Adam Distler
Astrophysics Researcher
Email: adam.distler@cfa.harvard.edu
LinkedIn:

About Me

I am currently a first-year graduate student at Harvard University pursuing an Astronomy PhD. Before Harvard, I graduated with a B.S. in Astronomy-Physics and Mathematics from the University of Wisconsin-Madison.

Education

Harvard University: September 2025 - Present
Astronomy Ph.D.
Current GPA: 4.0/4.0

University of Wisconsin-Madison: September 2022 - May 2024
Bachelor's of Science in Mathematics and Astrophysics
GPA: 4.0/4.0

University of Minnesota-Twin Cities: January 2021 - May 2022
State of Minnesota Post Secondary Enrollment Options
GPA: 4.0/4.0

Century College: August 2020 - May 2022
State of Minnesota Post Secondary Enrollment Options
GPA: 4.0/4.0

Experience

Research Intern; UW-Madison Astronomy Department May 2024 -
Mentor: Prof. Melinda Soares-Furtado
Year-long paid position working with Prof. Melinda Soares-Furtado to perform astronomy research. Currently, I have led and submitted a first-author publication in exoplanet detection in the Hyades, where we characterized the stellar properties of the host star along with the orbital and physical parameters of the mini-Neptune that orbits it. I worked with data from TESS, astrometry information from Gaia, follow-up ground-based photometry, and spectra obtained from TRES and ESPRESSO. As a young ($\approx$ 700 Myr) exoplanet whose host is also a Hyades member and an M dwarf, this could prove to be a very exciting follow-up candidate for atmosphere characterization to understand how these budding worlds develop.

Astronomy Researcher; UW-Madison Astronomy Department September 2024 - Present
Mentor: Prof. Juliette Becker
Work with Prof. Juliette Becker on better understanding the dynamical interactions between stars and their planetary systems through stellar J_2 evolution. We aim to study whether ultra-short period planetary characteristics can be replicated through different architectures.

Astronomy Researcher; UW-Madison Astronomy Department November 2024 - Present
Mentor: Prof. Nick Stone
Recently began a new project on investigating extreme-mass-ratio-inspirals (EMRIs) of compact objects (neutron stars, stellar-mass black holes) into super-massive black holes. Due to the strength of the gravitational

waves emitted by this effect, future facilities such as the Laser Interferometer Space Antenna (LISA) will be able to detect these events, so understanding the behavior and overall frequency of these events is crucial. I am planning to work on numerical simulations detailing this behavior and how strong scattering impacts the end fate of the compact object.

Mathematics Researcher; UW-Madison Math Department May 2024 - August 2024
Mentor: Dr. Yukun Yue
A continuation of my work in the Madison Experimental Mathematics Lab (MXM). Using the numerical scheme that we developed for the Cahn-Hilliard-Navier-Stokes, I am leading a first-author publication on proving the energy stability and showing the convergence of our scheme in the semi-discrete case. After this project, I plan to expand this by proving this scheme for a fully discrete Hybridized Discontinuous Galerkin (HDG) method.

Lead Tutor and Course Assistant; UW-Madison - Math Learning Center January 2024 - May 2024
Supervisor: Dr. Tracii Friedman
A new role where I served as a shift supervisor for other tutors. Duties included hosting training sessions for 5-8 tutors about effective education and tutoring along with communicating with Dr. Friedman about ways to improve the support provided. I also worked as a course assistant for MATH 320 - Linear Algebra and Differential Equations, where I held small group meetings multiple times weekly to go through course material.

Undergraduate Researcher; UW-Madison Astronomy Department December 2023 - May 2024
Worked with Prof. Soares-Furtado to determine membership in the Ursa Major moving group. Tasks were data collection, organization, and analysis. I took part in proposal writing and editing, and our fall proposal to the Southern African Large Telescope (SALT) was ranked among the best. I began work on a pipeline in Python that would be more accessible than the current version in IDL. This pipeline will provide the necessary radial velocity values that are needed to determine membership through spectroscopic data obtained from the Southern African Large Telescope (SALT).

Undergraduate Researcher; Madison Experimental Mathematics Lab August 2023 - May 2024
Mentor: Dr. Yukun Yue, Van Vleck Associate Professor of Mathematics
Undergraduate member of the Madison Experimental Mathematics Lab (MXM) and worked on finding numerical solutions to gradient flow problems. We worked on a numerical scheme for the Cahn-Hilliard-Navier-Stokes equations, by implementing both projection and Scalar Auxiliary Variable methods.

Research Assistant; University of Missouri-Columbia May 2023 - July 2023
Mentor: Prof. Mahmoud Almasri, Associate Professor of Electrical Engineering and Computer Science
Participated in an REU (Research Experiences for Undergraduates) program at the University of Missouri focused on improving Infrared Detectors by using Silicon-Germanium-Oxide thin films. Lab work consisted of IV testing, using a cryostat to measure the Temperature Coefficient of Resistance, and doing noise testing on the films.

Math Tutor and Peer Mentor; UW-Madison - Math Learning Center October 2022 - January 2024
Supervisor: Dr. Tracii Friedman
Worked for the Math Department on tutoring students in mathematics. Tutored in both lecture halls and smaller study groups to help students in Precalculus, Calculus I/II/III, Discrete Math, and Linear Algebra/Differential Equations. Currently also a peer mentor for MATH320-Linear Algebra and Differential Equations, which involves setting aside specific office hours to help students in both the regular and honors sections of this course. Tasks consisted of helping with students' current homework problems, reviewing past tests, and creating new problems to further their critical thinking skills.

First Author Works

1. *Strong Scatterings for EMRIs*
   Distler, A. and Stone, N.C. in prep.

2. *Peas and USPs: Can Stellar Spindown and Peas in a Pod Replicate Ultra-Short-Period Planet Characteristics?*

Distler, A. and Becker, J. in prep.

3. *TESS Hunt for Young and Maturing Exoplanets (THYME) XIII: A 130 Myr Moving Group Containing Two Transiting Planetary Systems*
Distler, A. et. al, accepted in AJ. Links: ArXiv

4. *TESS Hunt for Young and Maturing Exoplanets (THYME) XII: A Young Mini-Neptune on the Upper Edge of the Radius Valley in the Hyades Cluster*
Distler, A. et. al, Published in the Astronomical Journal. Links: IOP ArXiv

Co-authored Works

1. *A Multi-Method Age Determination for the Ursa Major Moving Group*
Sheffler, J., et al. and 6 co-authors including **Distler, A.**. Published in the Astronomical Journal. IOP, ArXiv.

2. *The TEMPO Survey II: Science Cases Leveraged from a Proposed 30-Day Time Domain Survey of the Orion Nebula with the Nancy Grace Roman Space Telescope*
Soares-Furtado, M., Limbach, M.A., Vanderburg, A., and 26 co-authors including **Distler, A.** ArXiv.

Accepted Proposals

WIYN/NEID Proposal SP2026 November 2025
Co-PI on an approved NEID proposal that was awarded 2.3 nights for the 2026 spring semester. We will continue to take radial velocities for TOI-4364 b to obtain a mass measurement.

WIYN/NEID Proposal FA2025 May 2025
Co-PI on an approved NEID proposal that was awarded 1.5 nights for the 2025 fall semester. We will continue to take radial velocities for TOI-4364 b to obtain a mass measurement.

WIYN/NEID Proposal SP2025 October 2024
Co-PI on an approved NEID proposal that was awarded 2.0 nights for the 2025 spring semester. We obtained precision radial velocities for TOI-4364 b with the goal of obtaining a mass measurement for the planet.

Southern African Large Telescope Phase 1 Proposal February 2024
Co-author. Ranked the top proposal of the cycle and focused on outlining the rationale for the project under Dr. Soares-Furtado and the target selection.

Presentations

UW-Madison Summer Dynamics Meetings August 5, 2025
Talk: "Strong Scatterings for Extreme Mass Ratio Inspirals."

Emerging Researchers in Exoplanet Sciences, Princeton University June 15-17, 2025
Talk: "Exploring Exoplanet Ages", Adam Distler

245th Meeting of the American Astronomical Society January 12 - 16, 2025
Poster: "*TESS* Hunt for Young and Maturing Exoplanets (THYME) XII: A Young Mini-Neptune on the Upper Edge of the Radius Valley in the Hyades Cluster", Adam Distler, Prof. Melinda Soares-Furtado, Prof. Andrew Vanderburg, Chambliss Poster Competition Finalist.

Stellar Observers Hackathon December 9, 2024
Led a Hackathon focused on obtaining radial velocities for a variety of objects, including single stars, binary systems, and white dwarfs. Primarily focused on using SALT data using the radial velocity pipeline I built, and how it can be adapted to other spectrographs and data types.

Emerging Researchers in Exoplanet Sciences, Cornell University July 12-15, 2024
Poster: "Hiding in the Hyades: A Mini-Neptune Transiting a Nearby M Dwarf", Adam Distler, Prof. Melinda Soares-Furtado, Prof. Andrew Vanderburg.

2024 SIAM Annual Meeting July 2024
Poster: "Numerical Modeling and Convergence Analysis of the Cahn-Hilliard-Navier-Stokes System Using a Combined Scalar Auxiliary Variable and Finite Element Scheme." Sanchita Chakraborty, Adam Distler, Alexis Liu, John Marek, and Yukun Yue.

244th Meeting of the American Astronomical Society June 11-13, 2024
Poster: "A Rigorous Age Dating of the Ursa Major Moving Group." Adam Distler, Prof. Melinda Soares-Furtado, Julia Sheffler, and M Clark.

Spring 2024 Madison Experimental Mathematics Lab Open House April 30, 2024
Poster: "ANALYSIS OF A NUMERICAL METHOD FOR CAHN-HILLIARD-NAVIER-STOKES." Adam Distler, Alexis Liu, Sanchita Chakraborty, and Yukun Yue.

Madison Undergraduate Symposium April 25, 2024
Poster: "Measuring the Milky Way's Rotation Curve." Ella Chevalier, Adam Distler, Alex Geiger, Brooke Kotten, Quinn Meece.

Fall 2023 Madison Experimental Mathematics Lab Open House December 12, 2023
Poster: "A Numerical Method for Cahn-Hilliard Navier-Stokes." Adam Distler, John Marek, Alexis Liu, Sanchita Chakraborty, Yukun Yue.

Mizzou Undergraduate Research Forum, University of Missouri July 27, 2023
Poster: "Optimizing Performance of Silicon-Germanium-Oxide Thin Films for Use in Infrared Detectors." Adam Distler, Farhana Tuli, Mahmoud Almasri.

Notable Awards and Recognitions

Academic

- National Science Foundation Graduate Research Fellow ($159,000)
- Hertz Fellowship Finalist
- Peter Livingston Scholar ($3,000 + $2,250 travel fund)
- Sophomore Research Fellowship Recipient ($3000, Declined due to graduation)
- Member of Phi Kappa Phi

Scholarships

- William F. Vilas Scholarship ($400)
- Tozer Foundation Scholarship ($2,250 per year, for four years)
- Community Scholarship Foundation General Scholarship ($1,000)
- WSTDA Scholarship ($3,000)
