

Eric R. Van Clepper

Contact Information

Department of the Geophysical Sciences
University of Chicago
ericvc@uchicago.edu
ericvc.com

ORCID

[0000-0002-5954-6302](https://orcid.org/0000-0002-5954-6302)

Education

- 2020 - 2026 Ph.D. Candidate, Geophysical Sciences, University of Chicago, Chicago, IL
Expected Graduation May 2026
Thesis Topic: Coupled Chemistry and Dynamics in Protoplanetary Disks
Advisor: Fred Ciesla
- 2015 - 2019 BA *cum laude* Astronomy & Planetary Science with Honors, Northwestern University, Evanston, IL
Advisor: Giles Novak

Employment

- 2020 - 2026 Research and Teaching Assistant, University of Chicago, Chicago, IL
- 2019 - 2020 N'Cat Tutor, Northwestern University, Evanston, IL
Lead one-on-one and group tutoring sessions for undergraduate students in introductory and advanced Math, Physics, and Earth Sciences courses.
- 2017 - 2019 Undergraduate Research Assistant, Northwestern University, Evanston, IL
Built sun sensor box for the BLAST-TNG. Modeled expected output of Half-Waveplate Sensor for TolTEC camera on LMT. Calibrated pointing on new HAWC+ observations of OMC star forming region.

Selected Grants

- Oct 2023 - Oct 2026 NASA FINESST
- Sept 2020 - Sept 2022 McCormick Fellowship
- June 2018 - Sept 2018 Northwestern Weinberg Research Grant
- June 2018 - Sept 2018 NASA ISG Summer Research Grant
- June 2017 - Sept 2017 NASA ISG Summer Research Grant

Conference Presentations

- August 2024 Goldschmidt Conference, Chicago
- January 2024 FARGO3D 1st Workshop, Santiago, Chile
- August 2023 Meteoritical Society, 86th Annual Meeting, Los Angeles
- July 2023 Kavli-IAU Astrochemistry Symposium, Astrochemistry VIII, Traverse City
- August 2021 Meteoritical Society, 84th Annual Meeting, Chicago

Poster Presentations

- October 2025 Solar System in Context, NOIRLab
- September 2025 Origins of Life, Origin Federation Conference
- June 2025 Origins of Solar Systems, Gordon Research Conference
- July 2024 New Heights in Planet Formation, ESO Dust Busters
- June 2023 Origins of Solar Systems, Gordon Research Conference
- August 2022 Emerging Researchers in Exoplanet Sciences VII

Software Development

CANDY <https://github.com/ervc/newcandy>

Chemistry ANd DYnamics, coupled astrochemistry and dust evolution for self-consistent modeling of chemical composition during planetesimal formation.

ParTrace <https://github.com/ervc/cpartrace>

Particle Tracking algorithm to track trajectories of tracer particles in 3D Hydrodynamic disk simulations, accounting for gas drag with 3D flows around embedded planets.

Professional Activities

- Executive Officer for NASA Review Panel.
- Peer Reviewer for *The Astrophysical Journal*.

Departmental Service

2024 Lead TA for intro to coding Bootcamp for incoming students
2024 - 2025 Graduate Union Steward for the Department of Geophysical Sciences
2023 Co-organizer of University of Chicago Graduate Research Expo
2022 - 2023 Co-organizer of University of Chicago Exoplanet Journal Club

Outreach

Nov 18, 2025 Meet a Scientist grad student life panel, College of the South
July 23, 2025 Guest Lecture on planet formation for UChicago summer class ASTR11901
Nov 14, 2023 Planetary science and grad student life panel, College of the South
Nov 21, 2022 Planetary science and grad student life panel, College of the South

Courses Taught

As TA at University of Chicago

Winter 2025	PHSC 13600	Natural Hazards
Spring 2024	GEOS 21200	Physics of the Earth
Autumn 2021	PHSC 10800	Earth as a Planet: Exploring our Place in the Universe
Winter 2021	PHSC 10100	Origin and Evolution of the Solar System and the Earth

Publications

First Author Publications

- Van Clepper, E. R., E. Bergin, F. Alarcón, and F. Ciesla. 2025. "Dust Recycling and Icy Volatile Enhancement (DRIVE): A Novel Method of Volatile Enrichment in Cold Giant Planets." *The Astrophysical Journal Letters* 994: L44. <https://doi.org/10.3847/2041-8213/ae1d81>
- Van Clepper, E., E. Price, and F. J. Ciesla. 2025. "Three-Dimensional Transport of Solids in a Protoplanetary Disk Containing a Growing Giant Planet." *The Astrophysical Journal* 980: 201. <https://doi.org/10.3847/1538-4357/ada8a4>.
- Van Clepper, E., J. B. Bergner, A. D. Bosman, E. Bergin, and F. J. Ciesla. 2022. "Chemical Feedback of Pebble Growth: Impacts on CO Depletion and C/O Ratios." *The Astrophysical Journal* 927 (2): 206. <https://doi.org/10.3847/1538-4357/ac511b>.

Other Publications

- Ciesla, F. J., E. Van Clepper, J. Bergner, and E. Bergin. 2025. "Oxygen Isotope Constraints on the Importance of Photochemical Processing in Protoplanetary Disks." *The Astronomical Journal, In Press*. <https://arxiv.org/pdf/2512.04944>
- Price, E. M., E. Van Clepper, and F. J. Ciesla. 2025. "Dynamics of Small, Constant-Size Particles in a Protoplanetary Disk with an Embedded Protoplanet." *The Astrophysical Journal* 979 (1): 37. <https://doi.org/10.3847/1538-4357/ad9f35>.
- Seligman, D. Z., L. A. Rogers, S. H. C. Cabot, et al. incl. E. Van Clepper. 2022. "The Volatile Carbon-to-Oxygen Ratio as a Tracer for the Formation Locations of Interstellar Comets." *The Planetary Science Journal* 3 (7): 150. <https://doi.org/10.3847/PSJ/ac75b5>.

Santos, F. P., D. T. Chuss, C. D. Dowell, et al. incl. E. Van Camp.* 2019. “The Far-Infrared Polarization Spectrum of ρ Ophiuchi A from HAWC+/SOFIA Observations.” *The Astrophysical Journal* 882 (2): 113. <https://doi.org/10.3847/1538-4357/ab3407>.

Chuss, D. T., B-G Andersson, J. Bally, et al. incl. E. Van Camp.* 2019. “HAWC+/SOFIA Multiwavelength Polarimetric Observations of OMC-1.” *The Astrophysical Journal* 872 (2): 187. <https://doi.org/10.3847/1538-4357/aafd37>.

**Name Change from Eric Van Camp to Eric Van Clepper in 2021*