

NAOMI CARL

(815) · 277 · 7893 ◇ nfcarl@asu.edu ◇ [LinkedIn](#)

EDUCATION

Arizona State University: Barrett, The Honors College August 2021 - May 2025 (expected)
B.S. in Astrophysics, B.S. in Physics Tempe, AZ

- 4.0 GPA. Dean's List, 2021, 2022, 2023, 2024. Minor in Horn Performance.
- President of Association of Women in Physics. Outreach Coordinator of Society of Physics Students.

RESEARCH EXPERIENCE

NASA Space Grant Program August 2022 - Present
Dr. Sanchayeeta Borthakur, Arizona State University Tempe, AZ

- Researched star formation in galaxies using optical imaging data and SED modeling. Used software including Python, Source Extractor, DS9, and CIGALE.
- Volunteered at public outreach events by performing informal astronomy education.

The Leadership Alliance at University of Chicago June 2024 - August 2024
Dr. Alexander Ji, University of Chicago Chicago, IL

- Performed spectroscopic analysis of a stellar stream to search for multiple stellar populations.
- Attended professional development and leadership workshops.
- Paper on findings in progress of being published.

RENTU at Brown University May 2023 - December 2023
Dr. Judd Bowman, Dr. Steven Murray, Arizona State University virtual

- Successfully debugged package for analyzing the Hydrogen Epoch of Reionization Array (HERA).
- Interpolated beam data points and ran simulations, including spherical harmonics and Fourier transforms.
- Carl, N., Murray, S. (2023). Cubic & Fourier Interpolation Over Frequency for the HERA Vivaldi Beam. HERA Memo #126. reionization.org/manual/uploads/HERA126_beam_interpolation_NCarl.pdf

ERIRA at Green Bank Observatory July 2023 - August 2023
Dr. Dan Reichart, University of North Carolina Green Bank, West Virginia

- Trained in radio telescope operations and analyses, including polarization maps, astrophotography, and data collection.

OTHER EXPERIENCE

Eclipse Ambassador for the Astronomical Society of the Pacific March 2023 - May 2024
Volunteer Program, NASA Partner Tempe, AZ

- Organized and hosted events pertaining to the solar eclipses and astronomy outreach, including education and safety training

Astronomy Teaching Aide January 2023 - May 2023
Dr. Sanchayeeta Borthakur, Arizona State University Tempe, AZ

- Assisted students in class and answered their questions in addition to grading papers

Marketing Assistant for Barrett, the Honors College February 2022 - Present
Chris Cardona, Arizona State University Tempe, AZ

- Attended student events, conducted interviews, and created social media content

TECHNICAL SKILLS

Coding & Software	Python, MATLAB, Astropy, LaTeX, Bash, C, GitHub, CIGALE, Source Extractor, DS9, Excel, Siemens NX CAD, Mathematica
Astronomy	Noise reduction, photometry, spectroscopy, modeling, simulations, cosmology, optical imaging, radio instrumentation, data collection
Physics & Math	modern physics, thermodynamics, quantum mechanics, special relativity, calculus, linear algebra, statistics, laboratory work, classical physics

EXTRACURRICULARS

Association of Women in Physics March 2024 - Present

- President of club, was interim secretary during the inaugural year when created.
- Founded the club and organized meetings. Demonstrated leadership capabilities.
- Worked with community to organize outreach and physics education opportunities to promote inclusivity.

Society of Physics Students August 2023 - Present

- Outreach Coordinator of club. Worked with local schools to organize events and physics demonstrations.
- Performed physics demonstrations and outreach at numerous community events.

School of Earth and Space Exploration Undergraduate Council August 2023 - August 2024

- Astrophysics representative to the council.
- Created an initiative to connect first-year students with faculty mentors.
- Developed a Canvas page for undergraduates for important announcements and resources.

Arizona State University Wind Symphony August 2021 - Present

- First chair French horn player in the ensemble.
- Performed at the College Band Directors National Association conference in Las Vegas.
- Assisted with social media management and other band logistics.

Arizona State University Horn Studio August 2022 - Present

- Studied French horn under Dr. John Ericson and performed with the studio ensemble.

CONFERENCES

Leadership Alliance National Symposium July 2024

- Presented 15 minute talk on research findings from work at University of Chicago.
- Attended leadership, research, and professional development workshops.

Arizona Space Grant Consortium Statewide Symposium April 2023. April 2024

- Presented 10 minute talk on research through the NASA Space Grant Program.

Conference for Undergraduate Women in Physics January 2024

- Collaborated in workshops on creating a more inclusive space in physics and professional development.

Oases in the Cosmic Desert: Understanding the Structure of the CGM February 2023

- Acted as a mic runner and volunteer in addition to attending talks and poster sessions.

Dwarf Galaxies, Star Clusters, and Streams in the LSST Era July 2024

- Took part in talks and poster sessions at the University of Chicago.