

Dominick Rowan

The Ohio State University



rowan.90osu.edu



0000-0003-2431-981X

EDUCATION

2020 – Present: Ohio State University, PhD in Astronomy

2016 – 2020: Haverford College, Bachelor of Science: Physics & Astronomy

Undergraduate Thesis: *A NICER View of the X-ray Background*

Departmental High Honors

Magna Cum Laude

Fall 2018: Study abroad at University of Edinburgh

AWARDS & HONORS

- AAS Chambliss Honorable Mention (2023)
- NSF GRFP Honorable Mention (2021)
- Ohio State University Fellowship (2020)
- Louis B. Green Prize in Astronomy (2020): *Awarded in honor of Louis B. Green (1911-1999) a Professor of Astronomy from 1941 to 1976 who inspired generations of students. These prizes are given to the students who go above and beyond in their contributions to the departments as well as showing excellence in research.*
- Inducted into Phi Beta Kappa Honors Society (2020)
- KINSC Summer Scholar (2017)

PUBLICATIONS — 8 as first author, 1 as second author, 8 as contributing author

1. Rowan, D., et al. (2023). *A hidden population of massive white dwarfs: two spotted K+WD binaries*. Submitted to MNRAS. (<https://ui.adsabs.harvard.edu/abs/2023arXiv230711146R/abstract>)
2. Rowan, D., et al. (2023). *The Value-Added Catalog of ASAS-SN Eclipsing Binaries III: Masses and Radii of Gaia Spectroscopic Binaries*. MNRAS. (<https://ui.adsabs.harvard.edu/abs/2023MNRAS.523.2641R/abstract>)
3. Rowan, D., et al. (2023). *The Value-Added Catalog of ASAS-SN Eclipsing Binaries II: Properties of Extra-Physics Systems*. MNRAS. (<https://ui.adsabs.harvard.edu/abs/2023MNRAS.520.2386R/abstract>)
4. Rowan, D., et al. (2022). *The Value-Added Catalog of ASAS-SN Eclipsing Binaries: Parameters of Thirty Thousand Detached Systems*. MNRAS (<https://ui.adsabs.harvard.edu/abs/2022arXiv220505687R/abstract>)
5. Rowan, D., et al. (2021). *High Tide: A Systematic Search for Ellipsoidal Variables in ASAS-SN*. MNRAS (<https://ui.adsabs.harvard.edu/abs/2021arXiv210502242R/abstract>)
6. Rowan, D., et al. (2020). *A NICER View of Spectral and Profile Evolution for Three X-ray Emitting Millisecond Pulsars*. Astrophysical Journal (<https://ui.adsabs.harvard.edu/abs/2020ApJ...892..150R/abstract>)

7. Rowan, D., et al. (2019). *Detections and Constraints on White Dwarf Variability from Time-Series GALEX Observations*. MNRAS (<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.4574R/abstract>)

8. Rowan, D., et al. (2016). *The Lick-Carnegie Exoplanet Survey: HD32963b – A New Jupiter-Analog Orbiting a Sun-like Star*. Astrophysical Journal. (<https://ui.adsabs.harvard.edu/abs/2016ApJ...817..104R/abstract>)

Co-Authored Publications:

1. Beck, P. G., et al. (2023). *Red-giant and main-sequence solar-like oscillators in binary systems revealed by ESA Gaia Data Release 3 -- Reconstructing stellar and orbital evolution from binary-star ensemble seismology*. A&A. (<https://ui.adsabs.harvard.edu/abs/2023arXiv230710812B/abstract>)

2. Lam, C. Y., et al. (2023). *Roman CCS White Paper: Characterizing the Galactic population of isolated black holes*. arXiv:2306.12514. (<https://ui.adsabs.harvard.edu/abs/2023arXiv230612514L/abstract>)

3. Terry, S. K., et al. (2023). *The Galactic Center with Roman*. arXiv:2306.12485. (<https://ui.adsabs.harvard.edu/abs/2023arXiv230612485T/abstract>)

4. Phillips, A., et al. (2023). *Seven Classes of Rotational Variables From a Study of 50,000 Spotted Stars with ASAS-SN, Gaia, and APOGEE*. Submitted to MNRAS. (<https://ui.adsabs.harvard.edu/abs/2023arXiv230509715P/abstract>)

5. Jayasinghe, T., Rowan, D., et al. (2023). *A search for compact object companions to high mass function single-lined spectroscopic binaries in Gaia DR3*. MNRAS. (<https://ui.adsabs.harvard.edu/abs/2023MNRAS.521.5927J/abstract>)

6. Olivier, G., et al. (2022). *A Multiwavelength Study of the Massive Colliding Wind Binary WR20a: A possible Progenitor for Fast-Spinning LIGO Binary Black Hole Mergers*. Submitted to ApJ. (<https://ui.adsabs.harvard.edu/abs/2022arXiv221202514O/abstract>)

7. Jayasinghe, T., et al. (2022). *The ‘Giraffe’: Discovery of a stripped red giant in an interacting binary with a $2 M_{\odot}$ lower giant*. MNRAS. (<https://ui.adsabs.harvard.edu/abs/2022MNRAS.tmp.2111J/abstract>)

8. Jayasinghe, T., et al. (2021) *A unicorn in monoceros: the $3 M_{\odot}$ dark companion to the bright, nearby red giant V723 Mon is a non-interacting, mass-gap black hole candidate*. MNRAS. (<https://ui.adsabs.harvard.edu/abs/2021MNRAS.504.2577J/abstract>)

9. Tucker, M.A., et al. (2018). *ASASSN-18ey: The Rise of a New Black Hole X-ray Binary*. The Astrophysical Journal Letters. (<https://ui.adsabs.harvard.edu/abs/2018ApJ...867L...9T/abstract>)

Classification Reports, Research Notes, and Telegrams:

Rizzo Smith, M. et al. (2022). *An Update on ASASSN-21qj: A Rapidly Fading, Sun-Like Star; Back With a Vengeance*. (<https://ui.adsabs.harvard.edu/abs/2022ATel15531....1R/abstract>)

Rizzo Smith, M. et al. (2022). ASASSN-22el: A Deep Eclipse Event.
(<https://ui.adsabs.harvard.edu/abs/2022ATel15308....1R/abstract>)

Rizzo Smith, M. et al. (2021). ASASSN-21sa: A Deep Dimming Event.
(<https://ui.adsabs.harvard.edu/abs/2021ATel14937....1R/abstract>)

Rizzo Smith, M. et al. (2021). ASASSN-21qj: A Rapidly Fading, Sun-Like Star.
(<https://ui.adsabs.harvard.edu/abs/2021ATel14879....1R/abstract>)

Rizzo Smith, M. et al. (2021). ASASSN-21nn: An Unusual Dimming Event in a Red Giant Star.
(<https://ui.adsabs.harvard.edu/abs/2021ATel14803....1R/abstract>)

Rowan, D., et al. (2021). ASASSN-21co: A Detached Eclipsing Binary with an 11.9 yr Period. RNAAS
(<https://iopscience.iop.org/article/10.3847/2515-5172/ac0c83>)

Tucker, M.A., Rowan, D.M., & Shappee, B.J. (2018). SCAT Transient Classification Report for 2018-07-22. Transient Name Server Classification Report. (<https://ui.adsabs.harvard.edu/abs/2018TNSCR1016....1T/abstract>)

Tucker, M.A., Rowan, D.M., & Shappee, B.J. (2018). SCAT Transient Classification Report for 2018-06-13. Transient Name Server Classification Report. (<https://ui.adsabs.harvard.edu/abs/2018TNSCR.814....1T/abstract>)

Tucker, M.A., Rowan, D.M., & Shappee, B.J. (2018). SCAT Transient Classification Report for 2018-06-12. Transient Name Server Classification Report. (<https://ui.adsabs.harvard.edu/abs/2018TNSCR.805....1T/abstract>)

Tucker, M.A., et al. (2018). SCAT Classification of 4 Optical Transients. The Astronomer's Telegram.
(<https://ui.adsabs.harvard.edu/abs/2018ATel11711....1T/abstract>)

WORK EXPERIENCE



Thomas Lucas Productions – 2016

Worked as an assistant writer and editor for SpaceRip, a streaming-based production company, during eight-week internship. Wrote and edited a documentary on Solar System formation theory, *The Improbable Rise of Planet Earth*. Wrote several astronomy features for SpaceRip blog on current events.

Haverford College Public Observing –2019 – 2020

Working as a leader of the Haverford public observing program this semester. Organize and run 3-4 observatory open-house events per semester for students and the local community and private events for small groups. Lead observations with the 12" and 16" telescopes, run/ science demonstrations, and give astronomy presentations.

PRESENTATIONS



Talk, Harvard-Smithsonian Center for Astrophysics ITC Luncheon, March 2023. Cambridge, Massachusetts. *The Value-Added Catalog of ASAS-SN Eclipsing Binaries*

Virtual Talk, University of California Santa Barbara, March 2023. *The Value-Added Catalog of ASAS-SN Eclipsing Binaries*

Poster presentation, American Astronomical Society, 241, Jan 2023. Seattle, Washington. *The Value-Added Catalog of ASAS-SN Eclipsing Binaries*

Poster presentation, TESS Science Conference II, Aug 2021. Virtual Meeting. *A Systematic Search for Ellipsoidal Variables with ASAS-SN and TESS*

Poster presentation, American Astronomical Society, 237, Jan 2021. Virtual Meeting. *A Systematic Search for Ellipsoidal Variables in ASAS-SN*

Poster presentation, American Astronomical Society, 235, Jan 2020. Honolulu, Hawaii. *A NICER View of Spectral and Profile Evolution for Three X-ray Emitting Millisecond Pulsars*

Talk, Haverford College Physics & Astronomy Symposium, Dec 2019. *A NICER View of the X-Ray Background*

Poster presentation, Haverford KINSC Summer Research Symposium, September 2019. *Phase-Resolved Spectra of Millisecond Pulsars with NICER X-ray Observations*

Poster presentation, International Pulsar Timing Array, June 2019. Pune, India. *Phase-Resolved Spectra of Millisecond Pulsars with NICER X-ray Observations*

Poster presentation, American Astronomical Society, 234, Jan 2019. *Pulsating and Eclipsing White Dwarfs Discovered from Time-Series GALEX Observations*

Talk, University of Hawaii Institute for Astronomy Summer Research Symposium, August 2018. *White Dwarf Variability in GALEX Observations.*

Talk, Keck Northeast Astronomy Consortium, October 2017. *Mapping Faraday Rotation Measures onto High Velocity Cloud H288*

OUTREACH AND MENTORSHIP



Ohio State Summer Undergraduate Research Program 2023:

Student: Jowen Callahan

Project Title: Determining the Masses and Radii of Heartbeat Stars

“Polaris” undergraduate physics and astronomy mentorship program, 2021, 2022, 2023

“Zenith” SciAccess Blind & Visually Impaired Astronomy Mentorship Program, 2020.

Haverford College Public Observing Co-Head, 2019-2020.

Organized observatory open-house events for the local community and private events for small groups/high schools. Led observations with the 12” and 16” telescopes, ran science demonstrations and gave talks

TEACHING EXPERIENCE



➤ Teaching Assistant, Introduction to Astronomy 101. Haverford College, Spring 2020

- Developed 'Startup Guide' for NICER Timing Group summer students, 2020

OBSERVING EXPERIENCE

Large Binocular Telescope: PEPsi and MODS (5 nights)

Public Observing facilities: Schmidt-Cassegrain 8", 12", and 16" telescopes

Observational Astronomy (ASTR341): Green Bank 20m radio telescope, 40ft radio telescope

University of Hawaii IfA REU: UH 88inch telescope (4 nights)