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Vincenzo (Vinny) R. D'Onofrio

NRAO Student Observing Support Program Fellow

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

Education

Texas A&M University — College Station, TX

Ph.D. Astronomy — *Expected May 2027*

- Advisor: Dr. Justin Spilker
- Thesis: Tracing Galaxy Evolution Across Cosmic Time with Post-Starburst Galaxies

M.S. Astronomy — *May 2025*

- 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

B.S. Astrophysics — *May 2022*

- GPA: 3.92/4.00
- Majors: Astrophysics, Physics

Research Positions/Experience

Graduate Student (Advisor: Dr. Justin Spilker) — August 2022 – Present
Texas A&M University — *College Station, TX*

Student Research Assistant (Advisor: Dr. Laura Chomiuk) — August 2021 – May 2022
Michigan State University Observatory Research Program — *East Lansing, MI*

NSF REU Intern (Advisor: Dr. Juergen Ott) — May 2021 – October 2021
National Radio Astronomy Observatory — *Socorro, NM (Remote)*

Student Research Assistant (Advisor: Dr. Kaitlin Cook) — June 2020 – May 2022
National Superconducting Cyclotron Laboratory — *East Lansing, MI*

Research Assistant (Advisor: Dr. Daniel Rathbun) — April 2019 – August 2019
Bionics and Vision Lab, Henry Ford Health System — *Detroit, MI*

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. Setton, D., et al. **(incl. D'Onofrio, V.)** (2025). "SQuIGG$\vec{L}$E: Buried star formation cannot explain the rapidly fading CO(2–1) luminosity in massive, $z \sim 0.7$ post-starburst galaxies." AJ, 170, 351.

2. 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 SQuIGG$\vec{L}$E Survey." RNAAS, 9, 243.

3. Spilker, J., et al. **(incl. D'Onofrio, V.)** (2025). "Unusually High Gas-to-Dust Ratios Observed in High-Redshift Quiescent Galaxies." Accepted to ApJL.

4. Suess, K., et al. **(incl. D'Onofrio, V.)** (2025). "Cold gas in a post-starburst pair at z∼1.4: major mergers as a pathway to quenching in the HeavyMetal survey." ApJ, 993, 158.

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 ∼ 0.7." ApJ, 949, 5.

Awarded Proposals

Principal Investigator

1. **VLA Semester 26A** - VLA/26A-427 (21.0 hours): What Powers the Radio? Morphological Constraints in High-z Post-Starbursts (PI: **V. D'Onofrio)**

2. **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)**

3. **ALMA Cycle 11** - 2024.1.01252.S (9.8 hours): Diffuse or Dense: Probing the Physical State of Massive Gas Reservoirs in z∼0.7 Quenched Galaxies (PI: **V. D'Onofrio)**

4. **VLA Semester 24B** - VLA/24B-451 (21.0 hours): Measuring Jet Ages to Test Radio AGN Feedback with Massive z∼0.7 Post-Starbursts (PI: **V. D'Onofrio)**

Co-Investigator

1. **VLA Semester 26A** - VLA/26A-430 (45.0 hours): Are High-Redshift Quiescent Galaxies Gas-Rich but Dust-Poor? (PI: J. Spilker)

2. **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)

3. **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)

4. **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)

5. **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)

6. **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∼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∼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∼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/GBO 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∼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
Letters to a Pre-Scientist — *Texas A&M University*

Coordinator — February 2025 – Present
Mentoring and Advising Graduates in an Inclusive Community (MAGIC) — *Texas A&M University*

Co-leader — October 2023 – February 2025
Graduates Learning Astro and Soft Skills (GLASS) — *Texas A&M University*

***In the News* Presenter** — October 2023 – Present
Astronomy on Tap — *Bryan, TX*

Mentor — August 2023 – Present
Mentoring and Advising Graduates in an Inclusive Community (MAGIC) — *Texas A&M University*

Trivia Creator — May 2023 – July 2024
Astronomy on Tap — *Bryan, TX*

Astronomer/Physicist — October 2022 – Present
Adopt-a-Physicist — *Texas A&M University*

Teaching Experience

Teaching Assistant, Lab Instructor — January 2024 – May 2024
ASTR 111: Overview of Modern Astronomy — *Texas A&M University*

Teaching Assistant — August 2023 – December 2023
ASTR 320: Astrophysical Research Methods — *Texas A&M University*

Teaching Assistant, Lab Instructor January 2023 – May 2023
ASTR 111: Overview of Modern Astronomy *Texas A&M University*
Teaching Assistant August 2022 – December 2022
ASTR 401: Stars and Extrasolar Planets *Texas A&M University*

Observation Experience

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