

KAYLEE E. GRACE

Department of Physics and Astronomy
University of Delaware
Newark, DE 19711

E-mail: kgrace@udel.edu
Webpage: kaygrace.github.io
ORCID iD: [0009-0001-6853-9470](https://orcid.org/0009-0001-6853-9470)

EDUCATION

- 2022 – Present* **University of Delaware**, Newark, DE.
Ph.D. in Physics, expected in 2028. MSc in Physics, conferred in 2025.
Advisor: Dr. Judith L. Provencal
- 2018 – 2022* **University of Connecticut (UConn)**, Storrs, CT.
Bachelors of Science in Physics (Honors) and Bachelors of Arts in Women's Gender and Sexuality Studies with a minor in Astrophysics.
- Thesis:** [Electromagnetic Detectability of Binary Supermassive Black Holes](#)
Advisors: Dr. Jonathan Trump and Dr. Megan Davis

RESEARCH POSITIONS

- 2022 - Present* **Graduate Research Assistant**
University of Delaware with Dr. J. Provencal
- Utilizes ground-based, *Transiting Exoplanet Survey Satellite*, and *Hubble Space Telescope* observational data and *TLUSTY* modeling software to investigate the internal structure of helium atmosphere white dwarfs (DBs) and determine the location of the blue edge of the DB instability strip
 - Observes 60 nights per year using Southeastern Association for Research in Astronomy remotely operated telescopes
- 2020 – 2022* Undergraduate Research Assistant in Binary Supermassive Black Hole Simulations for Rubin/LSST (UConn)
- 2021* Research Experience for Undergraduates (REU) Summer Researcher in Neutrino Astrophysics (UWRF)

AWARDS AND SCHOLARSHIPS

- 2025* AAS FAMOUS Travel Grant
- 2024* Student Travel Grant to attend Current Challenges in the Physics of White Dwarf Stars
- 2020, 2021* Jacqueline Brown-Dickstein Award
- 2018* Academic Excellence Scholarship

SELECTED CONFERENCES

<i>January 2025</i>	245th American Astronomical Society Meeting, poster.
<i>July 2024</i>	EUROWD24: 23rd European Workshop on White Dwarfs, poster.
<i>April 2024</i>	InnovatHER: Research Showcase, talk.
<i>March 2024</i>	Current Challenges in the Physics of White Dwarf Stars, poster.
<i>January 2024</i>	243rd American Astronomical Society Meeting, poster.
<i>November 2023</i>	American Physical Society Mid-Atlantic Meeting, poster.
<i>April 2022</i>	UConn Frontiers Undergraduate Research Poster Exhibition.
<i>Jan. 2022</i>	Conference for Undergraduate Women in Physics, poster.

TEACHING AND OUTREACH EXPERIENCE

<i>2025</i>	Teaching Assistant/Residential Mentor Summer Science Program at Colby College <ul style="list-style-type: none"> • Provided academic support in physics, math, and computer science to 36 advanced high school students • Supervised nightly on-site observations using a 0.7-m telescope and the LCO network
<i>2023 – Present</i>	Mount Cuba Scholars Mentor <ul style="list-style-type: none"> • Acts as a mentor for a high school student, helping brainstorm, plan, and execute a research project over their senior year
<i>2022 - Present</i>	Graduate Teaching Assistant University of Delaware <ul style="list-style-type: none"> • PHYS 133 (two semesters): Co-req lab for Introduction to Astronomy • PHYS 221 (five semesters): Co-req lab for algebra-based mechanics lecture
<i>2025 - Present</i>	Technical Associate Mt. Cuba Astronomical Observatory <ul style="list-style-type: none"> • Lead 12+ Public and Children's Programs for audiences of 28 each year • Use the 1.3-m and 0.6-m telescopes to research the DB instability strip
<i>2022 – Present</i>	Academic and Research Mentor of Undergraduate Students <i>2022 – Present</i> Millie Dill (UDel Physics '25)

2022 - 2025 **Educational Associate** (Mt. Cuba Astronomical Observatory)

PUBLICATION LIST

- [1] Davis, Megan C., **Grace, Kaylee E.** et al. "Reliable Identification of Binary Super-massive Black Holes from Rubin Observatory Time-Domain Monitoring". In: *ApJ* 965.1 (2024), p. 34.

EXTRACURRICULAR ACTIVITIES

2024 - Pres. Gender Minorities in Physics and Astronomy

2024 - Pres General Board Member, Founding Member

2023 - Pres. Physics and Astronomy Graduate Student Society

2024 - 2025 Secretary

2023 - 2024 General Board Member