

Tsantiri Artemis

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EDUCATION

SEP 2020 - PRESENT **Michigan State University - Facility for Rare Isotope Beams**
Ph.D Candidate in Physics
Department of Physics and Astronomy, College of Natural Sciences

Ph.D Project: Reaction cross section measurements in inverse kinematics for the astrophysical γ -process.
Supervisor: Professor Artemisia Spyrou

SEP 2014 - JUN 2020 **National Technical University of Athens**
Diploma (5-year continuous program) in Physics
Department of Physics, School of Applied Mathematical and Physical Sciences,
GPA: 8.23/10, top 5% in senior class, Very Good

Diploma Thesis: "*Measurement of the fission cross section of the $^{232}\text{Th}(n,f)$ reaction with micromegas detectors.*"
Supervisor: Professor Michael Kokkoris

WORK EXPERIENCE

MAY 2021 - PRESENT **Michigan State University**
Research Assistant in Experimental Nuclear Astrophysics at the *Facility for Rare Isotope Beams (FRIB)*

Study of nuclear reactions that produce heavy elements in stars.

- Participated in experiments in various nuclear physics laboratories (FRIB, Argonne National Laboratory, University of Oslo)
- Led the setup (vacuum components, electronic setup, digital acquisition system) and execution of my thesis experiment in the ReAccelerator area of FRIB for the measurement of the $^{73}\text{As}(p,\gamma)^{74}\text{Se}$ reaction with the Summing NaI (SuN) γ -ray detector, and developed codes for online and offline analysis
- Performed data analysis of experiments including energy calibrations, simulations and theoretical interpretation. Codes used: ROOT, PYTHON, RAINIER and GEANT4
- Mentored undergraduate students within the research group and through departmental mentoring programs

MAY 2024 **University of Victoria**
Visiting Research Fellow at the *Department of Physics & Astronomy*

- Monte Carlo impact studies for the astrophysical i-process using the NuGrid code PPN
- Study the impact of experimentally constrained neutron capture reaction rate on the final abundances

WORK EXPERIENCE (CONT.)

- SEP 2020 - MAY 2021 **Michigan State University**
Teaching Assistant at the *Department of Physics & Astronomy*
- Graded and hosted homework help sessions for Electromagnetism senior physics course with 60+ students
 - Instructed Optics laboratory
- JUN - JUL 2019 **National Center for Scientific Research “Demokritos”**
Internee at the *Institute of Nuclear & Particle Physics*
- Study of the newly installed BGO detector assembly
 - Review of the corresponding resolution function
 - Repairs in two BGO-crystal detector preamplifiers
 - Re-construction of a preamplifier electronic board (using EAGLE design and schematics software)
- 2016 - 2020 Home tutor (mathematics / physics) for Middle & High School Students

PUBLICATIONS

- [1] A. Spyrou, D. Mücher, P. A. Denissenkov, F. Herwig, E. C. Good, G. Balk, H. C. Berg, D. L. Bleuel, J. A. Clark, C. Dembski, P. A. DeYoung, B. Greaves, M. Guttormsen, C. Harris, A. C. Larsen, S. N. Liddick, S. Lyons, M. Markova, M. J. Mogannam, S. Nikas, J. Owens-Fryar, A. Palmisano-Kyle, G. Perdikakis, F. Pogliano, M. Quintieri, A. L. Richard, D. Santiago-Gonzalez, G. Savard, M. K. Smith, A. Sweet, A. Tsantiri, and M. Wiedeking, *Phys. Rev. Lett.* 132, 202701, (2024) DOI: [10.1103/PhysRevLett.132.202701](https://doi.org/10.1103/PhysRevLett.132.202701)
- [2] I. Cox, Z. Y. Xu, R. Grzywacz, W.-J. Ong, B. C. Rasco, N. Kitamura, D. Hoskins, S. Neupane, T. J. Ruland, J. M. Allmond, T. T. King, R. S. Lubna, K. P. Rykaczewski, H. Schatz, B. M. Sherrill, O. B. Tarasov, A. D. Ayangeakaa, H. C. Berg, D. L. Bleuel, G. Cerizza, J. Christie, A. Chester, J. Davis, C. Dembski, A. A. Doetsch, J. G. Duarte, A. Estrade, A. Fija kowska, T. J. Gray, E. C. Good, K. Haak, S. Hanai, J. T. Harke, C. Harris, K. Hermansen, D. E. M. Hoff, R. Jain, M. Karny, K. Kolos, A. Laminack, S. N. Liddick, B. Longfellow, S. Lyons, M. Madurga, M. J. Mogannam, A. Nowicki, T. H. Ogunbeku, G. Owens-Fryar, M. M. Rajabali, A. L. Richard, E. K. Ronning, G. E. Rose, K. Siegl, M. Singh, A. Spyrou, A. Sweet, A. Tsantiri, W. B. Walters, and R. Yokoyama, *Phys. Rev. Lett.* 132, 152503, (2024) DOI: [10.1103/PhysRevLett.132.152503](https://doi.org/10.1103/PhysRevLett.132.152503)
- [3] A. Tsantiri, A. Palmisano-Kyle, A. Spyrou, P. Mohr, H. C. Berg, P. A. DeYoung, A. C. Dombos, P. Gastis, E. C. Good, C. M. Harris, S. N. Liddick, S. M. Lyons, O. Olivas-Gomez, G. Owens-Fryar, J. Pereira, A. L. Richard, A. Simon, M. K. Smith, and R. G. T. Zegers, *Phys. Rev. C* 107, 035808 (2023), DOI: [10.1103/PhysRevC.107.035808](https://doi.org/10.1103/PhysRevC.107.035808)
- [4] F. Pogliano, A. C. Larsen, S. Goriely, L. Siess, M. Markova, A. Görgen, J. Heines, V. W. Ingeberg, R. G. Kjus, J. E. L. Larsson, K. C. W. Li, E. M. Martinsen, G. J. Owens-Fryar, L. G. Pedersen, S. Siem, G. S. Torvund, and A. Tsantiri, *Phys. Rev. C* 107, 064614 (2023) DOI: [10.1103/PhysRevC.107.064614](https://doi.org/10.1103/PhysRevC.107.064614)
- [5] A. Palmisano-Kyle, A. Spyrou, P. A. DeYoung, A. Dombos, P. Gastis, O. Olivas-Gomez, C. Harris, S. Liddick, S. M. Lyons, J. Pereira, A. L. Richard, A. Simon, M. K. Smith, A. Tsantiri, and R. Zegers, *Phys. Rev. C* 105, 065804 (2022), DOI: [10.1103/PhysRevC.105.065804](https://doi.org/10.1103/PhysRevC.105.065804)
- [6] V. Michalopoulou, M. Axiotis, S. Chasapoglou, Z. Eleme, G. Gkatis, A. Kalamara, M. Kokkoris, A. Lagoyannis, N. Patronis, A. Stamatopoulos, A. Tsantiri, and R. Vlastou, *The European Physical Journal A*, 57, 277 (2021), DOI: [10.1140/epja/s10050-021-00590-w](https://doi.org/10.1140/epja/s10050-021-00590-w)

AWARDS AND FELLOWSHIPS

2024	<i>Second Prize Oral Presentation</i> in Student/Postdoc competition at the 14 th International Conference on Nucleus-Nucleus Collisions (NN2024)
2024	<i>IReNA Visiting Fellowship</i> of \$4000 to visit the University of Victoria, BC, Canada to work with P. Denisenkov on impact studies
2021	<i>Award for best Teaching Assistant</i> in upper level courses voted by students - MSU

CONFERENCE PRESENTATIONS

AUG 2024	Contributed Talk - 14 th International Conference on Nucleus-Nucleus Collisions (NN2024), Whistler, BC, Canada
JUN 2024	Contributed Talk - 2024 CeNAM Frontiers in Nuclear Astrophysics Meeting, University of Notre Dame, USA
DEC 2023	Contributed Talk - 2023 Fall Meeting of the APS Division of Nuclear Physics and the Physical Society of Japan, Waikoloa Village, Hawaii
NOV 2023	Contributed Talk - INPART TALYS School, Kruger, South Africa
MAR 2023	Contributed Talk - 18th Russbach School on Nuclear Astrophysics, Rußbach am Paß Gschütt, Austria
OCT 2022	Contributed Talk - 2022 Fall Meeting of the APS Division of Nuclear Physics, New Orleans, USA
MAY 2022	Poster Presentation - JINA-CEE Frontiers in Nuclear Astrophysics Meeting, University of Notre Dame, USA
MAY 2022	Contributed Talk - Junior Researcher Workshop - JINA-CEE Frontiers in Nuclear Astrophysics Meeting, Notre Dame, USA
MAY 2022	Poster Presentation - 8 th Workshop on Level Density and Gamma Strength, Oslo, Norway

TECHNICAL SKILLS

NUCLEAR PHYSICS:	Codes: GEANT4, TALYS, RAINIER, SRIM, NEUSDESK, SACALC3, SPECTCL Experimental: Beam-line setup, vacuum components, data acquisition systems
NUCLEAR ASTROPHYSICS:	Network Calculations using MESA, NUCNET TOOLS, WEBNUCLEO
PROGRAMMING:	UNIX SCRIPTING, C++, PYTHON, FORTRAN
DATA ANALYSIS:	ROOT, PYROOT, ORIGIN, MICROSOFT EXCEL
DOCUMENTS & PRESENTATIONS:	L ^A T _E X, MICROSOFT OFFICE (WORD, POWERPOINT)

OUTREACH-LEADERSHIP-COMMITTEE EXPERIENCE

JUN 2024 - PRESENT	<i>Executive Committee Member of IReNA Blog</i> Create and manage the blog website, edit and post writers' contributions
MAR 2024 - PRESENT	<i>Student's Representative on IReNA Steering Committee</i> Organize and support the IReNA Young Researchers Organization, act as a point of contact to bring suggestions or concerns from junior researchers to the IReNA Steering Committee, and participate on the monthly meetings of the IReNA Steering Committee
AUG 2022 - PRESENT	Webmaster for Graduate Student Organization <i>Physics Graduate Organization (PGO) - MSU</i>
SEP 2021 - PRESENT	Tour guide at the <i>Facility for Rare Isotope Beams (FRIB)</i>
AUG 2022 - JUL 2024	Webmaster for Graduate Student Organization <i>Facility for Rare Isotope Beams Graduate Organization (FRIBGO) - FRIB MSU</i>
NOV 2023	CEU Mentor at <i>2023 Fall Meeting of the APS Division of Nuclear Physics and the Physical Society of Japan</i> Attend <i>mentor training workshop</i> led by Shelly Lesher, and mentor five CEU (Conference Undergraduate Experience) students through their first conference presentations
JUN 2023	Activity Leader at <i>NS³ Nuclear Science Summer School 2023 - MSU</i> Lead high school student lab on radiation detection
MAY 2023	Co-Chair of Organizing Committee of <i>CeNAM Frontiers in Nuclear Astrophysics 2023 Meeting - FRIB MSU</i>
MAY 2023	Organizer of Public Speaking Workshop <i>CeNAM Frontiers in Nuclear Astrophysics 2023 Meeting - FRIB MSU</i>
SEP 2022 - AUG 2023	Mentor undergraduate students through mentoring program held by the <i>Women and Minorities in Physical Sciences (WaMPS) - MSU</i> Mentor two students through their graduate school application process
AUG 2022 - JUL 2023	Space Committee for Graduate Student Organization <i>Facility for Rare Isotope Beams Graduate Organization (FRIBGO) - FRIB MSU</i> Management of Graduate Student Office Spaces
MAY 2022	Activity Leader at <i>NS³ Nuclear Science Summer School 2022 - MSU</i>
APR 2022	Volunteer at <i>FRIB Countdown Event - FRIB MSU</i>
AUG 2021 - JUL 2022	Webmaster for Graduate Student Organization <i>Women and Minorities in Physical Sciences (WaMPS) - MSU</i> Organization of Events promoting Women in Physics

LANGUAGES

ENGLISH:	Excellent - TOEFL (09/21/2019): 113/120
FRENCH:	Very Good - <i>Certificat Pratique de Langue Française - Paris Sorbonne B2</i> (07/08/2011)
GREEK:	Native speaker