

TAWNY SIT

Ph.D. Candidate, Department of Astronomy, The Ohio State University
sit.6@osu.edu ◇ tawnysit.github.io

EDUCATION

The Ohio State University Ph.D. Candidate, Astronomy	Columbus, OH August 2022 - Present
California Institute of Technology B.S. Astrophysics	Pasadena, CA June 2020

AWARDS & HONORS

NSF Graduate Research Fellowship <i>The Ohio State University</i>	August 2024 - Present
Graduate Enrichment Fellowship <i>The Ohio State University</i>	August 2023 - August 2024
Distinguished University Fellowship <i>The Ohio State University</i>	August 2022 - August 2023

PUBLICATIONS

First Author

3. Sit, T. et al., “Chemical Cartography with APOGEE: Two-process Parameters and Residual Abundances for 288,789 Stars from Data Release 17,” 2024, *ApJ*, 970, 180, doi:10.3847/1538-4357/ad4ed2.
2. Sit, T. et al., “Long-rising Type II Supernovae in the Zwicky Transient Facility Census of the Local Universe,” 2023, *ApJ*, 959, 142, doi:10.3847/1538-4357/ad036f.
1. Sit, T. & Ness, M. K., “The Age Distribution of Stars in the Milky Way Bulge,” 2020, *ApJ*, 900, 4, doi:10.3847/1538-4357/ab9ff6.

Contributing Author

8. Griffith, E. J., et al., “Many elements matter: Detailed abundance patterns reveal star-formation and enrichment differences among Milky Way structural components,” arXiv:2410.22121
7. Johnson, J. W., et al., “The Milky Way Radial Metallicity Gradient as an Equilibrium Phenomenon: Why Old Stars are Metal-Rich,” submitted to *ApJ*, arXiv:2410.13256
6. Schulze, S., et al., “A cosmic formation site of silicon and sulphur revealed by a new type of supernova explosion,” submitted, arXiv:2409.02054
5. Hasselquist, S., et al., “2-process Model and Residual Abundance Analysis of the Milky Way Massive Satellites,” 2024, *ApJ*, doi: 10.3847/1538-4357/ad70ad
4. Das, K. K., et al., “Probing Presupernova Mass Loss in Double-peaked Type Ibc Supernovae from the Zwicky Transient Facility,” 2024, *ApJ*, 972, 91, doi:10.3847/1538-4357/ad595f
3. Anand, S., et al., “Collapsars as Sites of r-process Nucleosynthesis: Systematic Photometric Near-infrared Follow-up of Type Ic-BL Supernovae,” 2024, *ApJ*, 962, 68, doi:10.3847/1538-4357/ad11df.
2. Das, K. K., et al., “Probing the low-mass end of core-collapse supernovae using a sample of strongly-stripped Calcium-rich Type IIb Supernovae from the Zwicky Transient Facility.” 2023, *ApJ*, 959, 12, doi:10.3847/1538-4357/acfeeb.

1. Karambelkar, V., et al., “Volumetric rates of Luminous Red Novae and Intermediate Luminosity Red Transients with the Zwicky Transient Facility.” 2023, *ApJ*, 948, 137, doi:10.3847/1538-4357/acc2b9.

PRESENTATIONS

Expanded Two-process Parameters and Abundances from APOGEE DR17

Talk - *DHWFEST: Dark, Hot, Warm, and Fuzzy mattEr in Space and Time* July 2024, Salt Lake City, UT

Long-rising Type II Supernovae in the Zwicky Transient Facility Census of the Local Universe

Talk - *American Astronomical Society Meeting 240* June 2022, Pasadena, CA

The Age Distribution of Stars in the Milky Way Bulge

Talk - *Caltech SURF Seminar Day* October 2019, Pasadena, CA

Data-driven Methods of Measuring Stellar Compositions from Keck Spectroscopy

Talk - *Caltech SURF Seminar Day* October 2018, Pasadena, CA

X-ray Spectral Analysis of NGC 1386

Talk - *Caltech SURF Seminar Day* October 2017, Pasadena, CA

OBSERVING

Programs

PI: Characterizing the Multi-element Abundance Dispersion of the Milky Way Disk

Large Binocular Telescope/PEPSI (20 hours) Semester 2025A

Experience

Palomar Observatory 200” Hale Telescope

DBSP - 7 nights; *DBSP* & *WASP* - 5 nights June 2021 - August 2022

UNDERGRADUATE/POST-BACCALAUREATE RESEARCH

Assistant Research Technician - Zwicky Transient Facility

California Institute of Technology, Department of Astronomy June 2021 - August 2022
Mansi Kasliwal

Post-baccalaureate Research - Halo RR Lyrae in CFTLS Deep Fields

University of California, Santa Cruz (Remote) July 2020 - June 2021
Raja Guhathakurta

Summer Undergraduate Research Fellowship

Columbia University, Department of Astronomy June - August 2019
Melissa Ness

Summer Undergraduate Research Fellowship

California Institute of Technology, Department of Astronomy June - August 2018
Evan Kirby

Summer Undergraduate Research Fellowship

California Institute of Technology, Department of Physics June - August 2017
Murray Brightman, Fiona Harrison

TEACHING AND MENTORING

Academic Facilitator

Undergraduate Residential Summer Access (URSA) Program May - August 2023
The Ohio State University

Primary Project Mentor

Science Internship Program June - August 2021
UC Santa Cruz (Remote)

Poster presented at AAS 240 (June 2022) with two high school student mentees as lead authors

Rise Program Tutor

Caltech Y Rise Program October 2017 - June 2020
California Institute of Technology

OUTREACH AND SERVICE

AstroGenMin Lunch Organizer
Department of Astronomy

Fall 2024 - Present
The Ohio State University

LGBTQ+ Lunch Founder/Organizer
Department of Astronomy

Spring 2024 - Present
The Ohio State University

Planning Team
Caltech Science Olympiad Club

Fall 2017 - Spring 2020
California Institute of Technology