University of Washington Astronomy Department tzdw@uw.edu, tzdwi.github.io 3910 15th Ave NE C319 Seattle, Washington 98195-0002 +1 (310) 963-1923

Education

Doctor of Philosophy, Astronomy

University of Washington, Seattle, WA, intended 2021

Master of Science, Astronomy

University of Washington, Seattle, WA, 2016

Bachelor of Arts, Astronomy & Physics Wesleyan University, Middletown, CT, 2015

Research Experience

Graduate Research Assistant

September 2015 - Present

University of Washington Astronomy Department, Seattle, WA

 \bullet Massive stars, binary stars, stellar populations, stellar evolution, time domain astronomy, Thorne-Żytkow objects.

Supervisor: Dr. Emily Levesque.

Undergraduate Research Assistant

June 2013 - May 2015

Wesleyan University Astronomy Department, Middletown, CT

• X-ray Astronomy, X-ray binaries, X-ray source populations in M51. Supervisor: Dr. Roy Kilgard.

Keck Northeast Astronomy Consortium REU Student University Astronomy Department, Hamilton, NY

• Near-Infrared Spectroscopy, star formation, molecular clouds. Supervisor: Dr. Jeff Bary.

Teaching, Outreach, & Service

Pre-MAP Graduate Research Mentor

Fall 2018 - Present

University of Washington Pre-Major in Astronomy Program, Seatte, WA

Research mentor to freshman undergraduate student, supervising multiple ongoing projects.

Graduate Teaching Assistant

Octorber 2015 - March 2017

UW Astronomy Department, Seattle, WA

• Section leader for Astronomy 101 and Astronomy 150 (The Planets). Presented new material, supervised laboratory experiments, and conducted planeterium presentations.

AoT Organizer & Presenter

October 2016 - Present

UW Astronomy Department, Astronomy on Tap, Seattle, WA

• Event co-organizer, planetarium presenter, and fundraiser for outreach events in local Seattle school districts.

Graduate Student Representative

September 2018 - Present

UW Astronomy Department, Seattle, WA

• Liason between graduate students and Astronomy faculty.

Prospective Graduate Student Visit Coordinator February 2017 - September 2018 UW Astronomy Department, Seattle, WA

• Responsible for arranging events, hosts, and travel for 8-12 prospective graduate students.

Awards & Activities

International Travel Grant Recipient, International Astronomical Union, Fall 2016

High Honors, Wesleyan University Astronomy Department, May 2015

Littell Prize, Wesleyan University Astronomy Department, May 2015

Presenter, Committee on Undergraduate Research REU Symposium, October 2014

Submitted

Short Term Variability of Evolved Massive Stars with TESS

Papers

Dorn-Wallenstein, T. Z., Levesque, E. M., & Davenport, J. R. A., submitted to ApJ, January 2019

Refereed

arcesetc: ARC Echelle Spectrograph Exposure Time Calculator

Papers

Morris, B. M., Dorn-Wallenstein, T. Z., Levesque, E. M., Sakari, S., Gies, D., Lester, K., Notsu, Y., Youngblood, A., McMillan, R., 2019, Journal of Open Source Software, 4(34), 1130, https://doi.org/10.21105/joss.01130

aesop: ARC Echelle Spectroscopic Observation Pipeline

Morris, B. M. & Dorn-Wallenstein, T. Z., 2018, Journal of Open Source Software, 3(28), 854, https://doi.org/10.21105/joss.00854

Stellar Population Diagnostics of the Massive Star Binary Fraction **Dorn-Wallenstein, T. Z.** & Levesque, E. M., 2018, ApJ, 867, 125D

No Strong Geometric Beaming in the Ultraluminous Neutron Star Binary NGC 300 ULX-1 (SN 2010da) from Swift and Gemini

Binder, B., Levesque, E. M., & **Dorn-Wallenstein**, **T. Z.**, 2018, ApJ, 863, 141

A Mote in Andromeda's Disk: A Misidentified Periodic AGN behind M31

Dorn-Wallenstein, T. Z., Levesque, E. M., & Ruan, J. J., 2017, ApJ, 850, 86D

Unrefereed Conference

Contributed Poster: Measuring the Massive Star Binary Fraction with Stellar Population Diagnostics

Proceedings Dorn-Wallenstein, T. Z. & Levesque, E. M., 2019, AAS Meeting 233, 364.17

Contributed Talk: Measuring the Massive Star Binary Fraction with Stellar Population Diagnostics

Dorn-Wallenstein, T. Z. & Levesque, E. M., 2018, Northwest x Southwest Meeting, University of British Columbia

Contributed Poster: A Mote in Andromeda's Disk: A Periodic AGN Behind M31 Dorn-Wallenstein, T. Z., Levesque, E. M., & Ruan, J. J., 2018, AAS Meeting 231, 250.28

Contributed Talk: There Are (super) Giants in the Sky: Searching for Misidentified Massive Stars in Algorithmically-Selected Quasar Catalogs

Dorn-Wallenstein, T. Z. & Levesque, E. M., 2016, IAU Symposium 329: The Lives and Death-Throes of Massive Stars, X-ray Splinter Session, Auckland, NZ

Contributed Poster: Properties of the Discrete X-ray Source Population of M51 Dorn-Wallenstein, T. Z., Kilgard, R. E., Martlin, C., Kuntz, K. D., Schulman, G, M51 Chandra VLP Collaboration, 2015, AAS Meeting 225, 345.25

Skills

- Software: Python, SQL/ADQL, IDL, UNIX, IRAF, TensorFlow, ciao/XSpec
- Other: Telescope Operator (Van Vleck Observatory), Drums & Percussion