

AMANDA VALENTINE NOWICKI

□ Louisiana State University □ anowic5@lsu.edu □ [LinkedIn](#) □

EDUCATION

LOUISIANA STATE UNIVERSITY	Baton Rouge, LA
Physics PhD	
Experimental Nuclear Astrophysics	Jan. 2025 - Present
UNIVERSITY OF TENNESSEE KNOXVILLE	Knoxville, TN
Physics B.S. – astronomy concentration	
	Dec. 2024
ADAMSVILLE HIGH SCHOOL	Adamsville, TN
Valedictorian	May 2020

RESEARCH EXPERIENCE

Department of Physics and Astronomy, University of Tennessee	Knoxville, TN
Undergraduate Research Assistant	2021 - 2024

Collaborated with a team under the direction of Dr. Robert Gryzwacz to produce Versatile Array of Neutron Detectors at Low Energy (VANDLE) beams for the Facility of Rare Isotope Beams (FRIB) at Michigan State University.

Contributed to the construction and testing phases of neutron-detecting scintillators.

Gained hands-on experience in using and maintaining specialized laboratory equipment.

Nuclear Science Summer School, Michigan State University	Lansing, MI
Program Participant	May 2022

Participated in an intensive summer program designed to introduce students to fundamental concepts in nuclear science and nuclear astrophysics through a combination of lectures and collaborative activities.

Explored and presented current research topics and engaged in discussions about open questions within the field.

Gained insights into cutting-edge developments and established a foundation for future exploration in the field.

Facility for Rare Isotope Beams (FRIB), Michigan State University
Guest Scientific User

Lansing, MI
June 2022

Played a key role in the assembly and implementation of the FRIB Decay Station initiator (FDSi) for the second experiment at FRIB.

Specifically involved in the wiring, testing, and resolution of hands-on practical challenges encountered during setup.

Collaborated with a multidisciplinary team to ensure smooth integration of detectors and troubleshoot any issues that arose during experimental configuration.

RESEARCH INTERESTS

Low Energy Nuclear Decay
Heavy Element Nucleosynthesis
Stellar Processes in Supernova

TECHNICAL SKILLS

C++
Linux
Python
GitHub
Latex
MESA
ROOT

PUBLICATIONS

Microsecond Isomer at the $N=20$ Island of Shape Inversion Observed at FRIB:
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.130.242501>

Crossing $N = 28$ Toward the Neutron Drip Line: First Measurement of Half-Lives at FRIB:
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.129.212501>

Proton Shell Gaps in $N=28$ Nuclei from the First Complete Spectroscopy Study with FRIB Decay Station Initiator
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.132.152503>

TEACHING EXPERIENCE

LOUISIANA STATE UNIVERSITY

Graduate Teaching Assistant, General Physics Laboratory

Baton Rouge, LA

(2025 - Present)

Prepared, tested, and maintained laboratory equipment; managed setup and teardown for general physics experiments.

Instructed students during lab sessions, graded lab reports, and provided additional instructional support as needed.

Provided one-on-one and group tutoring in introductory physics and supported course instruction

MUNFORD HIGH SCHOOL

Trumpet and Visual Technician, Munford Marching Band

Munford, TN

(2021 - 2025)

Collaborate with fellow instructors to design and refine instructional materials, contributing to a comprehensive and efficient learning experience.

Independently developed and implemented curriculum for a large group of students under my direction, demonstrating strong organizational and leadership skills.

LEADERSHIP AND SERVICE

Vice President, Women in Physics, University of Tennessee Knoxville, 2023-2024

Historian, Society of Physic Students, University of Tennessee Knoxville, 2023-2024

Volunteer, National Society of Black Physicists Conference, University of Tennessee Knoxville, 2023

RESEARCH ADVISORS

Dr. Catherine Deibel

(2025 - Present)

Professor of Physics

Louisiana State University, Dept. of Physics and Astronomy

deibel@lsu.edu

Dr. Robert Grzywacz

(2021 - 2024)

Director, UT-ORNL Joint Institute for Nuclear Physics & Applications

Associate Department Head

University of Tennessee Knoxville, Dept. of Physics and Astronomy

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