

# RAMISA AKTHER RAHMAN

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## EDUCATION

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| <b>Yale University</b> , New Haven, CT   | 2024 – Present |
| – Ph.D. in Astronomy (Expected 2030)   |                |
| <b>College of William &amp; Mary</b> , Williamsburg, VA  | 2020 – 2024    |
| – B.S. in Physics with Departmental Honors, Minor in English                                     |                |
| – Honors Thesis: <i>Faraday Rotation Results Associated with the Photoionized Gas of IC 1396</i> |                |
| Advisors: Dr. Allison Costa, Prof. Irina Novikova  |                |
| – Dean's List Spring 2024, Fall 2023, Spring 2023, Fall 2022, Spring 2021                        |                |

## RESEARCH EXPERIENCE

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| <b>Graduate Researcher</b> , Yale Astronomy Department   | Fall 2025 – Present     |
| Advisor: Prof. Earl Bellinger, Dr. Ebraheem Farag  |                         |
| <b>Graduate Researcher</b> , Yale Astronomy Department   | Fall 2024 – Present     |
| Advisor: Prof. Héctor Arce   |                         |
| <b>Summer Researcher (Post-bacc)</b> , Center for Astrophysics   Harvard & Smithsonian         | Summer 2024             |
| Advisors: Dr. Joshua Bennett Lovell, Dr. Kristina Monsch, Dr. David J. Wilner, Dr. Alice Booth |                         |
| <b>Undergraduate Researcher (NSF REU)</b> , Smithsonian Astrophysical Observatory              | 2023 – 2024             |
| Advisors: Dr. Joshua Bennett Lovell, Dr. David J. Wilner, Dr. Eric Koch                        |                         |
| <b>Undergraduate Researcher (NSF REU)</b> , National Radio Astronomy Observatory (NRAO)        | 2022 – 2024             |
| Advisor: Dr. Allison Costa   |                         |
| <b>Undergraduate Researcher</b> , William & Mary   Quantum & Optics Research Group             | 2021 – 2022             |
| Advisors: Prof. Irina Novikova, Prof. Eugeniy Mikhailov  |                         |
| <b>Undergraduate Research Assistant</b> , William & Mary   Planetary Research Group            | June 2021 – August 2021 |
| Advisors: Dr. Jonathan Kay, Mikayla Huffman (graduate student at CU Boulder)                   |                         |

## PUBLICATIONS

2. **Rahman, R. A.**, Lovell, J. B., Koch, E. W., Wilner, D. J., Andrews S. M., Monsch, K., Ha, D. 2025, *ApJ*, 981, 68. *The Radiowave Hunt for Young Stellar Object Emission and Demographics (RADIOHEAD): A Radio Luminosity–Spectral Type Dependence in Taurus–Auriga YSOs*
1. Lovell, J. B., Keating, K. G., Andrews S. M., MacGregor, M., **Rahman, R. A.**, Rao R., Williams J. P. 2024, *ApJL*, 962, L12. *SMA Detection of an Extreme Millimeter Flare from the Young Class III Star HD 283572*

## AWARDS, SCHOLARSHIPS AND HONORS

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| <b>Physics Undergraduate Research Prize</b> , William & Mary   | 2024 |
| <b>NSF Graduate Research Fellowship Honorable Mention</b>  | 2024 |
| <b>Chambliss Poster Competition Finalist</b> , American Astronomical Society (AAS) 243 <sup>rd</sup> Meeting | 2024 |
| <b>Charles Center Semester Research Grant</b> , William & Mary   | 2023 |

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| <b>2<sup>nd</sup> Place (Honorable Mention)</b> , William & Mary 2023 Physics Fest Lightning Talk           | 2023       |
| <b>Virginia Space Grant Consortium Undergraduate STEM Research Scholarship</b>                              | 2023       |
| <b>Virginia State Scholarship Fund Scholarship for Women in Higher Education</b>                            | 2023, 2021 |
| <b>Mentoring for Careers in Physics Mentee Travel Support Award</b> , William & Mary                        | 2023       |
| <b>Best Astrophysics Poster Prize</b> , Conference for Undergraduate Women in Physics, Princeton University | 2023       |

## PRESENTATIONS

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### Talks:

- **Northeast Star & Planet Formation Meeting**, MIT Haystack Observatory  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics* July 2024
- **Physics Honors Thesis Talk**, William & Mary  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396* May 2024
- **Mid-Year Physics Honors Thesis Talk**, William & Mary  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396* December 2023
- **W&M 2023 Physics Fest Student Lightning Talk**, William & Mary  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics* October 2023
- **Astrophysics REU Summer Symposium**, Center for Astrophysics | Harvard & Smithsonian August 2023  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics*
- **W&M 2023 Physics Undergraduate Research Showcase**, William & Mary April 2023  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **W&M Scholars Undergraduate Research Experience 3<sup>rd</sup> Annual Undergraduate Research Conference**, William & Mary April 2023  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **W&M 2022 Physics Fest Lightning Talk**, William & Mary October 2022  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **Summer Student Research Symposium**, National Radio Astronomy Observatory (NRAO) August 2022  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **W&M 2022 Physics Undergraduate Research Showcase**, William & Mary April 2022  
*Acousto-Optic Modulator Optimization*

### Posters:

- **Gordon Research Conference 2025 Origins of the Solar System**, Mount Holyoke College June 2025  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics*
- **Gordon Research Seminar 2025 Origins of the Solar System**, Mount Holyoke College June 2025  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics*
- **Virginia Space Grant Consortium Student Research Conference**, Newport News, VA April 2024  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **2024 American Physical Society March Meeting**; Virtual March 2024  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396*
- **American Astronomical Society (AAS) 243<sup>rd</sup> Meeting**, New Orleans, LA January 2024  
*RADIOHEAD: The Radiowave Hunt for young stellar object Emission And Demographics*

- **Conference for Undergraduate Women in Physics**, Princeton University  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396* January 2023
- **American Astronomical Society (AAS) 241<sup>rd</sup> Meeting**, Seattle, WA  
*Faraday Rotation Results Associated with the Photoionized Gas of IC 1396* January 2023

## OBSERVATIONS

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### Accepted Proposals:

- Submillimeter Array (SMA) - 30 hours awarded (CoI Rahman, PI Lovell)  
*Millimeter follow-up of radio-detected YSO multiples: Is stellar multiplicity driving class III millimeter variability?* (2023B-S038)

### Observing Experience:

- Palomar 200-in Telescope (WIRC+Pol) - 3 nights (2024B), 3 nights (2025B)
- Keck Observatory (OSIRIS) - 1 night (2024B)

## TEACHING EXPERIENCE

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### Teaching Fellow, Yale University

- ASTR 1100: Stars and Planets (Dr. Michael Faison) Fall 2025
- ASTR 120: Galaxies and the Universe (Dr. Michael Faison) Spring 2025
- ASTR 210: Stars and their Evolution (Prof. Robert Zinn) Fall 2024

## ATTENDED WORKSHOPS

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**2025 Summer School in Statistics for Astronomers**, Center for Astrostatistics at The Pennsylvania State University Jun 2025

**ALMA Data Calibration & Analysis Workshop**, Center for Astrophysics | Harvard & Smithsonian Oct 2024

## OUTREACH AND SERVICE

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### Talks:

- **AstroSibs Professional Development Summer Research Info Session**, Yale Astronomy Department December 2024  
*How to Apply to REUs*
- **Mentoring for Careers in Physics (MCP) Workshop**, William & Mary November 2023  
*Applications & Opportunities (Internships & Research)*

### Professional:

- **Astronomy Student Council**, Yale Astronomy Department August 2025 – Present  
*Member (as GSA Representative)*
- **Graduate Student Assembly Representative**, Yale University Graduate School of Arts & Sciences May 2025 – Present  
*Astronomy Department Representative*
- **Exoplanet & Stars Seminar**, Yale Astronomy Department May 2025 – Present  
*Seminar co-organizer*

- **Astronomy Committee on Diversity and Climate**, Yale Astronomy Department  
*Member* September 2024 – Present
- **Committee on the Status of Minorites in Astronomy (CSMA)**, AAS  
*Member* October 2023 – Present
- **Mentoring for Careers in Physics (MCP) Organization**, William & Mary  
*Member* December 2021 – May 2024
- **Society of Physics Students**, William & Mary  
*Member* August 2020 – May 2024
- **College of Arts & Sciences Faculty Hire Committee**, William & Mary  
*Undergraduate Representative* January 2023 – March 2023

#### **Community:**

- **South Asian Student Association**, William & Mary  
*Member* August 2020 – May 2024
- **First Generation & Low Income Student Organization**, William & Mary  
*Member* August 2020 – May 2024
- **Muslim Student Association**, William & Mary  
*Member* August 2020 – May 2024

#### **MEDIA COVERAGE**

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- Navigating a future studying stars: W&M student co-authors prestigious astrophysics study**, William & Mary News February 2024
- Extreme Eruption on Young Sun-like Star Signals Savage Environment for Developing Exoplanets**, Center for Astrophysics | Harvard & Smithsonian News Release February 2024