

CURRICULUM VITAE

Mika Lambert

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EDUCATION

PhD in Astronomy and Astrophysics

Expected 2028

University of California, Santa Cruz

Bachelor of Science in Astronomy

May 12, 2023

Minors in Physics, Math, and Japanese

University of Arizona

Summa Cum Laude

PUBLICATIONS AND RESEARCH PRODUCTS

PUBLICATIONS

Donghyeon J. Khim, Dennis Zaritsky, **Mika Lambert**, Richard Donnerstein. [*Properties of Nuclear Star Clusters in Low Surface Brightness Galaxies*](#)

Published in the Astrophysical Journal on July 1, 2024

Mika Lambert, Donghyeon J. Khim, Dennis Zaritsky, Richard Donnerstein. [*Systematically Measuring Ultra-diffuse Galaxies \(SMUDGes\). VI. Nuclear Star Clusters*](#)

Published in the Astrophysical Journal on January 15, 2024

Mika Lambert, Chad F. Bender, Shubham Kanodia, Caleb I. Canas, Andrew Munson, et. al. [*TOI-5375: An Object at the Hydrogen Burning Limit Orbiting an Early M-type Star*](#)

Published to the Astronomical Journal on April 28, 2023

RESEARCH PRODUCTS

DESI Milky Way Survey Workshop Toronto 2024 - *Disturbances in the Milky Way Disk: Phase Space Ridges*

Talk, August 12, 2024

USPA Symposium - *Exploring the Kinematic Disequilibrium of the Milky Way in Phase Space with DESI*

Poster, June 3, 2024

American Astronomical Society 241st meeting - [*The Prevalence of Nuclear Star Clusters in Ultra-Diffuse Galaxies*](#)
iposter, January 12, 2023

RESEARCH EXPERIENCE

Graduate Student Researcher

September 2023-Present

University of California, Santa Cruz

Advisor: Connie Rockosi

I am analyzing the **disturbances in the Milky Way disk** using the Dark Energy Spectroscopic Instrument (DESI) Milky Way Survey (MWS). Looking at different phase spaces we see manifestations of perturbations of the disk. The goal is to identify the radial distance these manifestations appear in the DESI MWS data, link them to substructures in the disk, and discuss the origins of these disturbances. It is important to understand the Galactic disk because it may allow one to see the effects of the dark matter potential on the disk, and trace the satellite interaction history of the Milky Way.

Undergraduate Researcher

November 2019-August 2023

University of Arizona

Advisor: Dennis Zaritsky

I developed analysis software to identify **nucleated low surface brightness galaxies** and measure the properties of the nuclear sources. The goal was to measure the incidence of nuclear clusters in these galaxies and to uncover any galaxy properties that led to an increased incidence rate. The properties of the nuclear core will also be used to constrain models for the formation and evolution of these cores. I am the first author of a paper submitted to the Astronomical Journal.

Undergraduate Researcher

January 2022-May 2023

University of Arizona

Advisor: Chad Bender

I identified **potential exoplanet targets** using spectroscopy and photometry of nearby stars to characterize them and the exoplanets that are orbiting them. We followed up on TESS objects with ground-based high-resolution spectroscopy from HPF to measure radial velocities. I learned how to utilize the PYMC and `exoplanet` packages from collaborators at Penn State University to model the orbital parameters, mass, and radius of targets of interest. I specifically worked on characterizing a system, labeled TOI-5375, and concluded the companion is a very low-mass star at the hydrogen-burning limit. I am the first author of a paper on the TOI-5375 system published in the Astronomical Journal.

SCHOLARSHIPS, AWARDS, AND GRANTS

Wildcat Distinction Tuition Scholarship (\$15,000)

Fall 2019-Spring 2023

University of Arizona

<i>Galileo Circle Scholar (\$1000)</i>	2022
College of Science, nominated by Steward Observatory and awarded to 100 undergraduates within the College of Science.	
<i>William Scott and Elizabeth P. Jenkins Scholarship (\$1200)</i>	2022
This scholarship's focus is on sharing the wonders of the Universe with the public.	
<i>Angelos C. Langadas Astronomy Scholarship (\$1233)</i>	2022
This scholarship was one of three awarded based on your strong commitment to pursuing a career in Astronomy.	
<i>Glenn C. Purviance Scholarship (\$2000)</i>	2022
This Scholarship was awarded as one of three outstanding Juniors in Astronomy.	
<i>Bychinsky A. Elaine Astronomy Scholarship (\$1,000)</i>	2020, 2021
This scholarship is to support and fund women in astronomy.	
<i>The Art of Planetary Science gallery artist</i>	2021, 2022
Lunar and Planetary Laboratory.	

COMPUTER SKILLS

Python, Linux, LaTeX, and HTML

OUTREACH & SERVICE

<i>President</i>	Spring 2022-Fall 2022
<i>Vice President</i>	Fall 2021-Spring 2022

The University of Arizona Astronomy Club

University of Arizona

- Run the weekly meetings with over 100 active members to provide resources for undergraduates, updates on future volunteer outreach events, and announce internal events such as off-campus observation nights, and the annual out-of-state spring trip.
- Coordinate with the other officers to organize outreach events, telescope training events, and bi-annual trips to local dark sky locations, manage our budget, and increase our departmental funding from \$100 to \$600 annually.
- Communicate with the University's student government association as the liaison between the club and the University.

<i>Preceptor</i>	Fall 2021, Spring 2022
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Introductory Mechanics

University of Arizona

- Lead discussion sections of over 30 students for the physics introductory mechanics classes (PHYS141) along with graduate students by encouraging students to work in groups to solve the weekly packet.
- Address questions that students have in a way that will guide them to the correct answer rather than simply giving the answer.
- Meet weekly with the professor lecturing the course to go over the packet and comment on how the previous meeting went as well as discuss the future worksheet.

Undergraduate Leader

Fall 2021-Spring 2022

TIMESTEP

University of Arizona

- Led a meeting focused on navigating the first two years of people's undergraduate careers.
- Facilitate a positive community that values diversity through attending discussions and DEI workshops.

DEI committee member

Spring 2021-Present

Phi Sigma Rho

University of Arizona

- Create a newsletter for the 60 members to promote inclusivity in our sorority including resources for further education.

Camp Counselor

Summer 2021

Astronomy Camp

University of Arizona

- Teach 20 to 30 students how to use image processing software, AstroImageJ, to analyze data taken from telescopes at Mt. Bigelow.
- Lead breakout room discussions about different topics in astronomy including galaxy classification and stellar evolution.

OTHER COMMUNITY INVOLVEMENT

Women in STEM mentorship program

Fall 2019–Spring 2020

U of A vaccination Point of Distribution (POD) volunteer

Feb 2021–May 2021

Arizona Public Interest Research Group (PIRG) voter registration volunteer

Fall 2020