

Zachary Way

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EDUCATION

Georgia State University, Atlanta, GA
Doctor of Philosophy (PhD) in Astronomy
In Progress

University of Wisconsin - Madison, Madison, WI
Bachelor of Science (BS) in Astronomy, Physics, and Mathematics
May 2019

EXPERIENCE

Graduate Researcher and Teaching Assistant **August 2021 - Present**
Georgia State University Atlanta, GA

- Currently utilizing low resolution spectra from the third Gaia data release to constrain fundamental parameters of M-dwarfs.
- 14 credit hours of teaching experience in Astronomy 1010 and 1020 labs.
- Department Webmaster since Feb 2023.
- Simulated rapidly rotating stars using the open source 3D and 2D fluid dynamic codes Rayleigh and ESTER.

SDSS WG Co-Chair and Database Manager **May 2023 - Present**
Sloan Digital Sky Survey

- Facilitated collaboration and scientific discussion as co-chair of the Solar Neighborhood Census working group.
- Developed and maintain the `sdss_id` which allows users to cross-match between all of the sources in different iterations of SDSS.

ASAS-SN Data Aid **May 2019 - August 2021**
The Ohio State University Columbus, OH

- Responsible for the maintenance and interpretation of data produced by the All-Sky Automated Survey for Supernovae.

MESA Research Assistant **Nov 2017 - May 2019**
University of Wisconsin - Madison Madison, WI

- Worked with the open source, stellar evolution code Modules for Experiments in Stellar Astrophysics (MESA) and GYRE, a code that simulates stellar tides and structure, under Dr. Richard Townsend.

Undergraduate Research Assistant **May 2017 - Sep 2017**
IceCube Neutrino Observatory Madison, WI

- Used Python in the calibration group analyzing data from LED flashers connected to the grid of photomultipliers comprising the South Pole neutrino observatory.

OUTREACH, AWARDS, & VOLUNTEER WORK

Three Taverns Lecture Series Presenter
→ Gave a public lecture titled *Studying Little Stars with Big Surveys* for local Atlanta residents.

Charlie Elliott Astronomy Club Invited Lecture
→ Gave a talk titled *Studying Little Stars with Big Surveys* to the Atlanta Astronomy Club.

astro-ph Coffee Hour

→ Began a weekly outreach meeting where we discuss recent papers posted to the astro-ph arxiv at a digestible level.

Member of the Graduate Stipends Task Force

↪ Volunteer member of a task force aimed at raising the minimum graduate student stipend within the Physics & Astronomy department and generally at GSU.

Second Century Initiative (2CI) University Doctoral Fellow

↪ Doctoral Fellowship granted by Georgia State University's NextGen program to students performing core and innovative research

Polaris Mentor

↪ Mentored a Freshman undergraduate and designed a semester research project through Polaris at The Ohio State, a program design to introduce members of underrepresented and non-traditional groups to physics and astronomy.

Breakfast of Science Champions (BoSC) Volunteer

↪ Taught grade school students from under served schools in the Columbus, OH area about the solar system and astronomy.

PUBLICATIONS

- Way, Z., Jayasinghe, T., Kochanek, C. S., Stanek, K. Z., Valley, P., Thompson, Todd A., Holoiu, Thomas W. -S., Shappee, Benjamin J., 2021, **Discovery of a Highly Eccentric, Chromospherically Active Binary: ASASSN-V J192114.84+624950.8**. Monthly Notices of the Royal Astronomical Society, Volume 514, Issue 1, pp. 200-207 *published*.

PRESENTATIONS

- Talk @ American Astronomical Society meeting #243, New Orleans, Louisiana
↪ *Low-Mass, Unresolved Binaries identified from their Gaia XP Spectra*
- Poster @ American Astronomical Society meeting #241, Seattle, Washington
↪ *Constraining Fundamental Properties of Low-Mass Dwarfs Using Low Resolution Spectroscopy from Gaia DR3*
- Talk @ iid2022, Guntersville, Alabama
↪ *Constraining Fundamental Properties of Late-Type Dwarfs Using Low Resolution Spectroscopy from Gaia DR3*
- Talk @ GSU Physics & Astronomy One Minute Colloquium, Virtual Meeting
- Talk @ American Astronomical Society meeting #237, Virtual Meeting
↪ *Discovery of a Highly Eccentric, Chromospherically Active Binary System: ASASSN-V J192114.84+624950.8*
- Poster @ UW-Madison Undergraduate Research Symposium, Madison, WI
↪ *Interpolation Schemes that don't Ruin Stars*

ASTRONOMER'S TELEGRAMS

- Z. Way et al., **ASASSN-20ni: Discovery of a Likely Classical Nova in the Small Magellanic Cloud**. The Astronomers Telegram, 14122:1, Oct 2020.
- Z. Way et al., **ASAS-SN Discovery of a Luminous Star undergoing a Deep Dimming Event**. The Astronomers Telegram, 14007:1, Sep 2020.
- Z. Way et al., **ASAS-SN Discovery of an Unusual Cataclysmic Variable (ASASSN-20jo)**. The Astronomers Telegram, 13942:1, Aug 2020.
- Z. Way et al., **ASAS-SN Discovery of a Rapid and Deep Fading Episode in a YSO Candidate**. The Astronomers Telegram, 13818:1, Jun 2020.
- Z. Way et al., **Continued Unusual Behavior of ASASSN-V J060000.76-310027.83**. The Astronomers Telegram, 13357:1, Dec 2019.

- Z. Way et al., **ASAS-SN Discovery of an Unusual, Rapidly Fading Star**. The Astronomers Telegram, 13346:1, Dec 2019.
- Z. Way et al., **ASAS-SN Discovery of a Likely RCB Variable ASASSN-V J183900.17-405428.9**. The Astronomers Telegram, 13159:1, Oct 2019.
- Z. Way et al., **ASAS-SN Discovery of an Unusual Stellar System with Deep Dimming Episodes**. The Astronomers Telegram, 13106:1, Sep 2019.

TECHNICAL SKILLS

Languages : Python, Fortran, Mathematica, Bash, PostgreSQL
Software : L^AT_EX, Linux, Microsoft Office, SAOImage DS9, Jupyter, MATPLOTLIB, MESA, GYRE, PHOEBE, ASTROPY, EMCEE
General : Version Control, Research Presentation, Numerical Methods, Building Mathematical Models