

Rory Bowens

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EDUCATION:

The University of Michigan, Ann Arbor, MI

Expected Graduation: August 2024

GPA: 4.000

Ph.D. in Astronomy and Astrophysics

The Pennsylvania State University, University Park, PA

Graduation: May 2019

Schreyer Honors College, University Park, PA

GPA: 3.980

Bachelor of Science in Astronomy and Astrophysics

Bachelor of Science in Physics, Minor in Mathematics

WORK EXPERIENCE:

Department of Astronomy, Ann Arbor, MI

Graduate Researcher

August 2019 - Present

- Working under Dr. Michael Meyer (Dept. of Astronomy)
- Studying infrared detectors coupled with ground-based adaptive optics
- Using a cryochamber for the purpose of testing infrared detectors
- Processing high contrast imaging data and predicting yield of detectors for future missions
- Commissioning a new mid-infrared ground-based instrument at MMT

Department of Astronomy and Astrophysics, University Park, PA

Researcher

November 2016 - Present

- Working under Dr. Andrew Shannon and Dr. Rebekah Dawson (Dept. of Astronomy and Astrophysics)
- Running N-body simulations of planetary systems to study protoplanetary disks
- Studying the long term evolution of disks subjected to planetary sculpting

College of LSA, Ann Arbor, MI

Research Experience for Undergraduates

May 2018 - August 2018

- Worked with Dr. Mario Mateo (Dept. of Astronomy)
- Polished ~160 optical fibers for use on the M2FS spectrograph
- Updated code for building plug plates by introducing new features, fixing bugs, and improving the GUI
- Assisted with Clay observations and observed two globular clusters for analysis of galactic center evolution

Department of Astronomy and Astrophysics, Ann Arbor, MI

January 2020 - December 2020

Graduate Student Instructor

Department of Astronomy and Astrophysics, University Park, PA

Learning Assistant

August 2017 - May 2018

PRESENTATIONS AND PAPERS:

- **ApJ Paper** January 2023
 - *Longterm Stability of Planetary Systems formed from a Transitional Disk*
- **SPIE Presentation and Paper** July 2022
 - *MIRAC-5: A ground-based mid-IR instrument with the potential to detect ammonia in gas giants*

- **IR2022 Presentation** February 2022
- **AGU Fall 2021 Poster** December 2021
 - *Forming Hospitable Rocky Worlds with Some (But Not Too Much) Water*
- **EPSC 2021 Presentation** September 2021
- **A&A Paper** July 2021
 - *Exoplanets with ELT-METIS I: Estimating the Direct Imaging Yield Around Nearby Stars*
- **METIS Science Team Presentation** June 2021
- **AASTCS 8: Habitable Worlds Poster** February 2021
- **SPIE Presentation and Paper** December 2020
 - *The Michigan Infrared Test Thermal ELT N-band (MITTEN) Cryostat*
- **233rd AAS Meeting Poster** January 2019
 - *Properties of Planets Formed in a Transitional Disk*
- **University of Michigan's REU Program Presentation** August 2018
- **Eberly College of Science Undergraduate Poster Symposium** October 2017
- **Penn State's REU Program Presentation** August 2017

EXTRACURRICULAR ACTIVITIES:

- JPL Astrophysics Mission Design School, Pasadena, CA** February 2023 - Present
 - Studying successful mission design practices
 - Designing a mission for a mock NASA announcement of opportunity
- Lunar Lion, University Park, PA**
General Control Software Member February 2016 - May 2019
- Eberly College of Science Student Council, University Park, PA**
Public Relations Chair September 2015 - May 2019

RELEVANT COURSEWORK:

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|------------------------------------|---|
| Stellar Astrophysics 1 & 2 | High Energy Astrophysics |
| Modern Astronomical Techniques | Structure and Content of Galaxies |
| The Extragalactic Universe | Astrophysics of the Interstellar Medium |
| Statistical Mechanics | Spacecraft Technology |
| Theoretical Mechanics | Quantum Mechanics |
| Fluids and Thermodynamics | Electricity and Magnetism |
| Wave Motion and Quantization | Topics in Contemporary Physics |
| Thermal Physics | Electronics for Scientists |
| Special and General Relativity | Experimental Physics |
| Programming for Engineers with C++ | |

SKILLS:

- Skilled in Microsoft Office, Python, IDL, SolidWorks, and STK
- Practiced in various laboratory work including part production and implementation
- Worked in Windows, Linux, and Unix environments
- Updated GUIs to improve user-friendliness and accessibility
- Experienced in public speaking, organization, and time management skills