Maya Skarbinski

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EDUCATION

Johns Hopkins University **Baltimore, MD**
Current PhD student **Sept 2023 – present**
Advised by Dr. Kate Rowlands, Dr. Katey Alatalo, and Professor Timothy Heckman

Harvard College **Cambridge, MA**
A.B. joint degree in Astrophysics and Physics (*Summa cum laude*) **May 2023**
Senior thesis: A JWST Library of Galaxy SEDs

RESEARCH EXPERIENCE

Researcher, Harvard-Smithsonian Center for Astrophysics **Sept 2022 – May 2023**
Awarded a Hoopes Prize for senior thesis which involved creating a galaxy spectral energy distribution library using James Webb Space Telescope observations. Paper in preparation. Advised by Professor Daniel Eisenstein and Dr. Ben Johnson.

NSF REU Research Intern, IfA, University of Hawai'i at Mānoa **May – July 2022**
Tested the method of measuring inclination angles of disk galaxies using synthetic images derived from the IllustrisTNG50 cosmological simulation. Advised by Dr. Hua Gao and Professor Eugene Magnier.

Researcher, Harvard-Smithsonian Center for Astrophysics **June 2021 – May 2022**
Researched the impact of mergers on the physical properties of molecular clouds in a Milky Way-like galaxy. Paper published December 2022 in MNRAS. Advised by Dr. Sarah Jeffreson and Professor Alyssa Goodman.

Research Intern, Columbia University Astrophysics Laboratory **April – June 2019**
Researched coincident detection rates of gravitational waves and high energy neutrinos with the goal of better understanding future data from LISA and IceCube-Gen2. Advised by Dr. Zsuzsanna Marka.

GRANTS AND AWARDS

2023 – William H. Miller Fellowship (support for first year of graduate school)
2023 – Hoopes Prize (for outstanding scholarly work or research on my senior thesis)
2023 – Phi Beta Kappa (Harvard University)
2021 – Detur Book Prize (for very high academic standing during the first three semesters at college)
2020, 21, 22 – John Harvard Scholar (top 5% of class at Harvard College)

PUBLICATIONS

Building the molecular cloud population: the role of cloud mergers, Skarbinski, M. Jeffreson, S. M. R., Goodman, A. A., **MNRAS 519,** 1887 (2023).

Overview of the JWST Advanced Deep Extragalactic Survey (JADES), Eisenstein, D. J., Willott, C., Alberts, S., et al. (incl. Skarbinski, M), ApJS submitted (2023).

JADES Initial Data Release for the Hubble Ultra Deep Field: Revealing the Faint Infrared Sky with Deep JWST NIRCam Imaging, Rieke, M. J., Robertson, B. E., Tacchella, S., et al. (incl. Skarbinski, M), ApJS accepted (2023)

JADES NIRSpec Initial Data Release for the Hubble Ultra Deep Field: Redshifts and Line Fluxes of Distant Galaxies from the Deepest JWST Cycle 1 NIRSpec Multi-Object Spectroscopy, Bunker, A. J., Cameron, A. J., Curtis-Lake, E., et al. (incl. Skarbinski, M), A&A submitted (2023)

PRESENTATIONS

Poster: *Building the molecular cloud population: the role of cloud mergers*, AAS 241, January 2023

TEACHING AND OUTREACH

High School Outreach **Nov 2023 – present**
City Neighbors High School in Baltimore
Organized a group of Johns Hopkins graduate students to talk to 11th grade classes at a public high school in Baltimore about research in astronomy and possible careers paths in STEM fields.

Peer Tutor **Sept 2021 – May 2023**
Academic Resource Center at Harvard University
Tutored students in physics, statistics, and applied math classes.

Co-Chair and Mentor **Sept 2021 – May 2023**
Harvard-Radcliffe Society of Physics Students' Polaris Program
Mentored first- and second-year physics students and coordinated the mentorship program in 2022-23.

Club Member **Feb 2020 – May 2023**
Student Astronomers at Harvard-Radcliffe (STAHR)
Took classes and got certified to use the telescope in the Loomis-Michael Observatory for the purpose of outreach to fellow undergraduates.

Club Member **Sept 2019 – May 2023**
Harvard Undergraduate Astronomy Society
Mentored undergraduate astronomy students.

Grader **Sept – Dec 2020**
Harvard University Department of Physics
Graded problem sets for Physics 15a (Introductory Mechanics and Relativity).