

# MADISYN BROOKS

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## EDUCATION

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<b>University of Connecticut</b> PhD in Physics Advisor: Jonathan Trump	<i>2023 - 2028 (expected)</i>
<b>University of Central Florida</b> Bachelors of Science in Physics Cum Laude	2019 - 2023

## RESEARCH POSITIONS

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<b>NSF Graduate Research Fellow</b> University of Connecticut	<i>August 2025 - Present</i>
<b>Graduate Research Assistant</b> University of Connecticut	2023 - 2025
<b>Research and Mentoring Program Scholar</b> University of Central Florida	2021 - 2023
<b>Research Experience for Undergraduate (REU) Summer Researcher</b> University of California-Davis	Summer 2022
<b>Research Experience for Undergraduate (REU) Summer Researcher</b> National Radio Astronomy Observatory (NRAO)	Summer 2021

## PUBLICATIONS

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- Brooks, M.**, *Here There Be (Dusty) Monsters: High-redshift Active Galactic Nuclei Are Dustier than Their Hosts*. ApJ 986, 117 (2025)
- Taylor, A. J., *CAPERS-LRD-z9: A Gas-enshrouded Little Red Dot Hosting a Broad-line Active Galactic Nucleus at  $z = 9.288$* . ApJ 989L, 7 (2025)
- Taylor, A. J., *Broad-line AGNs at  $3.5 < z < 6$ : The Black Hole Mass Function and a Connection with Little Red Dots*, ApJ 986, 165 (2025)
- Finkelstein, S. L., *The Cosmic Evolution Early Release Science Survey (CEERS)*. ApJ 983L, 4 (2025)
- Backhaus, B. E., *Emission-Line Diagnostics at  $z > 4$ :  $[OIII]\lambda 4363/H\gamma$* . ApJ submitted, arXiv:2502.03519
- Davis, K., *A Census from JWST of Extreme Emission-line Galaxies Spanning the Epoch of Reionization in CEERS*. ApJ 974, 42 (2024)

## SELECTED AWARDS AND HONORS

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National Science Foundation Graduate Research Fellowship	<i>August 2025 - Present</i>
UCF College of Sciences General Scholarship	Spring 2023
Society of Physics Students Future Faces of Physics Award	Fall 2021, Fall 2022
Society of Physics Students Marsh White Award	Fall 2021, Fall 2022
Sigma Pi Sigma Member	2022 - 2023
UCF Pegasus Scholarship	2019 - 2023
Florida Bright Futures Scholarship	2019 - 2023

## SELECTED ORAL PRESENTATIONS

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**Brooks, M.**, "Updates from JWST Science in the Extragalactic Deep Fields", *JWST Weekly Science Briefing April 2025*, Virtual.

**Brooks, M.**, R. Simons, J.R. Trump, "Dust Attenuation of BLGN in the JWST Deep Fields," *University of Connecticut Astronomy Seminar Fall 2024*, Storrs, CT.

**Brooks, M.**, R. Simons, J.R. Trump, "Dust Attenuation of BLGN in the JWST Deep Fields," *2024 Tinsley Workshop*, New Haven, CT.

**Brooks, M.**, D. Perlot, M. Guthrie, K. Davis, "The Restoration of the Cynthia Peterson Memorial Planetarium," *Middle Atlantic Planetarium Society (MAPS) Conference 2024*, Mystic, CT.

**Brooks, M.**, R. Simons, J.R. Trump, "Dust Attenuation of Little Red Dots," *CEERS Collaboration Meeting 2024*, San Lorenzo de El Escorial, Spain.

## SKILLS

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<b>Python</b>	NumPy, SciPy, AstroPy, Matplotlib, Pandas, emcee, Seaborn
<b>Tech</b>	Jupyter Notebook (Anaconda), Git, LaTeX, VSCode, Windows
<b>Statistics</b>	Bayesian Inference, Statistical Analysis, Regression Models
<b>Working Knowledge</b>	IDL, HTML, C, Linux

## TEACHING EXPERIENCE

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**Undergraduate Academic and Research Mentor**, University of Connecticut  
Yarden Sackett (UConn BSc '25) Fall 2024 - Spring 2025

**Guest Lecturer: Introductory Astronomy**, University of Connecticut  
Seasons, 09/05/2024  
Moon Phases, 09/10/2024

**Graduate Teaching Assistant**, University of Connecticut  
Introductory Astronomy Laboratory, PHYS1025Q Fall 2023, Fall 2024, Spring 2025  
General Physics II Laboratory, PHYS1202Q Spring 2024  
Physics BRIDGE program Summer 2025

## OUTREACH AND SERVICE

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**PENGUIN Mentoring** Founding Member Summer 2025 - Present

**Observatory Volunteer**, University of Connecticut Fall 2023 - Present

**Planetarium Presenter**, University of Connecticut Fall 2023 - Present

**Astronomy Seminar Committee**, University of Connecticut Spring 2024 - Present

**Executive Secretary** - NASA Review Panel Summer 2025

**AI Safety Group (BEACON)**, University of Connecticut  
Social Media Coordinator Fall 2024 - Spring 2025

**Women in Physics Society**, University of Central Florida  
President Fall 2021 - Spring 2023  
Secretary Spring 2021  
CuWiP Organizing Committee Fall 2021 - Spring 2023

**Society of Physics Students**, University of Central Florida  
Treasurer Fall 2021 - Spring 2023