

Annie Giman

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EDUCATION

Yale University

Aug 2019 – May 2024

Bachelor of Science in Astrophysics

New Haven, CT

Relevant coursework: Scientific Computing in Astrophysics, Galaxies and their Evolution, Astrophysical Fluids, Research Methods in Astrophysics

RESEARCH EXPERIENCE

California Institute of Technology

Jun 2023 – Present

Summer Undergraduate Research Fellow

Pasadena, CA

- **Project:** Disentangling a New Compton-Thick AGN From a Serendipitous Quasar Using Broadband X-Ray Spectral Modelling
- **Advisors:** Professor Fiona Harrison and Dr. Peter Boorman
- Building broadband X-ray spectrum of a Compton-thick AGN candidate and using *NuSTAR* and *XMM-Newton* observations and building models to account for a contaminant source
- Using nested-sampling to fit phenomenological and obscuration models to explore candidate

Yale Center for Astronomy and Astrophysics

Aug 2022 – Present

Undergraduate Researcher

New Haven, CT

- **Project:** Weighing Supermassive Black Holes from Infrared Spectra of Obscured AGN
- **Advisors:** Professor Meg Urry and Dr. Mislav Baloković
- Processing raw near-infrared data from Palomar TripleSpec observations of atypical active galactic nuclei
- Deriving masses through spectral analysis and identifying accretion regimes

North Carolina State University

May 2022 – Jan 2023

Computational and Data Science in Astrophysics NSF REU Intern

Raleigh, NC

- **Project:** Modeling Cool Glass Outflow Kinematics of the Fermi Bubbles
- **Advisor:** Professor Rongmon Bordoloi
- Developed computational model to constrain kinematics of Fermi Bubble nuclear outflow using background quasar sightlines and related bubble age with gas kinematics
- Investigated Sag A* burst event as source of Fermi Bubbles and constrained launch velocity of event

Wright Laboratory

May 2020 – Aug 2021

Research Assistant

New Haven, CT & Remote

- **Project:** Rydberg Atoms as Quantum Sensors for Dark Matter
- **Advisor:** Professor Reina Maruyama
- Developed Rydberg atoms as quantum sensors for axion dark matter as an extension of the Haloscope at Yale Sensitive to Axion Cold Dark Matter (HAYSTAC) experiment
- Developed code for generating data, visualizations, and experimental parameters

TALKS

New England Regional Quasar and AGN Meeting (NERQUAM), University of Rhode Island May 2023

Conference for Undergraduate Women in Physics Flash Talk, Brown University Jan 2023

North Carolina Museum of Natural Sciences Public Science Talk, NCMNS Aug 2022

Wright Lab Summer Student Research Symposium, Yale University Aug 2021

AWARDS AND FELLOWSHIPS

Undergraduate Scholarship , NASA CT Space Grant	Dec 2022
John E. Linck & Alanne Headland Linck Fellowship (x2), Yale College	May 2020 & 2021
36 Under 36 , New York Jewish Week	Jun. 2019

COMMUNITY AND OUTREACH

Yale Astronomical Society , Co-Founder and Co-President	Sep 2022 – Present
Slifka Center for Jewish Life at Yale , Student Representative to Board of Trustees	Jun 2022 – Jun 2023
Yale Women in Physics , Co-President and Treasurer	May 2020 – Jun 2022
Distilled Periodical , Outreach Coordinator and Developmental Editor	Sep 2020 – May 2022
Hillel Student Board , Jewish Culture Chair	Apr 2020 – Mar 2021
Splash at Yale , Teach outreach classes to high schoolers (click to see)	

OBSERVATIONAL EXPERIENCE

Palomar Telescope (3 nights); PI: Mislav Baloković

TEACHING

ASTR 160: Frontiers and Controversies in Astrophysics , Undergraduate Learning Assistant (TA)	Fall 2024
ASTR 210: Stars and their Evolution , Science and Quantitative Reasoning Tutor	Spring 2023
PHYS 401: Advanced Classical Physics , Science and Quantitative Reasoning Tutor	Fall 2022

SKILLS AND HOBBIES

Skills: Python, Spectral Fitting (Xspec, PySpecKit), Bayesian Statistics (Emcee, BXA), Parallelization (Open MPI, MPI4Py), Java, Solidworks, L^AT_EX

Hobbies: Knitting, Fantasy Baseball, Community Organizing, Inner Tube Water Polo, Poker