

Evan Fitzmaurice – Curriculum Vitae

Education

Pennsylvania State University (PSU) – State College, PA
Dual-Title Ph.D. Student – Astronomy/Astrophysics and Astrobiology 08/2022 – **Present**

Pennsylvania State University (PSU) – State College, PA
M.S. – Astronomy/Astrophysics 08/2022 – 08/2024

The Ohio State University (OSU) – Columbus, OH
B.S. – Astronomy/Astrophysics and Physics 08/2017 - 05/2021
Magna Cum Laude
Honors in the College of Arts and Sciences
Honors Research Distinction in Astronomy and Astrophysics
Undergraduate Thesis

Research/Work Experience

Research Assistant – PSU Department of Astronomy 01/2023 - **Present**
Advisors: Prof. Suvrath Mahadevan, Prof. Eric B. Ford
Leading research on the detection of Jupiter and Earth-like companions to low mass stars using extreme precision radial velocity techniques.

Science Policy Society at Penn State – Treasurer 05/2025 – **Present**
Student organization aimed at connecting scientists, policy-makers, and the community to promote the use of scientific evidence in policymaking.

Camp Counselor – Camp Laurel 05/2023-08/2023
Mount Vernon, ME 05/2022-08/2022
Facilitated the success and experience of the oldest age group of 12-14 year olds. Work included night sky outreach.

Teaching Assistant – PSU Department of Astronomy 08/2022 - 12/2022
Graded and proctored assignments for 3000 students across Astro 1 and Astro 7N, the largest introductory astronomy courses for non-majors in the United States.

Research Assistant – OSU Department of Astronomy 9/2021 - 05/2022
Advisors: Dr. David V. Martin, Prof. B. Scott Gaudi
Led research on the orbital dynamics of multi-planet systems orbiting binary stars using numerical simulations and the relationship between exoplanets and polluted white dwarfs.

Research/Work Experience Continued

Night Sky Outreach Ranger – National Park Service
Santa Monica Mountains National Recreation Area
Los Angeles, CA

05/2021 - 09/2021

Led a lighting inventory for classification as an International Dark Sky Urban Park, conducted multiple free, public astronomy outreach events with telescopes.

Instructional Assistant – OSU Department of Astronomy
Creating a virtual lab experience for students to engage in astronomy related inquiry and activities.

08/2020 - 05/2021

01/2018 - 05/2018

Peer-Reviewed Publications

(self in **bold**)

First-author:

1. “Astrometry and Precise Radial Velocities Yield a Complete Orbital Solution for the Nearby Eccentric Brown Dwarf LHS 1610 b”, **Fitzmaurice, E.**, Stefánsson, G. et al (18 other co-authors), September 2024, *The Astronomical Journal* 168, 3. doi: 10.3847/1538-3881/ad57be. <https://ui.adsabs.harvard.edu/abs/2024AJ....168..140F/abstract>

2. “Spectroscopy of TOI-1259B - an unpolluted white dwarf companion to an inflated warm Saturn”, **Fitzmaurice, E.**, Martin, D.V. et al (8 other co-authors) January 2023, *Monthly Notices of the Royal Astronomical Society*, 518, 1. doi: 10.1093/mnras/stac2879. <https://ui.adsabs.harvard.edu/abs/2023MNRAS.518..636F/abstract>

3. “Sculpting the circumbinary planet size distribution through resonant interactions with companion planets”, **Fitzmaurice, E.**, Martin, D.V., Fabrycky, D.C., June 2022, *Monthly Notices of the Royal Astronomical Society*, 512, 4. doi: 10.1093/mnras/stac741. <https://ui.adsabs.harvard.edu/abs/2022MNRAS.512.5023F/abstract>

Selected publications as co-author:

1. “The NEID Earth Twin Survey. III. Survey Performance After Three Years on Sky”, Gupta, A., **Fitzmaurice, E.** et al (24 co-authors), June 2025, <https://arxiv.org/abs/2506.23704>

2. “Gaia-4b and 5b: Radial Velocity Confirmation of Gaia Astrometric Orbital Solutions Reveal a Massive Planet and a Brown Dwarf Orbiting Low-mass Stars”, Stefánsson, G. et al (19 co-authors incl. **Fitzmaurice, E.**), February 2025, *The Astronomical Journal* 169, 2. doi: 10.3847/1538-3881/ada9e1. <https://ui.adsabs.harvard.edu/abs/2025AJ....169..107S/abstract>

3. “The NEID Earth Twin Survey. I. Confirmation of a 31 Day Planet Orbiting HD 86728”, Gupta, A. et al (23 co-authors incl. **Fitzmaurice, E.**), January 2025, *The Astronomical Journal* 169, 1. doi: 10.3847/1538-3881/ad89bf. <https://ui.adsabs.harvard.edu/abs/2025AJ....169....1G/abstract>

4. “Data-Driven Modeling of Telluric Features and Stellar Variability with StellarSpectraObservationFitting.jl”, Gilbertson, C. et al (13 co-authors incl. **Fitzmaurice, E.**), August 2024. *Submitted to The Astronomical Journal*, doi: 10.48550/arXiv.2409.17289. <https://ui.adsabs.harvard.edu/abs/2024arXiv240817289G/abstract>

5. “Running the gauntlet - survival of small circumbinary planets migrating through destabilizing resonances”, Martin, D.V., **Fitzmaurice, E.**, May 2022, *Monthly Notices of the Royal Astronomical Society*, 512, 1. doi: 10.1093/mnras/stac090. <https://ui.adsabs.harvard.edu/abs/2022MNRAS.512..602M/abstract>

Non Peer-Reviewed Writing

1. [Twinkle, Twinkle Little Star, How I Wonder Where You’ve Gone?](#) - Fitzmaurice, E. Blog for the Science Policy Society at Penn State.

Conference Presentations

Extreme Precision Radial Velocities 6

07/2025

Porto, Portugal

Title: The NEID GTO Program: Status Update of the NEID Earth Twin Survey and Confirmation of a Planet Orbiting a Near Solar-Twin
Poster presentation of the status of the NEID Earth Twin Survey after 3.5 years on sky. Summarized the initial results of the planet search and potential confirmation of a planet orbiting a solar twin.

Extreme Solar Systems V

03/2024

Christchurch, New Zealand

Title: Spirals and Wobbles: A Complete Orbital Characterization of the Brown Dwarf LHS 1610 b using Astrometry and Precise Radial Velocities
Poster presentation on my implementation of a joint sampling process to combine the Gaia astrometric solution with high precision radial velocities from the Habitable-zone Planet Finder to measure the true mass and all orbital elements of the brown dwarf companion to the nearby M-dwarf LHS 1610.

Institute for Computational and Data Sciences Symposium

10/2023

Penn State University, State College, PA

Title: Searching for Exoplanets in the Haystack of Stellar Activity
Poser and oral presentation on my implementation of cutting edge software for the detection of Earth-like exoplanets in the NEID telescope guaranteed observing program. Awarded a 2-minute lightning talk and monetary prize for best lightning talk.

Conference Presentations Continued**Emerging Researchers in Exoplanet Science 2023**

06/2023

Yale University, New Haven, CT

*Title: Running the Gauntlet: The Migration of Circumbinary Planets**15-minute presentation on the outcomes of circumbinary planets that experience resonant interactions with the binary and companion planets.***Great Lakes Exoplanet Area Meeting 2021**

11/2021

University of Michigan, Ann Arbor, MI

*Title: Multi-Planet Circumbinary Migration**15-minute presentation on the outcomes of circumbinary planets that experience resonant interactions with the binary and companion planets.***Triple Evolution and Dynamics III**

03/2021

*Title: Multi-Planet Circumbinary Migration: The Peril or Protection from Resonant Locking**Poster presentation on the stability of multi-planet systems around binary stars.***Conferences Attended****Extreme Precision Radial Velocities V**

03/2023

Santa Barbara, CA

Great Lakes Exoplanet Area Meeting 2022

08/2022

The Ohio State University, Columbus, OH

Invited Panels/Outreach**Instruments that Explore Light**

11/2024

Family STEAM Night – Bellefonte Area High School

*Demonstration of X-ray cube satellite 3D model, ray optics manipulation kit, and thermal infrared camera for K-12 grade***Amazing Astronomy: Eclipse Elementary**

10/2023

*Distributing eclipse viewing glasses and educating elementary students in the State College Area School District on safe-viewing practices and scientific facts about stars and eclipses.***Astronomical Research at Penn State**

10/2023

A complete overview of the research being conducted at PSU's Department of Astronomy and tips for starting research as an undergraduate. Given to the Penn State Astronomy Club.

Invited Panels/Outreach Continued**Applying to Graduate School**

Penn State University

09/2023, 09/2022

The Ohio State University

03/2022

Overview of the components to an application, when to start, areas to focus on, things to consider if accepted, and alternate paths to consider if not.

Careers in Science

Blue Springs South High School

12/2021, 12/2022

Advising physics students from my former high school on important steps in achieving a career in science from applying to undergraduate institutions to faculty positions.

Extracurriculars**Science Policy Society**

08/2023 – Present

Penn State University

Discussing current issues relative to science and the policy that comes as a result. We produce a podcast where we interview scientists who have work that significantly impacts public policy. We also advocate at the federal level for adaptive policy in the face of changing scientific discovery.

Awards and Fellowships**National Science Foundation - Graduate Research Fellowship Program**

04/2024

Honorable Mention

Proposed project title: Spirals and Wobbles: Detecting Never Before Seen Giant Exoplanets Orbiting Low Mass Stars

Institute for Computational and Data Sciences Scholar

08/2022 - Present

Penn State University

Exemplifying the use of computational resources in research. Demonstrating a strong background in leadership and interdisciplinary research.

Beta Theta Pi – Men of Principle Scholarship

12/2018

The Ohio State University

Exemplary behavior founded in the core principles of the fraternity: responsible conduct, integrity, trust, mutual assistance, and cultivation of the intellect.

Awards and Fellowships Continued

National Buckeye Scholar

08/2017 - 05/2021

The Ohio State University

Given to highly competitive applicants who are non-residents of Ohio based on grade point average, ACT/SAT score, class rank, and high school curriculum rigor.

Maximus Scholarship

08/2017 - 05/2021

The Ohio State University

Given to highly competitive applications to OSU based on grade point average, ACT/SAT score, class rank, and high school curriculum rigor.