003).
23. *Lifetime measurements and terminating structures in ^{87}Nb* , J. Pavan, S.L. Tabor, A.V. Afanasjev, C. Baktash, F. Cristancho, M. Devlin, J. Döring, C.J. Gross, G.D. Johns, **R.A. Kaye**, D.R. LaFosse, I.Y. Lee, F. Lerma, A.O. Macchiavelli, I. Ragnarsson, D.G. Sarantites, and G.N. Solomon, *Phys. Rev. C* **67**, 034316 (2003).
24. *Lifetime of the 2^+_1 state and densities for the $0^+_{g.s.} \rightarrow 2^+_1$ transition in ^{18}Ne* , L.A. Riley, P.D. Cottle, M. Brown-Hayes, W.T. Cluff, J.D. Fox, N. Keeley, F.W. Letson, **R.A. Kaye**, K.W.

- Kemper, M.T. McEllistrem, S.L. Tabor, J.M. Thompson, and D. Walker, *Phys. Rev. C* **68**, 044309 (2003).
25. *γ vibrational band and quasiparticle excitations in ^{80}Sr* , T.A. Sienko, C.J. Lister, and **R.A. Kaye**, *Phys. Rev. C* **67**, 064311 (2003).
 26. *Transition strengths and band terminations in ^{86}Zr* , M. Wiedeking, S.L. Tabor, F. Cristancho, M. Devlin, J. Döring, C.B. Jackson, G.D. Johns, **R.A. Kaye**, I.Y. Lee, F. Lerma, A.O. Macchiavelli, M. Naidu, I. Ragnarsson, D.G. Sarantites, and G.Z. Solomon, *Phys. Rev. C* **67**, 034320 (2003).
 27. *Evolution of collectivity with spin in ^{81}Y* , **R.A. Kaye**, C.T. Rastovski, S.L. Tabor, J. Döring, F. Cristancho, M. Devlin, G.D. Johns, I.Y. Lee, F. Lerma, A.O. Macchiavelli, D.G. Sarantites, and G.Z. Solomon, *Phys. Rev. C* **66**, 054305 (2002).
 28. *First observation of excited structures in neutron deficient, odd-mass Pt, Au and Hg nuclei*, F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, K. Abu Saleem, I. Ahmad, M. Alcorta, H. Amro, J. Caggiano, J.A. Cizewski, M. Danchev, C.N. Davids, D.J. Hartley, A. Heinz, B. Herskind, **R.A. Kaye**, T.L. Khoo, T. Lauritsen, C.J. Lister, W.C. Ma, G.L. Poli, J. Ressler, W. Reviol, L.L. Riedinger, D. Seweryniak, S. Siem, M.B. Smith, A.A. Sonzogni, P.G. Varmette, and I. Wiedenhover, *Nucl. Phys. A* **682**, 487c (2001).
 29. *Transition strengths in odd-odd ^{80}Rb* , M.A. Cardona, G. Garcia Bermudez, **R.A. Kaye**, G.Z. Solomon, and S.L. Tabor, *Phys. Rev. C* **61**, 044316 (2000).
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Research Grants Received

1. PI of Research Experiences for Undergraduates (REU) grant (#1658998) funded by the National Science Foundation (NSF) for *REU Site: Interdisciplinary Scientific Computation at Ohio Wesleyan University*, in collaboration with the OWU Department of Mathematics and Computer Science. Co-PIs: Chris Fink and Craig Jackson. Award: \$250,188 for 2017–2020. This is a continuation of a grant first awarded by NSF in 2007.
2. Co-PI of REU grant (#1262850) funded by the NSF for *REU Site: Interdisciplinary Scientific Computation at Ohio Wesleyan University*, in collaboration with the OWU Department of Mathematics and Computer Science. PI: Brad Trees. Award: \$309,330 for 2013–2017. This is a continuation of a grant first awarded by NSF in 2007.
3. Great Lakes Colleges Association New Directions Initiative Grant for *Initiating a New Research Program to Study Exotic Nuclei Near the Neutron Drip Line*. Award: \$7,660 for August 2010–May 2011.
4. Co-PI of Major Research Instrumentation (MRI) grant (#0922409) funded by the NSF for *MRI-Consortium: Development of a Neutron Detector Array by Undergraduate Research Students for Studies of Exotic Nuclei*. PI: Paul DeYoung (Hope College). OWU Award: \$145,753 for 2009–2012.
5. OWU Thomas E. Wenzlau Grant for *Structure Studies of the Zinc-60 Nucleus at Low Spin*. Award: \$2,200 for 2005–2006.
6. PI of MRI grant (#0216072) funded by the NSF for *Acquisition of a High-Rate Data Analysis System for Nuclear Astrophysics Research: An MRI/RUI Proposal*. Co-PI: Ingo Wiedenhover (Florida State University). Award: \$104,892 for 2002–2004.

Presentations at Professional Meetings and Invited Talks While At OWU and PUC

1. *Multiple Band Structures in ^{70}Ge* , Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2018.
2. *Searching for Gold in the “Wild West” and “Exotic East” of the Nuclear Landscape*, invited talk at Denison University, February 2014.
3. *Collective Behavior in ^{71}As* , Joint Meeting of the Nuclear Physics Divisions of the American and Japanese Physical Societies, Waikoloa, HI, October 2009.
4. *Collective Behavior in ^{71}As* , Fall Meeting of the Ohio-Region Section of the American Physical Society, Ohio Wesleyan University, October 2009.
5. *Searching for Gold in the “Wild West” of the Nuclear Landscape*, invited talk at Ohio Northern University, April 2009.
6. *Parity Measurements in ^{80}Sr* , Annual Meeting of the American Physical Society (APS) Division of Nuclear Physics (DNP), Newport News, VA, October 2007.
7. *Transition Strengths and Degree of Deformation in ^{79}Sr* , Annual Meeting of the APS DNP, Nashville, TN, October 2006.
8. *Searching for Gold in the “Wild West” of the Nuclear Landscape*, invited talk at Oberlin College, October 2005.
9. *Nuclear Lifetimes in ^{79}Sr* , Fall Meeting of the Ohio-Region Section of the American Physical Society, Cleveland State University, October 2005.
10. *Collective Excitations and Shape Changes in ^{80}Y* , Annual Meeting of the APS DNP, Chicago, IL, October 2004.
11. *Highly-deformed structures in ^{80}Y* , Annual Meeting of the APS DNP, Tucson, AZ, October 2003.
12. *Evolution of collectivity with spin in ^{81}Y* , Annual Meeting of the APS DNP, East Lansing, MI, October 2002.
13. *Lifetime Measurements in ^{81}Y* , poster presentation at the Nuclear Structure 2000 Conference, East Lansing, MI, August 2000.

Academic Service (Selected)

1. Acting Department Chair, Fall 2018
2. Proposal Reviewer for the Major Research Instrumentation Program of the NSF, 2018–2019
3. University Equal Employment Opportunity Commissioner, Fall 2017–Spring 2020
4. Reviewer for *Hands-On Introduction to LabVIEW for Scientists and Engineers*, Third Edition, by John Essick (Oxford University Press), Spring 2017.
5. Elected member of the Committee for Intercollegiate Athletics, Fall 2014–present (Chair: Fall 2019–Spring 2020)
6. Departmental Assessment Liaison, Ohio Wesleyan University, Fall 2012–May 2020
7. Elected member of the University Assessment Committee, Fall 2012–Spring 2019 (Chair: Spring–Fall 2016, Fall 2017–Spring 2019)
8. Director of the OWU Pre-Engineering Dual-Degree Program, Fall 2011–May 2020
9. Department Liaison for the External Review of the Department of Physics and Astronomy, Spring 2011
10. Elected member of the Teaching, Learning, and Cross-Cultural Programming Committee, Fall 2008–Spring 2010
11. Elected Member-At-Large, Executive Committee of the Ohio-Region Section of the American Physical Society, 2006–2008
12. Society of Physics Students and Sigma Pi Sigma Faculty Advisor, Fall 2005–May 2020
13. Physics Coordinator, Northwest Indiana Science Olympiad, 2000–2004
14. Faculty Development Committee, Purdue University Calumet, 2001–2004
15. Chair, School of Engineering, Math, and Science Curriculum Committee, Purdue University Calumet, 2001–2004

Recent Church and Community Service (Selected)

1. Lifegroup Leader, Lifepoint Church Delaware, January 2018–May 2020
2. Connections Team member, Lifepoint Church Delaware, August 2017–March 2020
3. Participated in a week-long mission trip at The Mission, a special-needs orphanage in Carmen Serdan, Mexico, June 2015
4. Elected member of Church Council (a committee that makes administrative decisions and forms church-wide policies and strategies), Gateway Community Church, 2014–2016
5. Provided weekly deliveries of donated bread and pastries from Panera Bread to Family Promise of Delaware County, an interfaith hospitality network for homeless families, 2013–2015.
6. Weekly science teacher and volunteer for Sunbury Home Educators, a Christ-centered co-op homeschool group, September 2012–March 2020
7. Co-leader of Missions Team, Gateway Community Church, 2012–2015
8. Greeter Team member, Gateway Community Church, 2011–2016
9. Children’s Ministry Team member, Gateway Community Church, 2011, 2013
10. Led annual physics outreach events to local schools with the Ohio Wesleyan University Chapter of the Society of Physics Students, 2006–2020

Denomination preference: Non-denominational Evangelical Protestant