

Research focus: galaxy formation and evolution across cosmic time with multiwavelength observations

EDUCATION

Texas A&M University	College Station, TX
<i>Ph.D. Astronomy</i>	<i>Expected May 2027</i>
<ul style="list-style-type: none"> • Advisor: Dr. Justin Spilker • Thesis: Tracing Galaxy Evolution Across Cosmic Time with Post-Starburst Galaxies 	
<i>M.S. Astronomy</i>	<i>May 2025</i>
<ul style="list-style-type: none"> • GPA: 3.92/4.00 • Project: Quenching via Tidal Removal of Cold Gas in Intermediate-z Massive Post-Starburst Galaxies 	
Michigan State University	East Lansing, MI
<i>B.S. Astrophysics</i>	<i>May 2022</i>
<ul style="list-style-type: none"> • GPA: 3.92/4.00 • Majors: Astrophysics, Physics 	

RESEARCH POSITIONS/EXPERIENCE

Graduate Student (Advisor: Dr. Justin Spilker)	August 2022 – Present
<i>Texas A&M University</i>	<i>College Station, TX</i>
Student Research Assistant (Advisor: Dr. Laura Chomiuk)	August 2021 – May 2022
<i>Michigan State University Observatory Research Program</i>	<i>East Lansing, MI</i>
NSF REU Intern (Advisor: Dr. Juergen Ott)	May 2021 – October 2021
<i>National Radio Astronomy Observatory</i>	<i>Socorro, NM (Remote)</i>
Student Research Assistant (Advisor: Dr. Kaitlin Cook)	June 2020 – May 2022
<i>National Superconducting Cyclotron Laboratory</i>	<i>East Lansing, MI</i>
Research Assistant (Advisor: Dr. Daniel Rathbun)	April 2019 – August 2019
<i>Bionics and Vision Lab, Henry Ford Health System</i>	<i>Detroit, MI</i>

HONORS AND AWARDS

NRAO Student Observing Support Program Fellowship (\$40k)	November 2024
NSF Graduate Research Fellowship Program, Honorable Mention	April 2024
Texas Space Grant Consortium Graduate Fellowship (\$5k)	December 2023
NSF Research Experiences for Undergraduates (~\$7k)	June 2021
MSU College of Natural Science Undergraduate Research Support Scholarship (\$1k)	January 2021

PUBLICATIONS

First-Author

1. **D’Onofrio, V.**, et al. (2025). “The Physical State of Massive Gas Reservoirs in $z \sim 0.7$ Post-Starburst Galaxies.” In preparation.
2. **D’Onofrio, V.**, et al. (2025). “Timing the Onset of Radio-Mode Feedback with $z \sim 0.7$ Post-Starbursts.” In preparation.
3. **D’Onofrio, V.**, et al. (2025). “Quenching Through Tidal Gas Removal: Molecular Gas and Star Formation in Tidal Tails of $z \sim 0.7$ Post-Starburst Galaxies.” *ApJ*, 990, 166.

Co-Author

1. Kumar, A., et al. (**incl. D’Onofrio, V.**) (2025). “Meet the Neighbors: Gas Rich “Buddy Galaxies” are Common Around Recently Quenched Massive Galaxies in the SQuIGGLE Survey.” Submitted to RNAAS.
2. Setton, D., et al. (**incl. D’Onofrio, V.**) (2025). “SQuIGGLE: Buried star formation cannot explain the rapidly fading CO(2–1) luminosity in massive, $z \sim 0.7$ post-starburst galaxies.” Submitted to *ApJ*.
3. Spilker, J., et al. (**incl. D’Onofrio, V.**) (2025). “Unusually High Gas-to-Dust Ratios Observed in High-Redshift Quiescent Galaxies.” Submitted to *ApJ*.

4. Suess, K., et al. (**incl. D’Onofrio, V.**) (2025). “Cold gas in a post-starburst pair at $z \sim 1.4$: major mergers as a pathway to quenching in the HeavyMetal survey.” Submitted to ApJL.
5. Luo, Y., et al. (**incl. D’Onofrio, V.**) (2025). “A Multiwavelength Evaluation of AGN in the Post-Starburst Phase.” Submitted to ApJ.
6. Zhu, P., et al. (**incl. D’Onofrio, V.**) (2025). “SQuIGGLE: Observational Evidence of Low Ongoing Star Formation Rates in Gas-rich Post-starburst Galaxies.” ApJ, 981, 60.
7. Verrico, M., et al. (**incl. D’Onofrio, V.**) (2023). “Merger Signatures are Common, but not Universal, in Massive, Recently Quenched Galaxies at $z \sim 0.7$.” ApJ, 949, 5.

AWARDED PROPOSALS

Principal Investigator

1. **ALMA Cycle 12** - 2025.1.01006.S (12.7 hours): What’s Left Behind: A Census of the Cold ISM in the First Massive Quiescent Galaxies (PI: **V. D’Onofrio**)
2. **ALMA Cycle 11** - 2024.1.01252.S (9.8 hours): Diffuse or Dense: Probing the Physical State of Massive Gas Reservoirs in $z \sim 0.7$ Quenched Galaxies (PI: **V. D’Onofrio**)
3. **VLA Semester 24B** - VLA/24B-451 (21.0 hours): Measuring Jet Ages to Test Radio AGN Feedback with Massive $z \sim 0.7$ Post-Starbursts (PI: **V. D’Onofrio**)

Co-Investigator

1. **ALMA Cycle 12** - 2025.1.01067.S (45.6 hours): Dust Rising from the ASHES: A Comprehensive ALMA Survey of Remnant Dust in the Earliest Quiescent Galaxies (PI: Z. Ji)
2. **ALMA Cycle 11** - 2024.1.00216.S (13.1 hours): Timing the Onset of Unexpected Dust Destruction using High-Redshift Post-Starburst Galaxies (PI: J. Spilker)
3. **ALMA Cycle 11 w/ JWST Cycle 3** - 2024.1.01064.S/JWST-GO-06719 (15.5/4.7 hours): Mapping Cold Gas and Star Formation in Gas Rich Post-Starburst Galaxies Near Cosmic Noon (PI: D. Setton)
4. **ALMA Cycle 10** - 2023.1.00948.S (13.1 hours): Timing the Onset of Unexpected Dust Destruction using High-Redshift Post-Starburst Galaxies (PI: J. Spilker)
5. **ALMA Cycle 10** - 2023.1.01012.S (12.1 hours): Does Molecular Gas Survive Quenching Near Cosmic Noon? (PI: D. Setton)

TALKS

Invited

1. **D’Onofrio, V.**, et al. “Tidal Removal of Cold Molecular Gas in $z \sim 0.7$ Post-Starburst Galaxies: A Qualitatively New Quenching Mechanism,” Texas A&M Nuclear-Astro Seminar, College Station, TX, May 24, 2024.

Contributed

1. **D’Onofrio, V.**, et al. “Investigating Star Formation Suppression via the ISM of Higher-Redshift Post-Starburst Galaxies,” Decoding Galactic Evolution through the Interplay of the Multi-Phase Interstellar Medium, Nagoya, Japan, August 25, 2025.
2. **D’Onofrio, V.**, et al. “Probing Star Formation Suppression with Higher- z Post-Starbursts,” Texas A&M Astrosymposium, College Station, TX, August 15, 2024.
3. **D’Onofrio, V.**, et al. “Tidal Removal of Cold Molecular Gas in $z \sim 0.7$ Post-Starburst Galaxies: A Qualitatively New Quenching Mechanism,” McMaster University Star Formation Workshop, Hamilton, ON, August 14, 2024.
4. **D’Onofrio, V.**, et al. “Tidal Removal of Cold Molecular Gas in $z \sim 0.7$ Post-Starburst Galaxies: A Qualitatively New Quenching Mechanism,” STScI Spring Symposium 2024, Baltimore, MD, April 19, 2024.
5. **D’Onofrio, V.**, et al. “Quenching in Intermediate-Redshift Massive Post-Starburst Galaxies,” Texas A&M Astrosymposium, College Station, TX, August 17, 2023.

6. **D’Onofrio, V.**, et al. “Molecular Gas Toward Sagittarius B2: The Galactic Center’s Complex Giant Molecular Cloud,” Texas A&M Astrosymposium, College Station, TX, August 18, 2022.
7. **D’Onofrio, V.**, et al. “Characterizing Molecular Gas Towards Sagittarius B2: The Galactic Center’s Complex Giant Molecular Cloud,” 2021 NRAO/GB0 Summer Student Symposium, virtual participation, August 13, 2021.

Public

1. **D’Onofrio, V.** “Why You Shouldn’t Go to Mars,” Astronomy on Tap, Bryan, TX, August 23, 2023.

Other

1. **D’Onofrio, V.**, et al. “Tidal Removal of Cold Molecular Gas in $z \sim 0.7$ Post-Starburst Galaxies: A Qualitatively New Quenching Mechanism,” Master’s/Preliminary Exam Defense, College Station, TX, October 28, 2024.
2. **D’Onofrio, V.**, et al. “Star Formation Quenching in Intermediate-Redshift Massive Post-Starburst Galaxies,” Texas A&M Exgal Group Meeting, College Station, TX, April 11, 2024.
3. **D’Onofrio, V.**, et al. “Molecular Gas Toward Sagittarius B2: The Galactic Center’s Complex Giant Molecular Cloud,” MSU Society of Physics Students Coffee Breaks, East Lansing, MI, November 11, 2021.

LEADERSHIP & OUTREACH

STEM Pen Pal	August 2025 – Present
<i>Letters to a Pre-Scientist</i>	<i>Texas A&M University</i>
Coordinator	February 2025 – Present
<i>Mentoring and Advising Graduates in an Inclusive Community (MAGIC)</i>	<i>Texas A&M University</i>
Co-leader	October 2023 – February 2025
<i>Graduates Learning Astro and Soft Skills (GLASS)</i>	<i>Texas A&M University</i>
In the News Presenter	October 2023 – Present
<i>Astronomy on Tap</i>	<i>Bryan, TX</i>
Mentor	August 2023 – Present
<i>Mentoring and Advising Graduates in an Inclusive Community (MAGIC)</i>	<i>Texas A&M University</i>
Trivia Creator	May 2023 – July 2024
<i>Astronomy on Tap</i>	<i>Bryan, TX</i>
Astronomer/Physicist	October 2022 – Present
<i>Adopt-a-Physicist</i>	<i>Texas A&M University</i>

TEACHING EXPERIENCE

Teaching Assistant, Lab Instructor	January 2024 – May 2024
<i>ASTR 111: Overview of Modern Astronomy</i>	<i>Texas A&M University</i>
Teaching Assistant	August 2023 – December 2023
<i>ASTR 320: Astrophysical Research Methods</i>	<i>Texas A&M University</i>
Teaching Assistant, Lab Instructor	January 2023 – May 2023
<i>ASTR 111: Overview of Modern Astronomy</i>	<i>Texas A&M University</i>
Teaching Assistant	August 2022 – December 2022
<i>ASTR 401: Stars and Extrasolar Planets</i>	<i>Texas A&M University</i>

OBSERVATION EXPERIENCE

MSU Observatory 0.6-meter Telescope (**~30 hrs**)

PROFESSIONAL SOCIETY MEMBERSHIPS

American Astronomical Society	October 2021 - Present
American Physical Society	September 2021 - May 2022

SKILLS

Programming: Python, C++, Swift/SwiftUI, Xcode, LaTeX, Git, Ruby, Java, MATLAB, Mathematica
Astronomy/Physics: CARTA, CASA, DS9, ROOT, AstroImageJ, Maxim DL, ACE SmartDome, grizli
Engineering: 3D printing, AutoCAD, Cura, Arduino