

JAKE A. MILLER

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EDUCATION

PhD <i>Physics</i> Wayne State University	Expected Spring 2024 Detroit, MI
Bachelor of Science <i>Major: Physics, University Honors</i> Wayne State University	May 2018 Detroit, MI

WORK EXPERIENCE

Graduate Research Assistant Wayne State University	January 2019 – August 2023 Detroit, MI
<ul style="list-style-type: none">• Built pipeline to create scientific images from remote robotic observatory• Modeled AGN spectra• Analyzed AGN light curves using methods such as time lag determination and flux-flux analysis	
Graduate Teaching Assistant Wayne State University	Fall 2018, Fall 2022 - Spring 2023 Detroit, MI
<ul style="list-style-type: none">• Instructed students on a variety of physics phenomena• Mentored students in one on one tutoring• Maintained lab equipment	
Planetarium Presenter Wayne State University	August 2016 – May 2021 Detroit, MI
<ul style="list-style-type: none">• Presented and created planetarium shows for both students and the general public• Created content for the planetarium website	
Science Center Educator Michigan Science Center	June 2016 – August 2018 Detroit, MI
<ul style="list-style-type: none">• Provided high energy education and entertaining science programming to a wide variety of audiences• Performed live demonstrations of scientific phenomena	

PRIMARY AUTHOR PUBLICATIONS

Continuum Reverberation Mapping of Mrk 876 over Three Years with... Miller, J., Cackett, E., Goad, M. et al. 2023	Published (ApJ) NASA ADS
Continuum Reverberation Mapping of 30 AGN over Four Years Expected Publication: Fall 2023	In Preparation
Resolving the Accretion Disk Size Discrepancy of PG2130+099 Expected Publication: Spring 2024	In Preparation

ADDITIONAL PUBLICATIONS

AGN STORM 2. VI. Mapping Temperature Fluctuations in the Accretion... Neustadt, J., Kochanek, C., Montano, J., et al. 2023	Submitted (ApJ) NASA ADS
AGN STORM 2: V. Anomalous Behavior of the CIV Light Curve in Mrk 817 Homayouni, Y., Kriss, G., De Rosa, G., et al. 2023	Submitted (ApJ) NASA ADS
AGN STORM 2. IV. Swift X-ray and ultraviolet/optical monitoring of... Cakett, E., Gelbord, J., Barth, A., et al. 2023	Accepted (ApJ) NASA ADS
UV-Optical Disk Reverberation Lags despite a Faint X-Ray Corona in... Kara, E., Barth, A., Cackett, E. et al. 2023	Published (ApJ) NASA ADS
AGN STORM 2. III. A NICER View of the Variable X-Ray Obscurer in... Partington, E., Cackett, E., Kara, E. et al. 2023	Published (ApJ) NASA ADS
AGN STORM 2. II. Ultraviolet Observations of Mrk 817 with the... Homayouni, Y., De Rosa, G., Plesha, R. et al. 2023	Published (ApJ) NASA ADS
AGN STORM 2. I. First results: A Change in the Weather of Mrk 817 Kara, E., Mehdipour, M., Kriss, G. et al. 2021	Published (ApJ) NASA ADS
On the multiwavelength variability of Mrk 110: two components... Vincentelli, F., McHardy, I., Cackett, E. et al. 2021	Published (MNRAS) NASA ADS
Supermassive Black Holes with High Accretion Rates in Active Galactic... Cackett, E., Gelbord, J., Li, Y. et al. 2020	Published (ApJ) NASA ADS
Search for Type Ia supernova NUV–optical subclasses Cinabro, D., Scolnic, D., Kessler, R. et al. 2017	Published (MNRAS) NASA ADS

CONFERENCES AND PRESENTATIONS

Compact Objects in Michigan and Ontario 2023 University Research Corridor	May 2023 Talk
Physics and Astronomy Graduate Research Day 2023 Wayne State University	April 2023 First Place Poster Presentation
Physics and Astronomy Graduate Research Day 2022 Wayne State University	April 2022 Talk
Compact Objects in Michigan and Ontario 2021 University Research Corridor	May 2021 Talk
43rd Scientific Assembly of COSPAR Committee on Space Research	January 2021 Talk
Compact Objects in Michigan and Ontario 2020 University Research Corridor	June 2020 Talk
2019 MSGC Fall Conference Michigan Space Grant Consortium	October 2019 Talk
2017 Annual Spring Meeting of the APS Ohio-Region Section American Physical Society	May 2017 Talk

RESEARCH FUNDING AND PROPOSALS

LCO 2023B Observation Proposal Lead PI on observation proposal occurring simultaneously with other robotic observatories	2023
Rumble Fellowship Awarded to Wayne State students who demonstrate the most promise for conducting research	2023
Michigan Space Grant Consortium Research Grant Awarded to graduate students with projects relevant to NASA's strategic plans	2019
Wayne State University Physics REU NSF funded research experience for undergraduates	2015

SCHOLASTIC SCHOLARSHIPS

David Fradkin and Gerald Dunifer Endowed Planetarium Scholarship Awarded for outstanding contributions to the Wayne State Planetarium	2017
Wayne State University Presidential Scholarship Merit based scholarship awarded to incoming students	2014

TEACHING EXPERIENCE

PHY 3310: Introductory Modern Physics Laboratory Laboratory covering modern physics phenomena and basic Python	Fall 2022 - Winter 2023 Wayne State University
AST 2011: Descriptive Astronomy Laboratory Taught basic descriptive astronomical techniques	Fall 2022 - Winter 2023 Wayne State University
PHY 2181: University Physics Laboratory 2 Demonstrated physics related to electromagnetism	Fall 2018 Wayne State University
PHY 2131: Physics Life Science Laboratory Laboratory teaching basic Excel usage and biological physics experiments	Fall 2018 Wayne State University

SKILLS

Programming: Python (NumPy, SciPy, AstroPy, Matplotlib), C++, perl, Javascript
Document Creation: Microsoft Office Suite, LaTeX, Adobe Photoshop

REFERENCES

Dr. Edward Cackett Physics Department Chair, Wayne State University	ecackett@wayne.edu
Dr. David Cinabro Program Manager, US. Department of Energy	david.cinabro@wayne.edu
Dr. Aaron Barth Professor, UC Irving	barth@uci.edu