

Nathan H. Frank

Physics and Astronomy Department

Augustana College

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EDUCATION

- Fall 2006 **Ph.D. Physics**, Michigan State University, East Lansing, MI
Thesis Advisor: Dr. M. Thoennesen
Title: Spectroscopy of Neutron Unbound States in Neutron Rich Oxygen Isotopes
- Dec. 2001 **M.S. Physics**, Michigan State University, East Lansing, MI
- May 2000 **Majors: Physics, Mathematics**, Concordia College, Moorhead, MN
B.A. *cum laude*, Minor: Computer Science

APPOINTMENTS

- 2009-Present Assistant Professor
Physics Department, Augustana College, Rock Island, IL
- 2007-2009 Visiting Assistant Professor
Physics Department, Illinois Wesleyan University, Bloomington, IL
- 2006-2007 Visiting Assistant Professor
Department of Physics, Concordia College, Moorhead, MN
- 2002-2006 Graduate Research Assistant
Department of Physics, Michigan State University, East Lansing, MI
- 2000-2001 Graduate Teaching Assistant
Department of Physics, Michigan State University, East Lansing, MI

TEACHING

- Instructor for Physics I (algebra based)
 - Fall 2009-Present (Augustana)
 - Fall 2007 and 2008 (Illinois Wesleyan)
 - Fall 2006 (Concordia College)

- Instructor for Physics II (algebra based)
Spring 2007 (Concordia College)
- Introductory Laboratory Sequence
2009-Present (Augustana)
2007-2009 (Illinois Wesleyan)
2006-2007 (Concordia College)
- Basic Physics II
Winter 2010 (Augustana)
- Basic Physics Laboratory Sequence
2009-Present (Augustana)
2007-2009 (Illinois Wesleyan)
2006-2007 (Concordia College)
2000-2001 (Michigan State)
- Modern Physics
Fall 2008 (Illinois Wesleyan)
- Special Topics in Nuclear Physics
Fall 2007 (Illinois Wesleyan)
- Computer Applications
Spring 2011, Winter 2012 (Augustana)
- Classical Mechanics I
Winter 2009 and 2011 (Augustana)
- Classical Mechanics II
Spring 2009 (Augustana)
- Electrodynamics
Spring 2008 (Illinois Wesleyan)
- Advanced Laboratory III
Spring 2010, 2011, and 2012 (Augustana)
- Advanced Experimental Physics Laboratory (junior level)
May 2008 and 2009 (Illinois Wesleyan)

RESEARCH

- 2012-2013 Undergraduate Research at Augustana College, Year round
- Six students worked on data analysis of nuclei produced during ^{28}F experiment data analysis, installed and performed the first experiment using the Augustana/NSCL CsI hodoscope, and simulation of an active target system to improve experiments
- 2011-2012 Undergraduate Research at Augustana College, Year round
- Several students worked on data analysis of nuclei produced during ^{28}F experiment data analysis and testing of the Augustana/NSCL CsI hodoscope
- 2010-2011 Undergraduate Research at Augustana College, Year round
- Several students worked on ^{28}F experiment data analysis
- 2009-2010 Undergraduate Research at Augustana College, Year round
- Two students participated in ^{28}F experiment at the NSCL and started analysis of these data
- 2008-2009 Undergraduate Research at Illinois Wesleyan University, Academic Year
- Two students presented the results of the analysis on neutron-rich $^{26,25}\text{F}$ isotopes
- 2008 REU Coordinator at Illinois Wesleyan University supported by Marquette University
- Funding from NSF Grant #0555445 from Marquette University, Milwaukee, WI
 - Title: Studies of Neutron-rich Nuclei Using the MoNA Detector
 - Two summer students were supported in finishing analysis of neutron-rich $^{26,25}\text{F}$ isotopes
- 2007-2008 Undergraduate Research at Illinois Wesleyan University, Academic Year
- Supervised three students in continued analysis of neutron-rich $^{26,25}\text{F}$ isotopes
- 2006-2007 Undergraduate Research at Concordia College, Year round
- Supervised a student that started analysis of neutron-rich $^{26,25}\text{F}$ isotopes
- 2001-2006 Graduate Research Assistant, National Superconducting Cyclotron Laboratory
Michigan State University

- Assembled, tested and characterized charged particle detectors
- Determined and assembled appropriate electronics for the detector system
- Mapped the MSU/FSU Sweeper Magnet and understood its properties
- Analyzed the experiment "Search for the First Excited State of ^{24}O "
- Simulation of the experiment using the program LISE

PROFESSIONAL DEVELOPMENT, GRANTS, AND AWARDS

- 2013-2015 NSSC-MSI Research Grant Award: Department of Energy
National Nuclear Security Administration under Award Number DE-NA0000979
This award is from the National Nuclear Security Administration (NNSA).
It will support N. Frank as a senior investigator in the development of
a new segmented target and detector system to be installed in the NSCL at MSU.
PI Gueye from Hampton University will lead the effort.
- 2010-2014 RUI: Establishing an Undergraduate Research Group in Nuclear Physics,
NSF Grant 0969173 (\$121,000)
This award supports students and the PI in research associated with
the NSCL at MSU. The research will be done with researchers in the
MoNA Collaboration.
- 2010 American Association of Physics Teachers (AAPT) New Faculty Workshop
Hilton Garden Inn, Greenbelt, MD, June 28 - July 1
Given specific guidance on different aspects of professional life including:
- teaching strategies such as JITT, Peer Instruction, Tutorials in Physics
 - faculty issues such as external funding, time management, balancing
professional and personal life
- 2008 Activity Based Physics Faculty Institute (ABPFI)
Dickinson College, Carlisle, PA, June 15-20
- Explored physics education research materials such as
Workshop Physics, Interactive Lecture Demonstrations, and RealTime Physics
 - Developed curricula for introductory physics course
- 2007-2008 Carl L. Bailey Centennial Faculty Scholarship Award

- Internal grant/award from Concordia College, Moorhead, MN
- Title: Probing the Structure of Exotic Nuclei with the MoNA/Sweeper Facility
- Two undergraduate students analyzed and interpreted data from an experiment using the facility and presented data

LEADERSHIP, SERVICE, AND OUTREACH

- 06/09/2013 Gordon Research Seminar Career Panel Participant
- 2012-14 Public Safety Committee
- 2012-14 Faculty Research Committee
- 3/5/2012 Discuss funding of nuclear science with legislative assistants in Washington, D.C.
- 2011-2012 Executive Director of the MoNA Collaboration
- 2011-2012 Steering Committee for the "2012 Conference on Laboratory Instruction Beyond the First Year" organization by ALPhA
- 2011- Advisor for Pre-medical Professional Students
- 2011- Secretary for John Deere Chapter of Sigma Xi
- 2010- Safety Officer of the Physics and Astronomy Department
- 2011-12 Accommodations Committee for Students with Special Needs
- 11/16/2011 Co-organized Bowlesburg Elementary School Outreach for First Graders where we performed simple physics demonstrations
- 2009 Student Physics Society Zone Meeting
Demonstrated Quantum Analog Experiments using sound waves

COMPUTER EXPERIENCE

- Experienced in C, C++, Paw, ROOT, Fortran, Tcl/Tk, Linux, data acquisition codes, LabView, IgorPro, and DataStudio

PROFESSIONAL AFFILIATIONS

- American Physical Society (APS), 2001-Present
- American Association of Physics Teachers (AAPT), 2006-Present
- Sigma Xi, The Scientific Research Society, 2009-Present
- Advanced Lab Physics Association (ALPhA), 2009-Present

1. **Study of Two-Neutron Radioactivity in the Decay of ^{26}O** , Z. Kohley, T. Baumann, D. Bazin, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, M. Jones, E. Lunderberg B. Luther, S. Mosby, T. Nagi, J.K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *Phys. Rev. Lett.* **110**, 152501 (2013).
2. **First observation of ^{13}Li ground state**, Z. Kohley, E. Lunderberg, P.A. DeYoung, A. Volya, T. Baumann, D. Bazin, G. Christian, N.L. Cooper, N. Frank, A. Gade, C. Hall, J. Hinnefeld, B. Luther, S. Mosby, W.A. Peters, J.K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *Phys. Rev. C* **87**, 011304(R) (2013).
3. **Spyrou et al. Replies:**, A. Spyrou, Z. Kohley, T. Baumann, D. Bazin, B.A. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, E. Lunderberg, S. Mosby, W.A. Peters, A. Schiller, J.K. Smith, J. Snyder, M.J. Strongman, M. Thoennessen, and A. Volya, *Phys. Rev. Lett.* **109**, 239202 (2012).
4. **Evidence for the ground-state resonance of ^{26}O** , E. Lunderberg, P.A. DeYoung, Z. Kohley, H. Attanayake, T. Baumann, D. Bazin, G. Christian, D. Divaratne, S.M. Grimes, A. Haagsma, J.E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G.F. Peaslee, A. Schiller, J. Snyder, A. Spyrou, M.J. Strongman, and M. Thoennessen, *Phys. Rev. Lett.* **108**, 142503 (2012).
5. **Reply to Comment on Neutron knockout of ^{12}Be populating neutron-unbound states in ^{11}Be** , W.A. Peters, T. Baumann, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, N. Frank, K.L. Jones, J.-L. Lecouey, B. Luther, G.F. Peaslee, W.F. Rogers, A. Schiller, M. Thoennessen, and, J.A. Tostevin, *Phys. Rev. C* **86**, 019802 (2012).
6. **Spectroscopy of neutron-unbound $^{27,28}\text{F}$** , G. Christian, N. Frank, S. Ash, T. Baumann, P.A. DeYoung, J.E. Finck, A. Gade, G.F. Grinyer, B. Luther, M. Mosby, S. Mosby, J.K. Smith, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen, M. Warren, D. Weisshaar, and A. Wersal, *Phys. Rev. C* **85**, 034327 (2012).
7. **First Observation of Ground State Dineutron Decay: ^{16}Be** , A. Spyrou, Z. Kohley, T. Baumann, D. Bazin, B.A. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, E. Lunderberg, S. Mosby, W.A. Peters, A. Schiller, J.K. Smith, J. Snyder, M.J. Strongman, M. Thoennessen, and A. Volya, *Phys. Rev. Lett.* **108**, 102501 (2012).
8. **Exploring the Low-Z Shore of the Island of Inversion at $N = 19$** , G. Christian, N. Frank, S. Ash, T. Baumann, J. Brown, J.E. Finck, A. Gade, G.F. Grinyer, B. Luther, G.F. Peaslee, J.K. Smith, A. Spyrou, M.J. Strongman, M. Thoennessen, M. Warren, D. Weisshaar, and A. Wersal, *Phys. Rev. Lett.* **108**, 032501 (2012).
9. **Search for the ^{15}Be ground state**, A. Spyrou, J.K. Smith, T. Baumann, B.A. Brown, J. Brown, G. Christian, P.A. DeYoung, N. Frank, S. Mosby, W.A. Peters, A. Schiller, M.J. Strongman, M. Thoennessen, and J.A. Tostevin, *Phys. Rev. C* **84**, 044309 (2011).

10. **Neutron Unbound States in $^{25,26}\text{F}$** , N. Frank, D. Albertson, J. Bailey, T. Baumann, D. Bazin, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, M. Kasperczyk, B. Luther, W.A. Peters, A. Schiller, A. Smith, M. Thoennesen, and J.A. Tostevin, *Phys. Rev. C* **84**, 037302 (2011).
11. **Neutron knockout of ^{12}Be populating neutron-unbound states in ^{11}Be** , W.A. Peters, T. Baumann, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, N. Frank, K.L. Jones, J.-L. Lecouey, B. Luther, G.F. Peaslee, W.F. Rogers, A. Schiller, M. Thoennesen, J.A. Tostevin, and K. Yoneda, *Phys. Rev. C* **83**, 057304 (2011).
12. **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. Hinnefeld, S. Mosby, W.A. Peters, W.F. Rogers, A. Schiller, J. Snyder, A. Spyrou, S.L. Tabor, and M. Thoennesen, *Phys. Rev. C* **83**, 031303 (2011).
13. **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. Thoennesen, *Phys. Rev. C* **81**, 021302(R) (2010).
14. **First evidence for a virtual ^{18}B ground state**, A. Spyrou, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, E. Breitbach, J. Brown, G. Christian, A. DeLine, P.A. DeYoung, J.E. Finck, N. Frank, R. Howes, S. Mosby, W.A. Peters, A. Russel, A. Schiller, M. Strongman, and M. Thoennesen, *Phys. Lett. B* **683**, (2010) 129133.
15. **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. Rogers, W.A. Peters, A. Schiller, S.L. Tabor, and M. Thoennesen, (MoNA Collaboration), *Phys. Rev. C* **80**, 021302(R) (2009).
16. **Neutron decay spectroscopy on neutron-rich oxygen isotopes**, N. Frank, T. Baumann, D. Bazin, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, A. Schiller, M. Thoennesen, and J. Tostevin, *Nucl. Phys. A* **813** (2008) 199.
17. **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. Thoennesen, *Phys. Rev. C* **78**, 044303 (2008).
18. **Experimental determination of the $N = 16$ shell closure and evidence for a neutron skin 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. Rogers, G. Peaslee, W.A. Peters, A. Schiller, M. Scott,

- S.L. Tabor, M. Thoennessen, P. Voss, and T. Williams, Phys. Rev. Lett. **100**, 152502 (2008).
19. **Production of Neutron Unbound Nuclei via Primary Fragmentation of ^{48}Ca** , G.A. 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. Stolz, M.J. Strongman, M. Thoennessen, and L.O. Wagner, Nucl. Phys. A **801** (2008) 101.
 20. **Reconstruction of nuclear charged fragment trajectories from a large gap sweeper magnet**, N. Frank, A. Schiller, D. Bazin, W.A. Peters, and M. Thoennessen, Nucl. Instrum. Methods Phys. Res. A **580**, 1478 (2007).
 21. **Selective population and neutron decay of an excited state of ^{23}O** , A. Schiller, N. Frank, T. Baumann, D. Bazin, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, M. Thoennessen, and J.A. Tostevin, Phys. Rev. Lett. **99**, 112501 (2007).
 22. **First observation of ^{60}Ge and ^{64}Se** , A. Stolz, T. Baumann, N. H. Frank, T. N. Ginter, G. W. Hitt, E. Kwan, M. Mocko, W. Peters, A. Schiller, C. S. Sumithrarachchi, and M. Thoennessen, Phys. Lett. B **627** (2005) 32-37.
 23. **New Approach for Measuring Properties of rp-Process Nuclei**, R. C. Clement, D. Bazin, W. Benenson, B. A. Brown, A. L. Cole, M. W. Cooper, P. A. DeYoung, A. Estrade, M. A. Famiano, N. H. Frank, A. Gade, T. Glasmacher, P. T. Hosmer, W. G. Lynch, F. Montes, W. F. Mueller, G. F. Peaslee, P. Santi, H. Schatz, B. M. Sherrill, M-J. van Goethem, and M. S. Wallace, Phys. Rev. Lett. **92**, 172502 (2004).
 24. **First two energy levels in ^{15}F** , W. A. Peters, T. Baumann, D. Bazin, B. A. Brown, R. R. C. Clement, N. Frank, P. Heckman, B. A. Luther, F. Nunes, J. Seitz, A. Stolz, M. Thoennessen, and E. Tryggestad, Phys. Rev. C **68**, 034607 (2003).
 25. **Single proton knock-out reactions from $^{24,25,26}\text{F}$** , M. Thoennessen, T. Baumann, B. A. Brown, J. Enders, N. Frank, P. G. Hansen, P. Heckman, B. A. Luther, J. Seitz, A. Stolz, and E. Tryggestad, Phys. Rev. C **68**, 044318 (2003).
 26. **Half-life limit of ^{19}Mg** , N. Frank, T. Baumann, D. Bazin, R. R. C. Clement, P. Heckman, W. A. Peters, A. Stolz, M. Thoennessen, and M. S. Wallace, Phys. Rev. C **68**, 054309 (2003).
 27. **First Search for ^{16}Be** , T. Baumann, N. Frank, B. A. Luther, D. J. Morrissey, J. P. Seitz, B. M. Sherrill, M. Steiner, J. Stetson, A. Stolz, M. Thoennessen, and I. Wiedenhover, Phys. Rev. C **67**, 061303 (2003).
 28. **Spectroscopic factors measured in inclusive proton-knockout reactions on ^8B and ^9C at intermediate energies**, J. Enders, T. Baumann, B. A. Brown, N. H. Frank, P. G. Hansen, P. R. Heckman, B. M. Sherrill, A. Stolz, M. Thoennessen, J. A. Tostevin, E. J. Tryggestad, S. Typel, and M. S. Wallace, Phys. Rev. C **67**, 064301 (2003).

1. **Nuclear structure physics with MoNA-LISA**, S.L. Stephenson, J.A. Brown, P.A. DeYoung, J.E. Finck, N.H. Frank, J.D. Hinnefeld, R.A. Kaye, B.A. Luther, G.F. Peaslee, D.A. Meyer, W.F. Rogers and the MoNA Collaboration, in *Neutron Spectroscopy, Nuclear Structure, Related Topics: XIX International Seminar of Neutrons with Nuclei*, (Joint Institute for Nuclear Research, Dubna, Russia, 2012) 138-144.
2. **Measurement of the Efficiency of the Modular Neutron Array (MONA) at the NSCL**, W.A. Peters, T. Baumann, G.A. Christian, D. Denby, J. Finck, N. Frank, C.C. Hall, J. Hinnefeld, A. Schiller, M.J. Strongman, P.A. DeYoung, and M. Thoennessen, Twentieth International Conference for the APPLICATION OF ACCELERATORS IN RESEARCH AND INDUSTRY, AIP Conf. Proc. **1099**, 807 (2009).
3. **Population of Neutron Unbound States via Two-Proton Knockout Reactions**, N. Frank, A. Schiller, T. Baumann, D. Bazin, A. Gade, J.-L. Lecouey, W.A. Peters, H. Scheit, and M. Thoennessen, Proceedings of the 9th International Spring Seminar on Nuclear Physics, Changing Facets of Nuclear Structure, edited by A. Covello, p.23, World Scientific (2008).
4. **Exploring Neutron-Rich Oxygen Isotopes with MoNA**, W.A. Peters, N. Frank, T. Baumann, D. Bazin, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, H. Scheit, A. Schiller, and M. Thoennessen., Proceedings International Conference on Proton Emitting Nuclei and Related Topics, PRO-CON07, edited by L. Ferreira, AIP Conference Proceedings **961**, 143 (2007).
5. **Observation of the First Excited State in ^{23}O** , N. Frank, A. Schiller, T. Baumann, D. Bazin, J. Brown, P. A. DeYoung, J. E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W. A. Peters, H. Scheit, and M. Thoennessen, Proceedings 23rd Winter Workshop on Nuclear Dynamics, edited by W. Bauer, R. Bellwied and J.W. Harris, p.187, EP Systema, Budapest, Hungary (2007).
6. **First Results from MoNA**, A. Schiller, T. Baumann, D. Bazin, B. A. Brown, D. Bazin, P. A. DeYoung, N. Frank, A. Gade, J. Hinnefeld, R. Howes, R. A. Kryger, J.-L. Lecouey, B. Luther, W. A. Peters, J. R. Terry, M. Thoennessen, and K. Yoneda, Proceedings of the International Conference on Frontiers in Nuclear Structure, Astrophysics and Reactions (FINUSTAR), Kos, Greece, September 12-17, 2005; AIP Conference Proceeding **831**, 92-99 (2006).
7. **Can the Neutron Capture Cross Section be Measured with Coulomb Dissociation?**, A. Horvath, K. Ieki, A. Kiss, A. Galonsky, M. Thoennessen, T. Baumann, D. Bazin, C. Bordeanu, N. Carlin, M. Csanad, F. Deak, P. A. DeYoung, N. Frank, T. Fukuchi, Zs. Fülöp, A. Gade, D. R. Galaviy, C. Hoffman, R. Iysak, W. A. Peters, H. Schelin, A. Schiller, R. Sugo, Y. Seres, G. Veres, Eur. Phys. J. A **25**, 217-220 (2005).
8. **Discovery of ^{60}Ge and ^{64}Se** , A. Stolz, T. Baumann, N. Frank, T. Ginter, G. W. Hitt, E. Kwan, M. Mocko, W. A. Peters, A. Schiller, C. Sumthrarachchi, M. Thoennessen, Eur. Phys. J. A **25**, 335 (2005).

9. **Single proton knock-out from ^{24}F** , M. Thoennessen, B. A. Brown, T. Baumann, J. Enders, N. H. Frank, P. G. Hansen, P. Heckman, B. A. Luther, J. P. Seitz, A. Stolz, and E. Tryggestad, Nucl. Phys. A **746**, 536c-539c (2004).
10. **Half-life limit of ^{19}Mg** , N. Frank, T. Baumann, D. Bazin, R. R. C. Clement, M. W. Cooper, P. Heckman, W. A. Peters, A. Stolz, M. Thoennessen, and M. S. Wallace, Nucl. Phys. A **746**, 551c-554c (2004).
11. **Investigation of neutron-rich oxygen and fluorine isotopes**, M. Thoennessen, T. Baumann, J. Enders, N. H. Frank, P. Heckman, J. P. Seitz, A. Stolz, and E. Tryggestad, Nucl. Phys. A **722**, 61c-66c (2003).

COLLOQUIA AND SEMINARS

1. **Undergraduate Research in Nuclear Physics**, Physics and Astronomy Department, Indiana University South Bend, South Bend, IN, March 8, 2012.
2. **Undergraduate Research in Neutron-rich Atomic Nuclei**, Sigma Xi Annual New Member Induction Banquet, Augustana College, Rock Island, IL, December 1, 2011.
3. **Studies of Neutron-rich Nuclei using the Modular Neutron Array**, Department of Physics, Elon University, Elon, NC, February 18, 2008.
4. **Nuclear Physics near the Dripline: Present and Future of MoNA**, Department of Physics, Central Michigan University, Mount Pleasant, MI, March 23, 2007.

CONTRIBUTED TALKS

1. **Research on Unstable Atomic Nuclei with Undergraduates**, Celebration of Scholarship at Augustana College, Feb. 18, 2013.
2. **Formative Assessment in an Algebra-based Physics Course**, Fall Meeting of the Illinois Section of the American Association of Physics Teachers at Sherrard High School in Sherrard, IL, Oct. 8-9, 2010.
3. **Cutting-Edge Undergraduate Research in Nuclear Physics**, American Association of Physics Teachers Winter Meeting in Chicago, IL 2009.
4. **First excited state of doubly-magic ^{24}O** , American Physical Society, Division of Nuclear Physics Meeting, Nashville, TN, Oct. 25, 2006.
5. **Search for the First Excited State of ^{24}O** , Second Joint Meeting of the American Physical Society and Japanese Physical Society, Division of Nuclear Physics Meeting, Maui, HI, Sep. 18, 2005.
6. **Commissioning of the MSU/FSU Sweeper Magnet**, American Physical Society, Division of Nuclear Physics Meeting, Chicago, IL, Oct. 29, 2004.
7. **Search for ^{19}Mg** , American Physical Society, Philadelphia, PA, April 5, 2003.

8. **Focal Plane Detector System for the MSU/FSU Sweeper Magnet**, American Physical Society, Division of Nuclear Physics Meeting, Lansing, MI, April 5, 2002.

STUDENT POSTERS AND PRESENTATIONS

1. **Exploration of Three-Body Decay Using Jacobian Coordinates**, Mark Hoffman, Kyle Williams, Celebration of Learning, Augustana College, Rock Island, IL, May 4, 2013.
2. **Exploration of Three-Body Decay Using Jacobian Coordinates**, Mark Hoffmann, Sigma Xi Research Presentations, Augustana College, Rock Island, IL, Jan. 29, 2013.
3. **Testing and Efficiency of a High Efficiency CsI Scintillator Array**, Natalie Viscariello, Sigma Xi Research Presentations, Augustana College, Rock Island, IL, Jan. 29, 2013.
4. **Active Target Simulation**, Nathan M. Smith, Sigma Xi Research Presentations, Augustana College, Rock Island, IL, Jan. 29, 2013.
5. **Testing and Installation of a High Efficiency CsI Scintillator Array**, Natalie Viscariello, 2012 Quadrennial Physics Congress, Orlando, FL, Nov. 8-10, 2012.
6. **Active Target Simulation**, Nathan Smith, 2012 Quadrennial Physics Congress, Orlando, FL, Nov. 8-10, 2012.
7. **Active Target Simulation**, Nathan Smith*, Peter Draznik*, Nathan Frank, CEU Poster, American Physical Society, Division of Nuclear Physics Meeting, Newport Beach, CA, Oct. 24-27, 2012.
8. **Exploration of Three-Body Decay using Jacobian Coordinates**, Mark Hoffman*, Kyle Williams*, Nathan Frank, CEU Poster, American Physical Society, Division of Nuclear Physics Meeting, Newport Beach, CA, Oct. 24-27, 2012.
9. **Testing and Installation of a High-Efficiency CsI Scintillator Array**, Stuart Casarotto*, Celebration of Learning, Augustana College, Rock Island, IL, May 5, 2012.
10. **Analysis of Neutron-Rich Isotopes**, Natalie Viscariello*, Celebration of Learning, Augustana College, Rock Island, IL, May 5, 2012.
11. **Testing and Installation of a High Efficiency CsI Scintillator Array**, Natalie Viscariello*, Stuart Casarotto*, J. Smith, and M. Thoennessen, CEU Poster, Bulletin of the American Physical Society DNP11-2011-020091, Division of Nuclear Physics Meeting, East Lansing, MI, Oct. 26-29, 2011.
12. **Analysis of an Experiment on Neutron-Rich Isotopes**, Mark Warren*, Celebration of Learning, Augustana College, Rock Island, IL, May 7, 2011.

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