

Curriculum Vitae

Zachary P. Meisel

Associate Professor
Director, Edwards Accelerator Laboratory
Department of Physics and Astronomy, Ohio University

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Employment

Director, Edwards Accelerator Laboratory	Fall 2018 - Present
Associate Professor	Fall 2020 - Present
Assistant Professor	Fall 2016 - Fall 2020
Ohio University Dept. of Physics & Astronomy.	
Postdoctoral Research Associate	Spring 2015 - Fall 2016
University of Notre Dame Dept. of Physics, Group of Manoel Couder.	
Graduate Research Assistant	Summer 2010 - Spring 2015
Natl. Superconducting Cyclotron Lab., Group of Hendrik Schatz.	
Undergraduate Research Assistant	Spring 2008 - Summer 2010
Natl. Superconducting Cyclotron Lab., Group of Hendrik Schatz.	
Undergraduate Research Assistant	Spring 2007 - Fall 2007
Mich. St. Univ. Lyman Briggs College, Group of Kristie Macrakis.	

Education

Michigan State University , East Lansing, MI Ph.D. in Physics (Nuclear Astrophysics focus), Research Advisor: Hendrik Schatz	May 2010 - April 2015
Michigan State University , East Lansing, MI B.S. in Astrophysics, Research Advisor: Hendrik Schatz	August 2006 - May 2010

Awards & Fellowships

[7] Outstanding Faculty Research, Scholarship, and Creative Activity Award College of Arts & Sciences, Ohio University	May 2021
[6] Dean's Outstanding Teacher Award College of Arts & Sciences, Ohio University	May 2020
[5] DOE Early Career Award U.S. Department of Energy	June 2018
[4] Sherwood K. Haynes Award Department of Physics and Astronomy, Michigan State University	April 2015
[3] Thomas A. Kaplan Award Department of Physics and Astronomy, Michigan State University	April 2013
[2] Carl L. Foiles Award Department of Physics and Astronomy, Michigan State University	April 2010
[1] Lawrence W. Hantel Endowed Fellowship Department of Physics and Astronomy, Michigan State University	April 2009

External Funding Awards

[6] "Nuclear Astrophysics and Structure On and Off the Stability Line" PI: Carl Brune, Co-PIs: Zach Meisel , Tom Massey, Alexander Voinov <i>US Department of Energy Office of Science</i> , \$1,676,000 (2020-2022)
[5] "Statistical Nuclear Physics and (α, n) Reactions for Applications" PI: Zach Meisel , Co-PI: Alexander Voinov <i>US Department of Energy National Nuclear Security Administration SSAA Award</i> , \$600,000 (2019-2022)
[4] "MRI: Acquisition of a Helium Ion Source Upgrade for the Edwards Accelerator Laboratory at Ohio University" PI: Zach Meisel , Co-PIs: Carl Brune, David C. Ingram, Alexander Voinov, Thomas N. Massey <i>US National Science Foundation Major Research Instrumentation Award</i> , \$186,965 (2018-2019)
[3] "Constraining Neutron Star Structure with Indirect Nuclear Reaction Studies" PI: Zach Meisel <i>US Department of Energy Office of Science Early Career Award</i> , \$750,000 (2018-2023)
[2] "Nuclear Astrophysics and Structure On and Off the Stability Line" PI: Carl Brune, Co-PIs: Zach Meisel , Tom Massey <i>US Department of Energy Office of Science</i> , \$1,170,000 (2016-2019)
[1] "Attending Nuclei in the Cosmos 2016" PI: Zach Meisel <i>American Astronomical Society International Travel Award</i> , \$2,500 (2016)

Approved User Facility and Computing Proposals

- [7] “ (α, xn) cross sections for ν -driven wind nucleosynthesis using SECAR”
Spokesperson: **Zach Meisel**, Backup Spokesperson: Fernando Montes.
e20019 of *Natl. Superconducting Cyclotron Lab. ReA-PAC* (2020).
- [6] “First radioactive beam science with SECAR: (α, n) cross sections for ν -driven wind nucleosynthesis”
Spokesperson: **Zach Meisel**, Backup Spokesperson: Fernando Montes.
e19011 of *Natl. Superconducting Cyclotron Lab. PAC 43* (2019).
- [5] “Identifying key nuclear physics uncertainties in shock-driven nucleosynthesis of core collapse supernovae”
PI: **Zach Meisel**
Standard Award PHS0315-2, *Ohio Supercomputer Center* (2018).
- [4] “Constraining the ^{56}Ni bypass in the rp -process”
Spokesperson: **Zach Meisel**, Backup Spokesperson: Wei Jia Ong.
e18018 of *Natl. Superconducting Cyclotron Lab. PAC 42* (2018).
- [3] “Constraining the Ni-Cu cycle in the rp -process with SuN”
Spokesperson: **Zach Meisel**, Backup Spokesperson: Stephanie Lyons.
e17009 of *Natl. Superconducting Cyclotron Lab. PAC 41* (2017).
- [2] “High-precision mass measurements in the proton-rich region for rp -process studies”
Spokesperson: Martin Eibach, Backup Spokesperson: **Zach Meisel**.
e15026 of *Natl. Superconducting Cyclotron Lab. PAC 39* (2015).
- [1] “Measurement of the $^{75}\text{Ga}(\alpha, n)$ and $(\alpha, 2n)$ cross sections important for neutrino driven wind nucleosynthesis”
Spokesperson: **Zach Meisel**, Backup Spokesperson: Fernando Montes.
e14032 of *Natl. Superconducting Cyclotron Lab. PAC 38* (2014).

Invited Talks: Conferences & Workshops

- [20] “The Impact of Nuclear Structure on Constraints of Neutron Star Structure”
Canadian Association of Physicists Congress.
9 June 2021, *Remotely delivered to*: Ontario, Canada.
- [19] “Measurement of the $^{13}\text{C}(\alpha, n)$ Cross Section for $E_\alpha = 3 - 8$ MeV”
International Atomic Energy Agency Consultancy Meeting on International Nuclear Data Evaluation Network on Light Elements.
18 March 2021, *Remotely delivered to*: Vienna, Austria.
Meeting report: <https://www-nds.iaea.org/publications/indc/indc-nds-0827.pdf>
- [18] “Update on the Association for Research at University Nuclear Accelerators”
Low Energy Community Meeting.
12 August 2020, *Remotely delivered to*: East Lansing, Michigan, USA.
- [17] “The Nucleosynthesis of Proton-Rich Isotopes”
American Physical Society April Meeting.
19 April 2020, *Remotely delivered to*: Washington, D.C., USA.
- [16] “Statistical Nuclear Physics and (α, n) Reactions for Applications”
NNSA Stewardship Science Academic Programs Annual Review.
27 February 2020, Washington, D.C., USA.

Invited Talks: Conferences & Workshops Cont'd.

[15] “X-ray burst experiments: status and opportunities for constraining dense matter”
JINA/INT Workshop on Dense Matter and Neutron Star Mergers.
 17 December 2019, Seattle, Washington, USA.

[14] “Mapping the Nuclear Mass Surface”
Nuclear Physics in Astrophysics IX.
Proceedings: doi:10.1088/1742-6596/1668/1/012026
 20 September 2019, Frankfurt, Germany.

[13] “Nuclear Astrophysics Opportunities for Proton-rich Nuclei”
Workshop on Nuclear Astrophysics Opportunities at ATLAS 2019.
 12 July 2019 Lemont, Illinois, USA.

[12] “New Frontiers in Experimental Nuclear Astrophysics”
Gordon Research Conference on Nuclear Chemistry 2019.
 18 June 2019 New London, New Hampshire, USA.

[11] “The Influence of Proton-rich Nuclei on the Most Neutron-rich Matter in the Universe”
International Conference on Proton Emitting Nuclei (PROCON) 2019.
 5 June 2019 East Lansing, Michigan, USA.

[10] “The Connection Between Terrestrial and Cosmic Laboratories for Neutron Star Crust Studies”
Investigating Crusts of Neutron Stars (ICONS) 2019.
 16 April 2019 Amsterdam, Netherlands.

[9] “Accomplishments and Endeavors of the Joint Institute for Nuclear Astrophysics”
Nuclear Structure 2018.
 10 August 2018 East Lansing, Michigan, USA.

[8] “Intersections Between Applications and Astrophysics for (α, n) Reactions”
Nuclear Processes in Dense Plasmas Workshop.
 1 August 2018 Livermore, California, USA.

[7] “Coolers in the Crust: Production & Impact of Urca Nuclides on Accreting Neutron Stars”
16th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics.
Proceedings: doi:10.1051/epjconf/201817804004
 18 - 22 September 2017 Shanghai, Shanghai, China.

[6] “The Edwards Accelerator Laboratory at Ohio University”
24th Conference on Application of Accelerators in Research and Industry.
Proceedings: doi:10.1016/j.phpro.2017.09.050
 30 October - 4 November 2016, Forth Worth, Texas, USA.

[5] “Nuclear Physics at Ohio University”
24th Conference on Application of Accelerators in Research and Industry.
 30 October - 4 November 2016, Forth Worth, Texas, USA.

[4] “The St. George Recoil Separator: Purpose, Status, and Future”
JINA-CEE/TRIUMF Satellite Workshop on Recoil Separators for Nuclear Astrophysics.
 11-12 October 2016, Vancouver, Canada.

Invited Talks: Conferences & Workshops Cont'd.

[3] “The Nuclear Physics of Neutron Star Urca Cooling”
JINA-CEE International Symposium on Neutron Stars in the Multi-Messenger Era
 23-27 May 2016, Athens, Ohio, USA.

[2] “From dripline to dripline: Nuclear Astrophysics in the Laboratory”
FAIRNESS 2016
Proceedings: doi:10.1088/1742-6596/742/1/012019
 14-19 February 2016, Garmisch-Partenkirchen, Germany.

[1] “Recent Results in Time-of-flight Mass Measurement”
530 WE-Heraeus-Seminar: Nuclear Masses and Nucleosynthesis.
 23-26 April 2013, Bad Honnef, Germany.

Invited Talks: Seminars & Colloquia

[18] “Where Do They Live? A Discussion of Planetary Habitability and the Prospects for Intelligent Life in the Galaxy”
Science on Screen Series, Athena Cinema
 24 June 2021, Athens, OH, USA.

[17] “Identifying the Best Nuclear Physics Hammer to Hit an Astrophysics Nail”
LANL Astrophysics Seminar, Los Alamos National Laboratory
 8 April 2021, *Remotely delivered to*: Los Alamos, NM, USA.

[16] “Constraining Ultradense Matter with Nuclear and Numerical Experiments”
NSCL/FRIB Seminar, Facility for Rare Isotope Beams
 10 February 2021, *Remotely delivered to*: East Lansing, Michigan, USA.

[15] “The Nuclear Physics and Astrophysics of Accreting Neutron Stars”
 Panelist for the *Facility for Rare Isotope Beams Theory Alliance Dialogues on Nuclear Physics*
 17 November 2020, *Remotely delivered to*: East Lansing, Michigan, USA.

[14] “The Interplay Between X-ray Superbursts and Neutron Star Crusts”
Nuclear Astrophysics Seminar, Institute of Modern Physics, CAS
 15 April 2020, *Remotely delivered to* Lanzhou, China.

[13] “The Undead: Nuclear Physics in the Death and Afterlife of Massive Stars”
Physics & Astronomy Colloquium, Ohio University
 11 October 2019, Athens, Ohio, USA.

[12] “Journey to the Center of the Neutron Star”
Nuclear Physics Seminar, University of Kentucky
 21 March 2019, Lexington, Kentucky, USA.

[11] “Frontiers in Nuclear Astrophysics”
Laboratory for Nuclear Science Special Seminar, Massachusetts Institute of Technology
 7 January 2019, Cambridge, Massachusetts, USA.

[10] “Reverse Engineering Neutron Star Properties from Astrophysics Models and Nuclear Physics Experiments”
Nuclear Physics Seminar Series, University of Massachusetts Lowell
 4 October 2018, Lowell, Massachusetts, USA.

Invited Talks: Seminars & Colloquia Cont'd.

[9] “Made to Order Nuclear Astrophysics: the Case of the Clock Burster”
Institute for Structure and Nuclear Astrophysics Seminar Series, University of Notre Dame
 3 September 2018 Notre Dame, Indiana, USA.

[8] “Nuclear Chemistry in the Cosmos”
American Chemical Society–Columbus Section Banquet
 12 February 2018 Columbus, Ohio, USA.

[7] “Imprint of Urca Cooling on Observables from Accreting Neutron Stars”
University of Tennessee Nuclear Physics Seminar Series
 5 February 2018 Knoxville, Tennessee, USA.

[6] “Life After Death: Element Creation in Stellar Explosions”
Ohio University Science Café Series
Video recording: <https://youtu.be/BexFeu0yiDU>
 1 November 2017 Athens, Ohio, USA.

[5] “From Dripline to Dripline: Nuclear Astrophysics of Accreting Neutron Stars”
Ball State University Physics & Astronomy Colloquium Series
 28 September 2017 Muncie, Indiana, USA.

[4] “Nuclear Thermostats: Urca Pairs in Accreting Neutron Star Oceans and Crusts”
JINA Online Seminar on Neutron Stars and Dense Matter
Video recording: <https://www.youtube.com/watch?v=tqXkdx8Z1Ww&t=1s>
 23 September 2016, Remotely delivered.

[3] “Nuclei and Neutron Star Surfaces”
Argonne National Laboratory Physics Division Seminar
 19 September 2016, Argonne, Illinois, USA.

[2] “From dripline to dripline: Nuclear Astrophysics in the Laboratory”
Ohio University Physics & Astronomy Colloquium Series
 26 January 2016, Athens, Ohio, USA.

[1] “ β -Delayed Proton Emission of ^{69}Kr and the ^{68}Se rp -process Waiting Point”
Kafeepalaver lecture series at the Max-Planck-Institut für Kernphysik
 24 May 2012, Heidelberg, Germany.

Contributed Talks

[14] “Comparing the Impacts of Nuclear Physics and Astrophysics Inputs on X-ray Burst Model Calculations”
American Physical Society Division of Nuclear Physics Meeting.
 23-27 October 2018, Kona, Hawaii.

[13] “Exploring Nuclear Physics Uncertainties in Models of Type I X-ray Bursts with MESA”
Burst Environment, Reactions, and Numerical Modeling Workshop (BERN) 2018.
 11-15 June 2018, Prato, Italy.

[12] “Constraints on Bygone Neutron Star Nucleosynthesis Using Urca Coolers in the Crust”
American Physical Society Division of Nuclear Physics Meeting.
 25-28 October 2017, Pittsburgh, Pennsylvania, USA.

Contributed Talks Cont'd.

[11] “Statistical nuclear reaction uncertainties important for the astrophysical rp and α processes”

6th Workshop on Nuclear Level Density and Gamma Strength.

8-12 May 2017, Oslo, Norway.

[10] “Status of the $A = 56, 64$, and 68 X-ray burst waiting points”

JINA-CEE Satellite Workshop on Experiments for X-ray Burst Nucleosynthesis.

22 May 2016, Athens, Ohio, USA.

[9] “Nuclear Physics of the Outer Crust of Accreting Neutron Stars”

American Physical Society Prairie Section Fall Meeting.

19-21 November 2015, South Bend, Indiana, USA.

[8] “Moving towards first science with the St. George Recoil Separator”

American Physical Society Division of Nuclear Physics Meeting.

28-31 October 2015, Santa Fe, New Mexico, USA.

[7] “Recent Results from the NSCL Time-of-Flight Mass Measurements of Neutron-rich Isotopes of Argon through Iron”

American Physical Society April Meeting.

11-14 April 2015, Baltimore, Maryland, USA.

[6] “Recent Results from the NSCL Time-of-Flight Mass Measurements of Neutron-rich Isotopes of Argon through Iron”

JINA-CEE Frontiers.

22-25 March 2015, East Lansing, Michigan, USA.

[5] “Nucleosynthesis in the ν -Driven Winds: Impact of (α, n) Reactions on the Abundances from Sr to Ag”

On behalf of Jorge Pereira.

Nuclei in the Cosmos XII.

7-11 July 2014, Debrecen, Hungary.

[4] “Time-of-flight Mass Measurement of Neutron-Rich Nuclei in the Cl-Cu Region”

American Physical Society April Meeting.

6 April 2014, Savannah, Georgia, USA.

[3] “Correcting for β -Summing in β -Delayed Proton Detection”

American Physical Society Division of Nuclear Physics Meeting.

16 October 2011, East Lansing, Michigan, USA.

[2] “Simulation of Silicon Detector Response for β -Delayed Proton Emission”

JINA Frontiers.

21-23 October 2010, Lake Geneva, Wisconsin, USA.

[1] “Simulation of Silicon Detector Response for β -Delayed Proton Emission”

Pan-American Advanced Studies Institute on Rare Isotopes.

1-13 August 2010, Joao Pessoa, Brazil.

Publications

- [47] “Reduction of neutron imaginary potential off the stability line and its possible impact on neutron capture rates”
Alexander V. Voinov, George Perdikakis, K. Brandenburg, C.R. Brune, A. Falduto, R. Giri, S.M. Grimes, T. Massey, **Z. Meisel**, S.N. Paneru, A.L. Richard
Physical Review C **104**, 015805 (2021)
- [46] “Determination of the ^{60}Zn level density from neutron evaporation spectra”
Doug Soltesz, Muhammad A.A. Mamun, Alexander V. Voinov, **Zach Meisel**, B.A. Brown, C.R. Brune, S.M. Grimes, H. Hadizadeh, M. Hornish, T.N. Massey, J.E. O’Donnell, W.E. Ormand
Physical Review C **103**, 015802 (2021)
- [45] “Urca nuclide production in type-I X-ray bursts and implications for nuclear physics studies”
Grant Merz and **Zach Meisel**
Monthly Notices of the Royal Astronomical Society **500**, 2958 (2021)
- [44] “Performance of neutron spectrum unfolding using deuterated liquid scintillator”
Mike Febraro, James deBoer, K. Brandenburg, C.R. Brune, K.A. Chipps, T. Danley, A. Di Fulvio, Y. Jones-Alberty, K.T. Macon, **Z. Meisel**, T.N. Massey, S.D. Pain, S. Paneru, S. Shahina, M.S. Smith, D. Soltesz, S. Subedi, I. Sultana, R. Toomey
Nuclear Instruments and Methods in Physics Research A **989**, 164824 (2021)
- [43] “ β -decay of ^{61}V and its role in cooling accreted neutron stars”
Wei Jia Ong, E.F. Brown, J. Browne, S. Ahn, K. Childers, B.P. Crider, A.C. Dombos, S.S. Gupta, G.W. Hitt, C. Langer, R. Lewis, S.N. Liddick, S. Lyons, **Z. Meisel**, P. Möller, F. Montes, F. Naqvi, J. Pereira, C. Prokop, D. Richman, H. Schatz, K. Schmidt, A. Spyrou
Physical Review Letters **125**, 262701 (2020)
- [42] “Influence of ^{73}Rb on the ashes of accreting neutron stars”
Daniel E.M. Hoff, Andrew M. Rogers, **Zach Meisel**, P.C. Bender, K. Brandenburg, K. Childers, J.A. Clark, A.C. Dombos, E.R. Doucet, S. Jin, R. Lewis, S.N. Liddick, C.J. Lister, C. Morse, H. Schatz, K. Schmidt, D. Soltesz, S.K. Subedi, S.M. Wang, S. Waniganeththi
Physical Review C **102**, 045810 (2020)
- [41] “First direct measurement of $^{22}\text{Mg}(\alpha, p)^{25}\text{Al}$ and implications for X-ray burst model-observation comparisons”
Jaspreet S. Randhawa, Yassid Ayyad, Wolfi Mittag, **Zach Meisel**, T. Ahn, S. Aguilar, H. Alvarez-Pol, D.W. Bardayan, D. Bazin, S. Beceiro-Novo, L. Carpenter, M. Cortesi, D. Cortina-Gil, D. Blankstein, P. Gastis, M. Hall, S. Henderson, J.J. Kolata, T. Mijatovic, F. Ndayisabye, P. O’Maley, J. Pereira, A. Pierre, H. Robert, C. Santamaria, H. Schatz, J. Smith, N. Watwood, J.C. Zamora
Physical Review Letters **125**, 202701 (2020)
- [40] “Evaluation of experimental constraints on the $^{44}\text{Ti}(\alpha, p)^{47}\text{V}$ reaction cross section relevant for supernovae”
Kelly Chipps, P. Adsley, M. Couder, W.R. Hix, **Z. Meisel**, K. Schmidt
Physical Review C **102**, 035806 (2020)
- [39] “Re-analysis of the $^{24}\text{Mg}(\alpha, \gamma)^{28}\text{Si}$ reaction rate at stellar temperatures”
Phil Adsley, Alison M. Laird, **Zach Meisel**
Physical Review C **102**, 015801 (2020)
- [38] “Sensitivity of ^{44}Ti and ^{56}Ni production in core collapse supernova shock-driven nucleosynthesis to nuclear reaction rate variations”
Shiv Subedi, **Zach Meisel**, Grant Merz
Astrophysical Journal **898**, 5 (2020)

Publications Cont'd.

- [37] “Nuclear mass measurements map the structure of atomic nuclei and accreting neutron stars”
Zach Meisel, Sebastian George, S. Ahn, D. Bazin, B.A. Brown, J. Browne, J.F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matoš, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers.
Physical Review C - Rapid Communications **101**, 052801(R) (2020)
- [36] “Constraining the destruction rate of ^{40}K in stellar nucleosynthesis through the study of the $^{40}\text{Ar}(p, n)^{40}\text{K}$ reaction”
Panos Gastis, George Perdikakis, J. Dissanayake, P. Tsintari, I. Sultana, C.R. Brune, T.N. Massey, **Z. Meisel**, A.V. Voinov, K. Brandenburg, T. Danley, R. Giri, Y. Jones-Alberty, S. Paneru, D. Soltesz, S. Subedi
Physical Review C **101**, 055805 (2020)
- [35] “High energy proton radiation damage experiment on a hybrid CMOS detector”
Evan Bray, Abraham D. Falcone, Mitchell Wages, D.N. Burrows, C.R. Brune, **Z. Meisel**
Journal of Astronomical Telescopes, Instruments, and Systems **6**, 016002 (2020)
- [34] “Discovery of mirror symmetry violation in bound nuclear ground states”
Dan E.M. Hoff, Andrew M. Rogers, Simon M. Wang, Peter C. Bender, K. Brandenburg, K. Childers, J.A. Clark, A.C. Dombos, E.R. Doucet, S. Jin, R. Lewis, S.N. Liddick, C.J. Lister, **Z. Meisel**, C. Morse, W. Nazarewicz, H. Schatz, K. Schmidt, D. Soltesz, S.K. Subedi, S. Waniganeththi
Nature **580**, 52-55 (2020)
Featured in: The Boston Globe
- [33] “Spallation-altered accreted compositions for X-ray bursts: Impact on ignition conditions and burst ashes”
Jaspreet S. Randhawa, **Zach Meisel**, Samuel A. Giuliani, Hendrik Schatz, B.S. Meyer, K. Ebinger, A.A. Hood, R. Kanungo
Astrophysical Journal **887**, 100 (2019)
Associated AAS author interview: https://youtu.be/0DY2_E4272M
- [32] “The ORNL Deuterated Spectroscopic Array – ODeSA”
Michael Febraro, Rebecca Toomey, S.D. Pain, K.A. Chipps, B. Becker, R.J. Newby, **Z. Meisel**, T.N. Massey, C.R. Brune, Q. Liu, R.J. deBoer, K.T. Macon, A. Boeltzig, J. O’Neill, M.S. Smith, M. Wiescher, D. Soltesz, I. Sultana, K. Brandenburg, S. Subedi, S. Paneru, T. Danley, Y. Jones-Alberty
Nuclear Instruments and Methods in Physics Research A **946**, 162668 (2019).
- [31] “Proton-induced reactions on molybdenum”
Edward Lamere, Manoel Couder, M. Beard, A. Simon, A. Simonetti, M. Skulski, G. Seymour, P. Huestis, K. Manukyan, **Z. Meisel**, L. Morales, M. Moran, S. Moylan, C. Seymour, E. Stech
Physical Review C **100**, 034614 (2019).
- [30] “Crust cooling models are insensitive to the crust-core transition pressure for realistic equations of state”
Sudhanva Lalit, **Zach Meisel**, Edward F. Brown
Astrophysical Journal **882**, 91 (2019).
- [29] “Constraining the neutron star compactness: Extraction of the $^{23}\text{Al}(p, \gamma)$ reaction rate for the rp -process”
Clemens Wolf, Christoph Langer, Fernando Montes, Jorge Pereira, Wei Jia Ong, Terri Poxon-Pearson, S. Ahn, S. Ayoub, T. Baumann, D. Bazin, P.C. Bender, B.A. Brown, J. Browne, H. Crawford, R.H. Cyburt, E. Deleeuw, B. Elman, S. Fiebiger, A. Gade, P. Gastis, S. Lipschutz, B. Longfellow, **Z. Meisel**, F.M. Nunes, G. Perdikakis, R. Reifarth, W.A. Richter, H. Schatz, K. Schmidt, J. Schmitt, C. Sullivan, R. Titus, D. Weisshaar, P.J. Woods, J.C. Zamora, R.G.T. Zegers
Physical Review Letters **122**, 232701 (2019).

Publications Cont'd.

[28] “Level densities of $^{74,76}\text{Ge}$ from compound nuclear reactions”

Alexander V. Voinov, Therese Renstrøm, D. L. Bleuel, S. M. Grimes, M. Guttormsen, A. C. Larsen, S. N. Liddick, G. Perdikakis, A. Spyrou, S. Akhtar, N. Alanazi, K. Brandenburg, C. R. Brune, T. W. Danley, S. Dhakal, P. Gastis, R. Giri, T. N. Massey, **Z. Meisel**, S. Nikas, S. N. Paneru, C. E. Parker, A. L. Richard
Physical Review C **99**, 054609 (2019).

[27] “Influence of nuclear reaction rate uncertainties on neutron star properties extracted from X-ray burst model-observation comparisons”

Zach Meisel, Grant Merz, Sophia Medvid
Astrophysical Journal **872**, 84 (2019).

[26] “Status of the JENSA gas-jet target for experiments with rare isotope beams”

Konrad Schmidt, Kelly A. Chipps, S. Ahn, D.W. Bardayan, J. Browne, U. Greife, **Z. Meisel**, F. Montes, P. D. O’Malley, W.-J. Ong, S. D. Pain, H. Schatz, K. Smith, M. S. Smith, P. J. Thompson
Nuclear Instruments and Methods in Physics Research A **911**, 1 (2018).

[25] “Toward complete spectroscopy using β -decay: The example of $^{32}\text{Cl}(\beta\gamma)^{32}\text{S}$ ”

Eric Aboud, Mike B. Bennett, Chris Wrede, Moshe Friedman, Sean N. Liddick, David Pérez-Loureiro, D.W. Bardayan, B.A. Brown, A.A. Chen, K.A. Chipps, C. Fry, B.E. Glassman, C. Langer, E.I. McNeice, **Z. Meisel**, W.-J. Ong, P.D. O’Malley, S.D. Pain, C.J. Prokop, H. Schatz, S.B. Schwartz, S. Suchyta, P. Thompson, M. Walters, X. Xu
Physical Review C **98**, 024309 (2018).

[24] “Nuclear Physics of the Outer Layers of Accreting Neutron Stars”

Zach Meisel, Alex Deibel, Laurens Keek, Peter Shternin, Justin Elfritz
Journal of Physics G **45**, 093001 (2018).
Invited Review.

[23] “Detailed study of the decay $^{31}\text{Cl}(\beta\gamma)^{31}\text{S}$ ”

Mike B. Bennett, Chris Wrede, Sean N. Liddick, David Pérez-Loureiro, D.W. Bardayan, B.A. Brown, A.A. Chen, K.A. Chipps, C. Fry, B.E. Glassman, C. Langer, N.R. Larson, E.I. McNeice, **Z. Meisel**, W. Ong, P.D. O’Malley, S.D. Pain, C.J. Prokop, S.B. Schwartz, S. Suchyta, P. Thompson, M. Walters, X. Xu
Physical Review C **97**, 065803 (2018).

[22] “Consistent Modeling of GS 1826-24 X-Ray Bursts for Multiple Accretion Rates Demonstrates the Possibility to Constrain rp -Process Reaction Rates”

Zach Meisel
Astrophysical Journal **860**, 147 (2018).

[21] “Low-lying level structure of ^{56}Cu and its implications on the rp process”

Wei Jia Ong, Christoph Langer, Fernando Montes, A. Aprahamian, D. W. Bardayan, D. Bazin, B. A. Brown, J. Browne, H. Crawford, R. Cyburt, E. B. Deleeuw, C. Domingo-Pardo, A. Gade, S. George, P. Hosmer, L. Keek, A. Kontos, I.-Y. Lee, A. Lemasson, E. Lunderberg, Y. Maeda, M. Matos, **Z. Meisel**, S. Noji, F. M. Nunes, A. Nystrom, G. Perdikakis, J. Pereira, S. J. Quinn, F. Recchia, H. Schatz, M. Scott, K. Siegl, A. Simon, M. Smith, A. Spyrou, J. Stevens, S. R. Stroberg, D. Weisshaar, J. Wheeler, K. Wimmer, R.G.T. Zegers
Physical Review C **95**, 055806 (2017).

[20] “Constraints on Bygone Nucleosynthesis of Accreting Neutron Stars”

Zach Meisel, Alex Deibel
Astrophysical Journal **837**, 73 (2017).

Publications Cont'd.

- [19] “Measurement of key resonance states for the $^{30}\text{P}(p,\gamma)^{31}\text{S}$ reaction rate, and the production of intermediate-mass elements in nova explosions”
 Anu Kankainen, Phil. J. Woods, Hendrik Schatz, Terri Poxon-Pearson, Daniel Doherty, V. Bader, T. Baugher, D. Bazin, B. A. Brown, J. Browne, A. Estradé, A. Gade, J. José, A. Kontos, G. Lotay, **Z. Meisel**, F. Montes, S. Noji, F. Nunes, G. Perdikakis, J. Pereira, F. Recchia, T. Redpath, S. R. Stroberg, M. Scott, D. Seweryniak, J. Stevens, D. Weisshaar, R.G.T. Zegers
Physics Letters B **769**, 549 (2017).
- [18] “Energy acceptance of the St. George recoil separator”
Zach Meisel, M.T. Moran, G. Gilardy, J. Schmitt, C. Seymour, M. Couder
Nuclear Instruments and Methods in Physics Research A **850**, 48 (2017).
- [17] “ β -particle energy-summing correction for β -delayed proton emission measurements”
Zach Meisel, Marcelo del Santo, H. Crawford, R.H. Cyburt, G.F. Grinyer, C. Langer, F. Montes, H. Schatz, K. Smith
Nuclear Instruments and Methods in Physics Research A **844**, 45 (2017).
- [16] “Urca Cooling Pairs in the Neutron Star Ocean and Their Effect on Superbursts”
 Alex Deibel, **Zach Meisel**, H. Schatz, E.F. Brown, A. Cumming
Astrophysical Journal **831**, 13 (2016).
- [15] “Dependence of x-ray burst models on nuclear reaction rates”
 Richard H. Cyburt, A. M. Amthor, A. Heger, E. Johnson, L. Keek, **Z. Meisel**, H. Schatz, K. Smith
Astrophysical Journal **830**, 55 (2016).
- [14] “Isobaric multiplet mass equation in the $A = 31$, $T = 3/2$ quartets”
 Mike B. Bennett, Chris Wrede, B.Alex Brown, Sean N. Liddick, David Pérez-Loureiro, D.W. Bardayan, A.A. Chen, K.A. Chipps, C. Fry, B.E. Glassman, C. Langer, N.R. Larson, E.I. McNeice, **Z. Meisel**, W. Ong P.D. O'Malley, S.D. Pain, C.J. Prokop, S.B. Schwartz, S. Suchyta, P. Thompson, M. Walters, X. Xu
Physical Review C **93**, 064310 (2016).
- [13] “Exploratory Investigation of the HIPPO gas-jet target fluid dynamic properties”
Zach Meisel, Ke Shi, Aleksandar Jemcov, and Manôel Couder
Nuclear Instruments and Methods in Physics Research A **828**, 8 (2016).
- [12] “Time-of-flight mass measurements of neutron-rich chromium isotopes up to $N = 40$ and implications for the accreted neutron star crust”
Zach Meisel, Sebastian George, S. Ahn, J. Browne, D. Bazin, F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matoš, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers.
Physical Review C **93**, 035805 (2016).
- [11] “Isospin Mixing Reveals $^{30}\text{P}(p,\gamma)^{31}\text{S}$ Resonance Influencing Nova Nucleosynthesis”
 Mike B. Bennett, Chris Wrede, B.Alex Brown, Sean N. Liddick, David Pérez-Loureiro, D.W. Bardayan, A.A. Chen, K.A. Chipps, C. Fry, B.E. Glassman, C. Langer, N.R. Larson, E.I. McNeice, **Z. Meisel**, W. Ong P.D. O'Malley, S.D. Pain, C.J. Prokop, H. Schatz, S.B. Schwartz, S. Suchyta, P. Thompson, M. Walters, X. Xu
Physical Review Letters **116**, 102502 (2016).

Publications Cont'd.

[10] “Angle-integrated measurements of $^{26}\text{Al}(d,n)^{27}\text{Si}$ reaction cross section: a probe of spectroscopic factors and astrophysical resonance strengths”

Anu Kankainen, Phil. J. Woods, Filomena Nunes, Christoph Langer, Hendrik Schatz, V. Bader, T. Baugher, D. Bazin, B. A. Brown, J. Browne, D. T. Doherty, A. Estradé, A. Gade, A. Kontos, G. Lotay, **Z. Meisel**, F. Montes, S. Noji, G. Perdikakis, J. Pereira, F. Recchia, T. Redpath, S. R. Stroberg, M. Scott, D. Seweryniak, J. Stevens, D. Weisshaar, K. Wimmer, R.G.T. Zegers
European Journal of Physics A **52**, 6 (2016).

[9] “Mass Measurement of ^{56}Sc Reveals a Small $A = 56$ Odd-Even Mass Staggering, Implying a Cooler Accreted Neutron Star Crust”

Zach Meisel, Sebastian George, S. Ahn, J. Browne, D. Bazin, F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matoš, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers.
Physical Review Letters **115**, 162501 (2015).

[8] “Gamow-Teller transitions to ^{45}Ca via the $^{45}\text{Sc}(t,^3\text{He} + \gamma)$ reaction at 115 MeV/ u and its application to stellar electron-capture rates”

Shumpei Noji, Remco G.T. Zegers, Sam M. Austin, T. Baugher, D. Bazin, B.A. Brown, C.M. Campbell, A.L. Cole, H.J. Doster, A. Gade, C.J. Guess, S. Gupta, G.W. Hitt, C. Langer, S. Lipschutz, E. Lunderberg, R. Meharchand, **Z. Meisel**, G. Perdikakis, J. Pereira, F. Recchia, H. Schatz, M. Scott, S.R. Stroberg, C. Sullivan, L. Valdez, C. Walz, D. Weisshaar, S.J. Williams, K. Wimmer.
Physical Review C **92**, 024312(2015).

[7] “Mass Measurements Demonstrate a Strong $N = 28$ Shell Gap in Argon”

Zach Meisel, Sebastian George, S. Ahn, J. Browne, D. Bazin, B.A. Brown, F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matoš, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers.
Physical Review Letters **114**, 022501(2015).

[6] “ β -Delayed Proton Emission of ^{69}Kr and the ^{68}Se rp -process Waiting Point.”

Marcelo del Santo, **Zach Meisel**, D. Bazin, A. Becerril, B.A. Brown, H. Crawford, R.H. Cyburt, S. George, G.F. Grinyer, G. Lorusso, P.F. Mantica, F. Montes, J. Pereira, H. Schatz, K. Smith, M. Wiescher.
Physics Letters B **738**, 453 (2014).

[5] “Determining the rp -process Flow through ^{56}Ni Resonances in $^{57}\text{Cu}(p, \gamma)^{58}\text{Zn}$ Identified with GREYINA”

Christoph Langer, Fernando Montes, A. Aprahamian, D.W. Bardayan, D. Bazin, B.A. Brown, J. Browne, H. Crawford, R.H. Cyburt, C. Domingo-Pardo, A. Gade, S. George, P. Hosmer, L. Keek, A. Kontos, I.-Y. Lee, A. Lemasson, E. Lunderburg, Y. Maeda, M. Matoš, **Z. Meisel**, S. Noji, F.M. Nunes, A. Nystrom, G. Perdikakis, J. Pereira, S.J. Quinn, F. Recchia, H. Schatz, M. Scott, K. Siegl, A. Simon, M. Smith, A. Spyrou, J. Stevens, S.R. Stroberg, D. Wiesshaar, J. Wheeler, K. Wimmer, R.G.T. Zegers.
Physical Review Letters **113**, 032502 (2014).

[4] “ β^+ Gamow-Teller Transition Strengths from ^{46}Ti and Stellar Electron-Capture Rates”

Shumpei Noji, Remco G.T. Zegers, Sam M. Austin, T. Baugher, D. Bazin, B.A. Brown, C.M. Campbell, A.L. Cole, H.J. Doster, A. Gade, C.J. Guess, S. Gupta, G.W. Hitt, C. Langer, S. Lipschutz, E. Lunderberg, R. Meharchand, **Z. Meisel**, G. Perdikakis, J. Pereira, F. Recchia, H. Schatz, M. Scott, S.R. Stroberg, C. Sullivan, L. Valdez, C. Walz, D. Weisshaar, S.J. Williams, K. Wimmer.
Physical Review Letters **112**, 252501(2014).

Publications Cont'd.

[3] “Time-of-flight Mass Spectrometry of Very Exotic Systems”
Zach Meisel and Sebastian George.
International Journal of Mass Spectrometry **349-350C**, 145 (2013).
Invited Review.

[2] “Time-of-flight Mass Measurements of Exotic Nuclei”
 Milan Matoš, Alfredo Estradé, Hendrik Schatz, D. Bazin, M. Famiano, A. Gade, S. George, W.G. Lynch,
Z. Meisel, M. Portillo, A. Rogers, D. Shapira, A. Stolz, M. Wallace, J. Yurkon.
Nuclear Instruments and Methods in Physics Research A **696**, 171 (2012).

[1] “The JINA REACLIB Database: Its Recent Updates and Impact on Type-I X-ray Bursts”
 Richard H. Cyburt, A. Matthew Amthor, Ryan Ferguson, **Zach Meisel**, Karl Smith, Scott Warren,
 Alexander Heger, R.D. Hoffman, T. Rauscher, A. Sakharuk, H. Schatz, F.K. Thielemann, M. Wiescher
The Astrophysical Journal Supplement Series, **189**, 240 (2010).

Graduate and Postdoctoral Advisees

[8] Caleb Marshall, Ohio University Dept. Phys. & Astron. Postdoc, Fall 2020 - Present
 Main research: (α, n) measurements for supernovae

[7] Nisha Singh, Ohio University Dept. Phys. & Astron. Ph.D. Physics, Summer 2020 - Present
Thesis (working title): Constraining rp -process Nucleosynthesis
 with $({}^3\text{He}, n)$ Measurements

[6] Mansi Saxena, Ohio University Dept. Phys. & Astron. Postdoc, Fall 2019 - Present
 Main research: Beta-decay studies for X-ray bursts

[5] Gulakshan Hamad, Ohio University Dept. Phys. & Astron. PhD physics, Fall 2019 - Present
Thesis (working title): Measurement of ${}^{96}\text{Zr}(\alpha, n)$ for
 Astrophysics and Applications

[4] Irin Sultana, Ohio University Dept. Phys. & Astron. M.S. Physics, Summer 2018 - Fall 2019
Thesis: Resolving the Resonance Conflict in the ${}^{18}\text{Ne}(\alpha, p)$
 Reaction Rate

[3] Shiv Subedi, Ohio University Dept. Phys. & Astron. Ph.D. Physics, Fall 2016 - Present
Thesis (working title): Identification and Reduction of Key Nuclear
 Physics Uncertainties Impacting ${}^{44}\text{Ti}$ Nucleosynthesis in Core
 Collapse Supernova Models

[2] Doug Soltesz, Ohio University Dept. Phys. & Astron. Ph.D. Physics, Fall 2016 - Spring 2021
Thesis: Use of $({}^3\text{He}, n)$ reactions to constrain
 nuclear reaction rates in the hydrogen and helium
 burning environments of type-I X-ray bursts

[1] Kristyn Brandenburg, Ohio University Dept. Phys. & Astron. Ph.D. Physics, Fall 2017 - Present
Thesis (working title): (α, n) Cross Section Measurements and the
 Origin of the Elements from Zinc to Tin
Thesis: Development of a Neutron Long Counter for (α, n) Cross
 Section Measurements at Ohio University M.S. Physics, Fall 2016 - Fall 2017

Teaching

- [3] Schools/Lecture Series To Present
 Spring 2019: Ohio U. Nuclear Theory Group, *Nuclear Reactions and Neutron Star Observables*
- [2] Instructor: Ohio University, Athens, Ohio, USA Fall 2016 – Present
 Spring 2021: Course ASTR 1000, *Survey of Astronomy*.
 Fall 2020: Course ASTR 4201, *Stellar Astrophysics and Radiation*.
 Spring 2020: Course PHYS 2001, *Introduction to Physics (Algebra based)*.
 Fall 2019: Course PHYS 7501, *Graduate Nuclear Physics I*.
 Spring 2019: Course PHYS 2001, *Introduction to Physics (Algebra based)*.
 Fall 2018: Course PHYS 4031/5031, *Electricity and Magnetism*.
 Spring 2018: Course PHYS 2001, *Introduction to Physics (Algebra based)*.
 Fall 2017: Course PHYS 7501, *Graduate Nuclear Physics I*.
 Spring 2017: Course PHYS 2001, *Introduction to Physics (Algebra based)*.
 Fall 2016: Course PHYS 6751, *Graduate Laboratory: Nuclear and Particle*.
- [1] Teaching Assistant: Mich. St. Univ. course PHY431 (Optics Lab). Fall 2010
 East Lansing, Michigan, USA.

Outreach

- [13] Lecturer: Athena Cinema Science on Screen Series June 2021
 Lecture Topic: *Prospects for Extraterrestrial Life in the Galaxy*.
 Athens, Ohio, USA.
- [12] Coordinator: Tours of the Edwards Accelerator Laboratory for the November 2019
 Ohio University Department of Physics and Astronomy Open-House
 Athens, Ohio, USA.
- [11] Adopted Physicist: Adopt-a-Physicist program (www.adoptaphysicist.org) October 2017, 2018
- [10] Presenter: “Fun with Liquid Nitrogen” November 2017
 Ohio University Department of Physics and Astronomy Open-House
 Athens, Ohio, USA.
- [9] Coordinator: Atlas Obscura Event at the Edwards Accelerator Laboratory, May 2017
 Athens, Ohio, USA.
<http://www.atlasobscura.com/events/edwards-accelerator-laboratory>
- [8] Author: Popular science article on time-travel, December 2016
 Ohio University College of Arts & Sciences Forum,
 “Could ‘Doctor Who’ Time Travel Really Work?”,
<http://www.ohio-forum.com/2016/12/could-doctor-who-time-travel-really-work/>
- [7] Guest Instructor: Holy Cross College, November 2015
 Course SCIE 121, *Great Ideas in Science*.
 South Bend, Indiana, USA.
- [6] Lecturer: Univ. Notre Dame / Mich. St. Univ. remote-lecture outreach program. October 2015
 Lecture Topic: *Nuclear Astrophysics*.
 Delivered remotely to DC Everest High School, Schofield, Wisconsin, USA

Outreach Cont'd.

- [5] Lecturer: Joint Institute for Nuclear Astrophysics (JINA) Physics of Atomic Nuclei Camp, Lecture Topic: *Nuclear Astrophysics*. South Bend, Indiana, USA (2015,2016). Virtual (2020). June 2015, 2016, July 2020, 2021
- [4] Guest Speaker on Astrophysics, REACH After School Program: *Creative Connections*. Lansing, Michigan, USA. November 2012 - January 2013
- [3] Lecturer: Mich. St. Univ. Math, Science, & Technology Camp, Lecture Topic: *Light & Matter*. East Lansing, Michigan, USA. July 2011, 2012, 2013
- [2] Tour Guide: Natl. Superconducting Cyclotron Lab. *50+ tours given*. East Lansing, Michigan, USA. Fall 2010 - Spring 2015
- [1] Outreach Team Member: Mich. St. Univ. Science Theatre Organization. East Lansing, Michigan, USA. Fall 2009 - Summer 2010

Professional Service

- [24] Reviewer for: *the Astrophysical Journal*, *Astrophysics and Space Science*, *European Physical Journal A*, *International Journal of Mass Spectrometry*, *Journal of Physics G*, *Monash University*, *Monthly Notices of the Royal Astronomical Society*, *Monthly Notices of the Royal Astronomical Society Letters*, *Physics Letters B*, *Physical Review Letters*, *National Science Foundation*.
- [23] Member: LANSCE Program Advisory Committee April 2021
- [22] Vice Chair: Separator for Capture Reactions (SECAR) Collaboration Executive Council January 2021 - Present
- [21] Co-organizer: JINA Horizons Meeting Virtual Meeting. 30 November - 4 December 2020
- [20] Lead Organizer: IReNA FA1 Workshop on Direct Measurements for Nuclear Astrophysics Virtual Meeting. June-July 2020
- [19] Co-organizer: JINA-CEE Events of the FRIB Proposal Workshop Virtual Meeting. 4-8 May 2020
- [18] Member: Facility for Rare Isotope Beams (FRIB) Users Organization Executive Committee Chair January 2020 - Present
March 2021 - Present
- [17] Member: American Physical Society (APS) Division of Nuclear Physics (DNP) Program Committee January 2020 - Present

Professional Service Cont'd.

- | | |
|---|---------------------------|
| [16] Coordinator: Focus Area on Nuclear Reaction Rates,
International Research Network for Nuclear Astrophysics (IReNA) | September 2019 - Present |
| [15] Co-organizer: Lorentz Center Workshop - Bursting the Bubble.
Leiden, Netherlands. | 24-28 June 2019 |
| [14] Judge: West Elementary Science Fair.
Athens, Ohio, USA. | 20 November 2018 |
| [13] Co-organizer: MoCA/JINA-CEE Burst Environment, Reactions
and Numerical Modeling Workshop.
Prato, Italy. | 11-15 June 2018 |
| [12] Co-organizer: EMMI/JINA-CEE Workshop on Nuclear Astrophysics at
Storage Rings and Recoil Separators.
GSI Darmstadt, Germany. | 13-15 March 2018 |
| [11] Judge: Ohio University Student Research Expo.
Athens, Ohio, USA. | 6 April 2017 |
| [10] Judge: Undergraduate Research Symposium,
Ohio University Department of Physics & Astronomy.
Athens, Ohio, USA. | 25 March 2017 |
| [9] Judge: Athens Middle School Science Fair.
Athens, Ohio, USA. | November 2016 |
| [8] Lead Organizer: JINA-CEE Frontiers 2016 Conference.
Notre Dame, Indiana, USA. | 29-31 March 2016 |
| [7] Social Chair: Mich. St. Univ. Physics Graduate Organization. | Spring 2014 - Spring 2015 |
| [6] Local Co-organizer: Nuclear Astrophysics Town Meeting.
Detroit, Michigan, USA. | 9-10 October 2012 |
| [5] Local Co-organizer: JINA Frontiers 2012 Conference.
East Lansing, Michigan, USA. | 7-9 October 2012 |
| [4] Volunteer: Science Olympiad.
East Lansing, Michigan, USA. | 28 April 2012 |
| [3] Support Staff: Mich. St. Univ. JINA Physics of Atomic Nuclei Camp. | August 2011 |
| [2] President: Mich. St. Univ. Physics Graduate Organization. | Fall 2011 - Summer 2012 |
| [1] Organizer: JINA Journal Club. | Spring 2011 - Fall 2014 |