# Theo O'Neill

theo-oneill.github.io
theo.oneill@cfa.harvard.edu


## Education

University of Virginia 2022

- B.S. Astronomy-Physics (with high distinction) & Statistics
- *Thesis:* Star Formation and Feedback in Low-metallicity Environments: From Molecular Clouds to Protostars

## Experience

Research Assistant, Harvard-Smithsonian Center for Astrophysics 2023 –
*Advisor: Prof. Alyssa Goodman*

Undergraduate Researcher, UVA 2019 – 2022
*Advisor: Prof. Rémy Indebetouw*

NSF REU, Smithsonian Astrophysical Observatory 2022
*Advisor: Prof. Alyssa Goodman*

Undergraduate Research Fellow, Chalmers Initiative on Cosmic Origins 2020 – 2021
*Advisors: Prof. Jonathan Tan & Dr. Giuliana Cosentino*

## Awards

NSF Graduate Research Fellowship 2023
Goldwater Scholarship 2022
Astronaut Scholarship 2022
Universities Space Research Association Distinguished Undergraduate Award 2022
D. Nelson Limber Award, UVA Dept. of Astronomy (*Outstanding $4^{th}$ year undergraduate*) 2023
Vyssotsky Prize, UVA Dept. of Astronomy (*Outstanding $3^{rd}$ year undergraduate*) 2022
McCullough Scholarship, UVA Dept. of Astronomy (*Outstanding $2^{nd}$ year undergraduate)* 2021
Echols Scholar, UVA 2018
College Science Scholar, UVA 2018

## Publications

5. Hsu, C.; Tan, J. C.; Christie, D.; Cheng, Y.; O'Neill, T. J. *GMC Collisions As Triggers of Star Formation. VIII. The Core Mass Function.* 2023, MNRAS, 552, 700.
4. O'Neill, T. J.; Indebetouw, R.; Sandstrom, K. M.; Bolatto, A. D.; Jameson, K. E.; Carlson, L. R.; Finn, M. K.; Meixner, M.; Sabbi, E; Sewilo, M. *Sequential Star Formation in the Young SMC Region NGC 602: Insights from ALMA*. 2022, ApJ, 938, 82.
3. O'Neill, T. J.; Indebetouw, R.; Bolatto, A. D; Madden, S. C; Wong, T. *Effects of CO-dark Gas on Measurements of Molecular Cloud Stability and the Size-Linewidth Relationship*. 2022, ApJ, 933, 179.
2. Swift, J. J; and forty other authors including O'Neill, T. J. *The Renovated Thacher Observatory and First Science Results*. 2022, PASP, 134, 1033.
1. O'Neill, T. J.; Cosentino, G.; Tan, J. C.; Cheng, Y.; Liu, M. *The Core Mass Function across Galactic Environments. III. Massive Protoclusters*. 2021, ApJ, 916, 45.

Non-refereed:

3. O'Neill, T. J.; Goodman, A. A.; Soler, J. D.; Han, J. J.; Zucker, C. *Mapping the Local Bubble's Magnetic Field in 3D.* 2023, available on Authorea preprint server (DOI: 10.22541/au.167303779.92162611).
2. Rasmusssen, K.; Chen, J.; Colquhoun, R. L.; Frentz, S.; Hiatt, L.; Kosciesza, A. J.; Olsen, C.; O'Neill, T. J.; Zamloot, V.; Strauss, B. E. *Gender Inclusive Methods in Studies of STEM Practitioners.* 2023, arXiv:2307.15802.
1. Strauss, B. E.; Borges, S. R.; Faridani, T.; Grier, J. A.; Kiihne, A.; Maier, E. R.; Olsen, C.; O'Neill, T.; Rivera-Valentín, E. G.; Sneed, E. L.; Waller, D.; Zamloot, V. *Nonbinary Systems: Looking Towards the Future of Gender Equity in Planetary Science.* 2020, State of the Profession White Paper for the Planetary Science and Astrobiology Decadal Survey 2023–2032.

## Presentations

Talks:

Colloquium, UVA Physics Department. 2023
*Mapping the Local Bubble's Magnetic Field in 3D*

Press Conference at 241$^{st}$ Meeting of the AAS. 2023
*A 3D Map of the Local Bubble's Magnetic Field*

241$^{st}$ Meeting of the AAS. 2023
*A 3D Map of the Local Bubble's Magnetic Field*

Max Planck Institute for Extraterrestrial Physics CAS Star & Planet Formation Journal Club. 2022
*Sequential Star Formation in the Young SMC Region NGC 602*

UVA Sigma Pi Sigma Research Symposium. 2022
*Mapping the Local Bubble's Magnetic Field in 3D*

Smithsonian Astrophysical Observatory REU Symposium. 2022
*Mapping the Local Bubble's Magnetic Field in 3D*

Michigan State University Astro Coffee. 2021
*The Core Mass Function Across Galactic Environments*

237$^{th}$ Meeting of the AAS. 2021
*The Core Mass Function in Massive, Dense Protoclusters*

VICO-CICO Fall Science Workshop. 2020
*The Core Mass Function in Massive Protoclusters*

VICO-CICO Summer Symposium. 2020
*Searching for the Peak of the Core Mass Function with ALMA*

Posters:

241$^{st}$ Meeting of the AAS. (Costa et al.) 2023
*Complete Confusion: Photometry of Extended Sources in Interferometric Radio Data*

52$^{nd}$ Lunar and Planetary Science Conference. (Strauss et al.) 2021
*Nonbinary Systems: Gender-inclusive Study Methods in Planetary Science*

American Geophysical Union Fall Meeting. (Strauss et al.) 2020
*Nonbinary Systems: Looking Toward the Future of Gender Equity in Planetary Science*

232$^{nd}$ meeting of the AAS. (Swift et al.) 2018
*Nearby Type Ia Supernova Follow-up at the Thacher Observatory*

$229^{\text{th}}$ meeting of the AAS. 2017
*First Light of the Renovated Thacher Observatory*

$229^{\text{th}}$ meeting of the AAS. (Swift et al.) 2017
*Does the Eclipsing Binary KIC 10935310 Contain a Massively Inflated M Dwarf?*

$229^{\text{th}}$ meeting of the AAS. (Edwards et al.) 2017
*A Search for Planet 9 at the Thacher Observatory*

$227^{\text{th}}$ meeting of the AAS. 2016
*The Renovation and Future Capabilities of the Thacher Observatory*

## Observing Time

PI: ALMA Cycle 9 "CO-dark gas in the Low-metallicity Star-forming region NGC 602." 11 hrs
Co-I: Las Cumbres Observatory Education Program, FLOYDS spectrograph (PI: J. Swift). 2 hrs

## Service & Outreach

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| Diversity, Equity, and Inclusion Committee, UVA Dept. of Astronomy | 2021 – 2022 |
| Graduate-Undergraduate Astronomy Committee, UVA Dept. of Astronomy | 2020 – 2022 |
| Undergraduate Peer Mentoring Program, UVA Dept. of Astronomy | 2020 – 2022 |
| UVA Astronomy Club (Vice President, Outreach Chair, Event Manager) | 2020 – 2022 |
| Astronomy Undergraduate Council (Chair), UVA Dept. of Astronomy | 2020 – 2021 |

*July 2023*