Olivia Rae Cooper

NSF Postdoctoral Fellow

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Summary

Research Interests: Massive galaxy evolution at high redshift ($z > 2$); baryonic characterization via multi-wavelength spectroscopic and photometric observations; incorporating climate change education in (astro)physics curricula

Grants & Awards: **$630k** from NASA, NRAO, Heising-Simons Foundation, NSF

Publications: **5 first-author** (57 citations); 41 co-author (> 1000 citations)

Mentorship: **9 students**: 1 post-bac (1 paper in prep.), 7 undergrad (2 published works), 1 high school

Observing: PI programs on ALMA, Keck, HET, Gemini, Palomar (~**70 hr total**); 27 nights observing on Keck

Talks & Outreach: 22 talks (**11 invited**); 25 science communication articles; 5 public outreach talks/interviews

Leadership: choir co-founder, Astrobites Climate Change Committee co-founder, COSMOS-Web Outreach co-chair

Education

The University of Texas at Austin *2020 - 2025*

Ph.D. in Astronomy *GPA: 4.0/4.0*

- Advisor: Prof. Caitlin Casey
- NSF Graduate Research Fellow
- Dissertation: *Bright and Early: The Role of Massive Galaxies in the Evolution of the $z > 2$ Universe*

Smith College *2016 - 2020*

B.A. in Astronomy (Highest Honors) & in Physics *GPA: 3.9/4.0*

- Advisor: Prof. James Lowenthal
- Concentration in Climate Change
- Senior Honors Thesis: *Tales From Our Dusty, Warped Past: Lensing Environments of Planck-Selected Submillimeter Galaxies Observed With Gemini*

Professional Appointments

2025	**NSF AAPF**, Department of Astrophysical and Planetary Sciences, CU Boulder
2025	**Postdoctoral Researcher**, UT Austin Astronomy Department
2024	**Visiting Researcher**, Cosmic Dawn Center, Neils Bohr Institute
2022-25	**NSF Graduate Research Fellow**, UT Austin Astronomy Department
2021-22	**Graduate Research Assistant**, UT Austin Astronomy Department
2020-21	**Dean's Excellence Fellow**, UT Austin Astronomy Department
2019	**LIGO Summer Undergraduate Research Fellow**, Caltech LIGO Lab
2018	**Physics & Astronomy NSF REU Fellow**, University of Utah Physics & Astronomy Department
2018-20	**Undergraduate Special Studies Researcher**, Smith College Astronomy Department
2017-19	**Undergraduate Research Intern**, Merenlender Lab, UC Berkeley
2016-18	**STRIDE Scholar**, Smith College Astronomy Department

Awards, Fellowships, & Honors

2025	**NSF Astronomy & Astrophysics Postdoctoral Fellowship**, NSF
	Brinson Postdoctoral Prize Fellowship, Brinson Foundation (declined)
2024	**ALMA Ambassador**, North American ALMA Science Center (NAASC)
	Advanced Teaching Preparation Certificate, UT Austin Graduate School
2023	**Professional Development Award (x2)**, UT Austin Graduate School

2022 **Frank N. Edmonds, Jr. Memorial Fellowship**, UT Austin Astronomy Dept
Board of Visitors 2nd Year Defense Award, UT Austin Astronomy Dept
OGS Summer Fellowship, UT Austin Graduate School
NSF Graduate Research Fellowship, National Science Foundation

2020 **Dean's Excellence Fellowship**, UT Austin College of Natural Sciences
Mary Dailey Irvine Prize, (for best astronomy thesis), Five College Astronomy Department
Excellence in Astronomy & Astrophysics, Smith College Astronomy Dept
Florence Augusta Merriam Bailey Prize, (environmental problem solving), Smith College

2019 **Goldwater Scholarship**, Barry M. Goldwater Foundation
Chambliss Student Award Honorable Mention, 233rd AAS Meeting

2018 **Grand Prize**, (selected for NSF REU Conference), University of Utah REU Symposium
Dean's List, Smith College

2017 **Dean's List**, Smith College

Publications

Statistics *(as of 30 Aug 2025, source: ADS)* Link to ADS
number of co-authored accepted (submitted) refereed papers: 30 (11)
number of first-authored accepted (submitted) refereed papers: 4 (0)
h-index: 18

†Denotes papers led by students under my supervision

Refereed Publications

30. Liu, Z., Silverman, J. D., *and 32 other authors including* **Cooper, O. R.** *A PAH deficit in the starburst core of a distant spiral galaxy*. 2025 MNRAS, 1199, arxiv:2505.09728
29. McKinney, J., **Cooper, O. R.**, Casey, C. M., Muñoz, J. B., Akins, H., Lambrides, E., Long, A. S. *Modeling Galaxies in the Early Universe with Supernova Dust Attenuation*. 2025 ApJ, 985, 21, arXiv:2502.14031
28. de Graaff, A., *and 28 other authors including* **Cooper, O. R.** *RUBIES: a complete census of the bright and red distant Universe with JWST/NIRSpec*. 2025 A&A 679, 189, arXiv:2409.05948
27. Finkelstein, S. L., Bagley, M., *and 97 other authors including* **Cooper, O. R.** *The Cosmic Evolution Early Release Science Survey (CEERS)*. 2025 ApJL 983, 4, arXiv:2501.04085
26. **Cooper, O. R.**, Brammer, G., *and 25 other authors RUBIES: JWST/NIRSpec resolves evolutionary phases of dusty star-forming galaxies at* $z \sim 2$. 2025 ApJ 982, 2, arXiv:2410.08387
25. Faisst, A. L., *and 50 other authors including* **Cooper, O. R.** *COSMOS-Web: The Role of Galaxy Interactions and Disk Instabilities in Producing Starbursts at* $z < 4$. 2025 ApJ 980, 2, arXiv:2405.09619
24. McKinney, J., Casey, C. M., Long, A. S., **Cooper, O. R.**, *and 35 other authors. SCUBADive I: JWST+ALMA Analysis of 289 sub-millimeter galaxies in COSMOS-Web*. ApJ 979, 2, arXiv:2408.08346
23. Casey, C. M., Akins, H. B., Kokorev, V., McKinney, J., **Cooper, O. R.**, Long, A. S., Franco, M., and Manning, S. M. *Dust in Little Red Dots*. 2024 ApJL 975, 4, arXiv:2407.05094
22. Gozaliasl, G., *and 17 other authors including* **Cooper, O. R.** *COSMOS Brightest Group Galaxies – III: Evolution of stellar ages*. 2024 A&A 690, 315, arXiv:2408.02577
21. Liu, D., *and 84 other authors including* **Cooper, O. R.** *Detailed study of a rare hyperluminous rotating disk in an Einstein ring 10 billion years ago*. 2024 Nature Astronomy 8, 118, nature.com/articles/s41550-024-02296-7
20. Gentile, F., *and 37 other authors including* **Cooper, O. R.** *Not-so-little Red Dots: Two massive and dusty starbursts at z 5-7 pushing the limits of star formation discovered by JWST in the COSMOS-Web survey*. 2024 ApJL 973, 2, arXiv:2408.10305
19. Franco, Maximilien, Akins, Hollis B., *and 48 other authors including* **Cooper, O. R.** *Unveiling the distant Universe: Characterizing* $z \geq 9$ *Galaxies in the first epoch of COSMOS-Web*. 2024 ApJ 973, 23, arXiv:2308.00751
18. Long, A. S., Antwi-Danso, J., *and 31 other authors including* **Cooper, O. R.** *Efficient NIRCam Selection of Quiescent Galaxies at* $3 < z < 6$ *in CEERS*. 2024 ApJ 970, 68, arXiv:2305.04662

17. **Cooper, O. R.**, Casey, Caitlin M., *and 34 other authors The Web Epoch of Reionization Lyman-α Survey (WERLS) I. MOSFIRE Spectroscopy of $\mathbf{z \sim 7-8}$ Lyman-α Emitters*. 2024 ApJ 970, 50, arXiv:2309.06656
16. Jung, I, Finkelstein, S. L., *and 30 other authors including* **Cooper, O. R.** *CEERS: Diversity of Lyman-Alpha Emitters during the Epoch of Reionization*. 2024 ApJ 967, 73, arXiv:2304.05385
15. Casey, Caitlin M., Akins, Hollis B., *and 40 other authors including* **Cooper, O. R.** *COSMOS-Web: Intrinsically Luminous $z \gtrsim 10$ Galaxy Candidates Test Early Stellar Mass Assembly*. 2024 ApJ 965, 98, arXiv:2308.10932
14. Stawinski, S, M. Urbano, Cooper, M. C., Finkelstein, S. L., Jung, I., Pérez-González, P. G., Casey, C. M., **Cooper, O. R.**, Hathi, N. P., Holwerda, B. W., Koekemoer, A. M., Fernández, V., Larson, R. L., Lucas, R. A., Yung, L. Y. A. *Deeper than DEEP: A Spectroscopic Survey of $z > 3$ Lyman-α Emitters in the Extended Groth Strip*. 2024 MNRAS 528, 4, arXiv:2307.04782
13. Lambrides, E., Chiaberge, M., *and 43 other authors including* **Cooper, O. R.** *Uncovering a Massive $z \sim 7.65$ Galaxy Hosting a Heavily Obscured Radio-Loud QSO Candidate in COSMOS-Web*. 2024 ApJL 961, 25, arXiv:2308.12823
12. Kamieneski, P, S., Yun, M. S., Harrington, K. C., Lowenthal, J. D., Wang, Q. D., Frye, B. L., Jimenez-Andrade, E. F., Vishwas, A., **Cooper, O.**, Pascale, M., Foo, N., Berman, D., Englert, A., Garcia Diaz, C. *PASSAGES: the wide-ranging, extreme intrinsic properties of Planck-selected, lensed dusty star-forming galaxies*. 2024 ApJ 961, 2, arXiv:2301.09746
11. McKinney, J., Manning, S. M., **Cooper, O. R.**, *and 32 other authors*. *A Near-Infrared Faint, Far-Infrared-Luminous Dusty Galaxy at $z \sim 5$ in COSMOS-Web*. 2023 ApJ 956, 72, arXiv:2304.07316
10. Akins, H. B., Casey, C, M., *and 57 other authors including* **Cooper, O. R.** *Two massive, compact, and dust-obscured candidate $z \sim 8$ galaxies discovered by JWST*. 2023 ApJL 956, 61, arXiv:2304.12347
9. Fujimoto, S., Finkelstein, S. L., *and 50 other authors including* **Cooper, O. R.** *ALMA FIR View of Ultra High-redshift Galaxy Candidates at $z \sim$ 11-17: Blue Monsters or Low-z Red Interlopers?*. 2023 ApJ 955, 130, arXiv:2211.03896
8. Casey, C. M., Kartaltepe, J. S., *and 83 other authors including* **Cooper, O. R.** *COSMOS-Web: An Overview of the JWST Cosmic Origins Survey*. 2023 ApJ 954, 31, arXiv:2211.07865
7. Long, A. S., Casey, C. M., Lagos, C. P., Lambrides, E. L., Zavala, J. A., Champagne, J., **Cooper, O. R.**, Cooray, A. R. *Missing Giants: Predictions on Dust-Obscured Galaxy Stellar Mass Assembly Throughout Cosmic Time*. 2023 ApJ 953, 11, arXiv:2211.02072
6. Champagne, J. B., Casey, C. M., Finkelstein, S. L., Bagley, M., **Cooper, O. R.**, Larson, R. L., Long, A. S., Wang, F. *A Mixture of LBG Overdensities in the Fields of Three $6 < z < 7$ Quasars: Implications for the Robustness of Photometric Selection*. 2023 ApJ 952, 99, arXiv:2304.10437
5. McKinney, J., Finnerty, L., Casey, C. M., Franco, M., Long, A. S., Fujimoto, S., Zavala, J. A., **Cooper, O. R.,** Akins, H., Pope, A., Armus, L., Soifer, B. T., Larson, K., Matthews, K., Melbourne, J., Cushing, M. *Broad Emission Lines in Optical Spectra of Hot, Dust-obscured Galaxies Can Contribute Significantly to JWST/NIRCam Photometry*. 2023 ApJ 946, 39, arXiv:2301.00017
4. **Cooper, O. R.**, Casey, C. M., Zavala, J. A., Champagne, J. B., da Cunha, E., Kartaltepe, J. S., Long, A. S., Spilker, J. S., Staguhn, J. *Searching Far and Long. I. Pilot ALMA 2 mm Follow-up of Bright Dusty Galaxies as a Redshift Filter*. 2022 ApJ 930, 32, arXiv:2203.14973
3. Katz, M. L., **Cooper, O. R.**, Coughlin, M. W., Burdge, K. B., Breivik, K., Larson, S. L. *GPU-Accelerated Periodic Source Identification in Large-Scale Surveys: Measuring P and $\dot{P}$*. 2021 MNRAS 503, 2, arXiv:2006.06866
2. Ashok, A., Zasowski, G. Seth, A., Hasselquist, S., Bergsten, G., **Cooper, O.**, Boardman, N., Bizyaev, D., Goytia, S. M., García-Hernández, D. A., Roman-Lopes, A. *The APOGEE Library of Infrared SSP Templates (A-LIST): High-resolution Simple Stellar Population Spectral Models in the H Band*. 2021 AJ 161, 4, arXiv:2012.15773
1. **Cooper, O.**, Keeley, A., Merenlender, A. *Curriculum gaps for adult climate literacy.* 2019 Conservation Science and Practice, e102, https://doi.org/10.1111/csp2.102

Publications In Review

Zhang, Y.; de Graaff, A.; *and 21 other authors including* **Cooper, O. R.** *RUBIES spectroscopically confirms the high number density of quiescent galaxies from $\mathbf{2 < z < 5}$*. Submitted to ApJ, arXiv:2508.08577

Akins, H. B.; Casey, C. M.; *and 15 other authors including* **Cooper, O. R.** *JWST+ALMA reveal the ISM kinematics and stellar structure of MAMBO-9, a merging pair of DSFGs in an overdense environment at $z = 5.85$*. Submitted to ApJ, arXiv:2508.06607

Muzzin, A; Suess, K. A.; Marchesini, D.; *and 80 other authors including* **Cooper, O. R.** *MINERVA: A NIRCam Medium Band and MIRI Imaging Survey to Unlock the Hidden Gems of the Distant Universe*. Submitted to ApJS, arXiv:2507.19706

Manning, S. M., McKinney, J. Whitaker, K. E., Long, A. S., **Cooper, O. R.**, *and 10 other authors*. *SCUBADive II: Searching for $z > 4$ Dust-Obscured Galaxies via F150W-Dropouts in COSMOS-Web*. Submitted to ApJ, arxiv:2505.09703

Foo, N.; Harrington, K. C.; *and 22 other authors including* **Cooper, O. R.** *PASSAGES: The Discovery of a Strongly Lensed Proto-cluster Core Candidate at Cosmic Noon*. Submitted to ApJ, arxiv:2504.05617

Setton, D. J.; Greene, J. E.; *and 34 other authors including* **Cooper, O. R.** *A confirmed deficit of hot and cold dust emission in the most luminous Little Red Dots*. Submitted to ApJL, arXiv:2503.02059

Akins, H. B.; Casey, C, M.; Chisholm, J.; Berg, D. A.; **Cooper, O.**; Franco, M.; Fujimoto, S.; Lambrides, E.; Long, A. S.; and McKinney, J. *Tentative detection of neutral gas in a Little Red Dot at* $z = 4.46$. Submitted to ApJL, arXiv:2503.00998

Khostovan, A. A.; Kartaltepe, J. S., *and 50 other authors including* **Cooper, O. R.** *COSMOS Spectroscopic Redshift Compilation (First Data Release): 165k Redshifts Encompassing Two Decades of Spectroscopy*. Submitted to ApJ, arXiv:2503.00120

House, L., **Cooper, O. R.**, Finkelstein, K., and Finkelstein, S. L. *Impact of Climate Change Intervention within Introductory Astronomy Courses*. Submitted to PhysRev PER.

Long, A. S., *and 44 other authors including* **Cooper, O. R.** *The Extended Mapping Obscuration to Reionization with ALMA (ExMORA) Survey: 5σ Source Catalog and Redshift Distribution*. Submitted to ApJ, arXiv:2408.14546

Akins, H. B., *and 40 other authors including* **Cooper, O. R.** *COSMOS-Web: The over-abundance and physical nature of "little red dots"–Implications for early galaxy and SMBH assembly*. Submitted to ApJ, arXiv:2406.10341

Non-refereed Publications

†Melendez, A., **Cooper, O. R.**, Akins, H., Casey, C. M., Urbano Stawinski, S., Shuntov, M., Paquereau, L., Karltaltepe, J., Franco, M., Kokorev, V., Magee, J., Fong, M., Faisst, A. L., Martin, C., and The WERLS Collaboration *Candidate* C III] *Emission in a Massive, Compact,* $z \sim 4.5$ *Galaxy*. 2025 RNAAS 9, 3, RNAAS

†Magee, J., Casey, C. M., **Cooper, O. R.**, Melendez, A., Fong, M., Karltaltepe, J., Long, A. S., Stawinski, S. U., Champagne, J. B., Cooper, M. C., Faisst, A. L., Maraston, C., and The WERLS Collaboration *Rotation Curve Measurement of Dark Matter Content of a* $z \sim 0.5$ *Galaxy*. 2023 RNAAS 7, 110, RNAAS

Invited & Contributed Talks

Invited Science Talks

30 Jul 2025 **Astronomy, Technology, and Climate Change**, New Data that Challenge Underlying Assumptions in Early Galaxy Evolution, Winter Harbor, ME

28 Feb 2025 **Resolving the evolution of dust-obscured galaxies with JWST + ALMA**, Astro/Space Seminar, University of Kansas Physics & Astronomy, Lawrence, KS *(virtual)*

06 Dec 2024 **RUBIES: JWST/NIRSpec resolves evolutionary phases of dusty star-forming galaxies at** $z \sim 2$, galread Journal Club, Department of Astrophysical Sciences, Princeton University, Princeton, NJ

04 Oct 2024 **The Emergence and Evolution of Dusty Galaxies with JWST + ALMA**, Friday Lunch Seminar, Astrophysical & Planetary Sciences, CU Boulder, Boulder, CO

30 May 2024 **Taking census of bright and early galaxies in the assembling cosmos**, Cake Talk, Cosmic Dawn Center, Niels Bohr Institute, Copenhagen, Denmark

15 May 2024 **Getting a big picture of massive galaxies in the assembling cosmos**, Astronomy & Atmospheric Sciences Seminar, DTU Space, Copenhagen, Denmark

17 Apr 2024 **Emerging and Evolving Massive Galaxies**, DAWN Summit, Cosmic Dawn Center, Niels Bohr Institute, Copenhagen, Denmark *(invited review)*

22 Nov 2022 **First Results from WERLS: Tracing Ionized Bubbles with Keck and JWST**, Extragalactic Seminar, Cornell Astronomy Dept, Ithaca, NY *(virtual)*

07 Nov 2022 **First Results from WERLS: Tracing Ionized Bubbles with Keck and JWST**, Lunch Seminar, New Mexico State University Astronomy Dept, Las Cruces, NM

15 Feb 2022 **Searching Far and Long: ALMA 2mm Follow-up of Bright Dusty Galaxies as a Redshift Filter**, Student Seminar, Parsec Institute at University of Montreal, Montreal, Canada *(virtual)*

20 Jan 2022 **Searching Far and Long: ALMA 2mm Follow-up of Bright Dusty Galaxies as a Redshift Filter**, CosmoFREDDIE Seminar, Institute for Astronomy, University of Hawaii, Honolulu, HI

Contributed Science Talks & Posters (selected)

10 Jun 2025 **Bright and Early: The Role of Massive Galaxies in the Evolution of the $z > 2$ Universe**, AAS#246, Dissertation Talk, Anchorage, AK

7 Nov 2024 **The Nebular Attenuation Curve for Dusty Star-Forming Galaxies**, CFC-CCA Joint Workshop on Extreme Star Formation, Austin, TX

16 Jul 2024 **Dusty RUBIES: Resolving evolutionary phases of dusty galaxies at cosmic noon**, RUBIES Team Meeting, Madison, WI *(virtual)*

27 Apr 2024 **Bright and Early: Tracing rapid assembly via census of massive galaxies in the first 2 Gyr**, Extreme galaxies in extreme environments at extremely early epochs, Reykjavik, Iceland

28 Mar 2024 **Bright and Early: Tracing rapid assembly via census of massive galaxies in the first 2 Gyr**, Extragalactic Seminar, UT Austin Astronomy Dept, Austin, TX

06 Mar 2024 **Searching Far and Long: ALMA 2 mm Follow-up for Efficient Selection of Early Dusty Starbursts**, The Physics and Impact of Astrophysical Dust: from Star Formation through Cosmology, Aspen Center for Physics, Aspen, CO

09 Nov 2023 **Searching Far and Long: Bright 2mm-detected galaxies with (and without) JWST counterparts**, Resolving the Extragalactic Universe with ALMA + JWST, Waseda University, Tokyo, Japan

12 Jun 2023 **First Results from WERLS: Tracing Ionized Bubbles with Keck and JWST**, First Light, Massachusetts Institute of Technology, Cambridge, MA

25 May 2023 **Searching Far and Long: Bright 2mm-detected galaxies with (and without) JWST counterparts**, COSMOS Team Meeting 2023, RIT, Rochester, NY

10 May 2023 **First Results from WERLS: Tracing Ionized Bubbles with Keck and JWST**, CEERS Team Meeting 2023, UT Austin, Austin, TX

14 Nov 2022 **First Results from WERLS: Tracing Ionized Bubbles with Keck and JWST**, Extragalactic Seminar, UT Austin Astronomy Dept, Austin, TX

12 Jul 2022 **Bright and Early: Efficient Identification of Massive Galaxies at $z > 4$**, COSMOS 2022 Meeting, Institut d'Astrophysique de Paris, Paris, France

14 Apr 2022 **Taking census of the extreme in the early Universe: Massive galaxy evolution at $z \sim 3 - 6$**, Cosmos Seminar, UT Austin Astronomy Dept, Austin, TX

26 Apr 2021 **Dusty needles in a haystack: 2mm survey of DSFGs in SSA22**, Extragalactic Seminar, UT Austin Astronomy Dept, Austin, TX

Invited Public & Outreach Talks

19 Mar 2024 **A Wide View of the First Two Billion Years**, Astronomy on Tap, Austin, TX

25 Feb 2023 **A Wide View of the First Two Billion Years with COSMOS-Web**, UT Austin Astronomy Dept Board of Visitors Meeting, Austin, TX *(watch here)*

Invited Professional Development Presentations

22 Sept 2023 **NSF Graduate Research Fellowship Guest Speaker**, NSF Graduate Research Fellowship Program Writer's Workshop, UT Austin Graduate School, Austin, TX

08 Sept 2023 **NSF Graduate Research Fellowship Panel**, NSF Graduate Research Fellowship Program Workshop, UT Austin Graduate School, Austin, TX

24 Jul 2023 **NSF Graduate Research Fellowship Panel**, Astronomy NSF REU Seminar, UT Austin Astronomy Department, Austin, TX

Observing & Grants

Awarded Time (PI)

MOSFIRE, Keck I (2024B) — 2 nights
Unfinished business: a spectroscopic census of dusty starbursts bolstered by ALMA+JWST

MOSFIRE, Keck I (2024A) — 1 night

Mapping a Large Ionized Bubble at $z = 7.68$ in COSMOS

VIRUS, Hobby-Eberly Telescope (2022-3) — 10 hr
Extending a complete census of Lyman-α Emitters in the SSA22 Protocluster at $z = 3.1$

GNRIS, Gemini North (2022A) — 3.8 hr
Spectroscopic determination of the relationship between a luminous X-ray AGN and a strongly lensed HyLIRG at $z = 3.55$

VIRUS, Hobby-Eberly Telescope (2022-2) — 7 hr
Extending a complete census of Lyman-α Emitters in the SSA22 Protocluster at $z = 3.1$

Atacama Large Millimeter/submillimeter Array (Cycle 8) — 9 hr
Needle in a haystack: Identifying the highest-redshift candidate DSFGs using 2mm imaging

GMOS imaging, Gemini South (2021B) — 1.25 hr
Comprehensive Lens Characterization for a Hyperluminous DSFG at $z = 2$

Triple Spec, Palomar Observatory P200 Telescope (Summer 2019) — 1 half night
Phase-resolved spectroscopy of ultra-compact binaries as candidate LISA verification sources

Awarded Time (Contributing Co-I, Selected)

Atacama Large Millimeter/submillimeter Array (Cycle 10) — 144 hr
PI: A. Faisst
The COSMOS High-z ALMA-MIRI Population Survey (CHAMPS): A Wide-Area Comprehensive Survey of the Dusty Universe

MOSFIRE+LRIS, NASA Keck Key Strategic Mission Support (2022A—2023B) — 29 nights
PIs: C. Casey & J. Kartaltepe
Web Epoch of Reionization Lyman-α Survey (WERLS)

NIRCam+MIRI, *JWST* (Cycle 1) — 254 hours
PIs: C. Casey & J. Kartaltepe
COSMOS-Web: The JWST Cosmic Origins Survey

Observing Experience

LRIS, Keck I (remote, 11 nights)	2022A, 2022B, 2023A
MOSFIRE, Keck I (local/remote, 19 nights)	2022A, 2024A, 2024B
WIYN 2.1 m Telescope, Kitt Peak National Observatory (remote)	Jul-Aug 2019
Triple Spec on P200 Telescope, Palomar Observatory (local)	Aug 13, 2019
WIYN 0.9 m Telescope, Kitt Peak National Observatory (local)	Jan 14-19, 2019
16” Telescope, Smith College McConnell Observatory (local)	Fall 2016-Spring 2020

Grants

NSF Astronomy & Astrophysics Postdoctoral Fellowship, 2025-28 — $330,000

NAASC Conference and Workshop Support, 2024 — $9,000
Conference funding awarded to choir collaboration

Heising-Simons Open Call for Support of Science Events and Gatherings, 2024 — $70,000
Conference funding awarded to choir collaboration

ALMA Ambassador, Cycle 12 — $10,000

Keck Principal Investigator Data Award, 2024B — $19,100

Keck Principal Investigator Data Award, 2024A — $14,750

NRAO Student Observing Support Grant, Cycle 8 — $28,143
Advising PI: C. Casey

NSF Graduate Research Fellowship, 2022-25 — $147,000

Mentorship & Teaching

Mentorship

Postbac	**Jake Magee**, Postbaccalaureate scholar, UT Austin *(co-advising with Prof. Casey)*	*2023-24*
Undergrad (research)	**Jake Magee**, Undergrad, UT Austin *(co-advised with Prof. Casey)*	*2022-23*
	Mia Fong, Undergrad, UT Austin *(co-advised with Prof. Casey)*	*2022-23*
	Alfonso Melendez, TAURUS Scholar & undergrad, UT Austin *(co-advised with Prof. Casey)*	*2022-23*
Undergrad (career)	**Elaine Gammon**, REU Student & undergrad researcher, UT Austin	*2023-25*
	Courtney Reed, TAURUS Scholar, UT Austin	*2022*
	Ian Wolter, TAURUS Scholar, UT Austin	*2022*
	Marie Barry, TAURUS Scholar, UT Austin	*2021*
	Jennifer Poppe, Undergrad, UT Austin	*2021-present*
Pre-college	**Ellis Resnick**, Hugo Mentorship; Astronomy & Climate Change Communication	*2023*

Teaching

Summer 2025	**PDP Inquiry Activity (UT Austin)**, participated in the Spring 2025 Inquiry & Design Institutes of the UCSC Institute for Science & Engineer Educators (ISEE) Professional Development Program (PDP); taught UT astronomy undergraduate researchers in a hands-on inquiry activity about signal sampling in Summer 2025
Spring 2024/25	**ASTR250L Guest Instructor (UH Hilo)**, guest instructor for upper level undergraduate extragalactic lab, invited to teach observational techniques with hands-on experience during Keck observing runs in addition to in-class lecture on galaxy evolution and multi-object spectroscopy (PI: Cooper & PI: Drakos)
Fall 2021	**Writing about Astronomy guest instruction (UMass Amherst)**, guest instructor for astronomy course, delivered tutorial titled "How to read science papers: An Astrobites perspective"
Jan 2018 - May 2019	**AST 100 & 113 Teaching Assistant (Smith College)**, tutor STEM and non-STEM undergraduates in astronomy courses, administer and evaluate constellation identification and telescope operation quizzes

Outreach, Interviews, & Press

Continued Outreach

Astrobites Collaboration *2021-present*

ASTROBITES.ORG/AUTHOR/OCOOPER

- *Climate Change Committee Co-Chair (2021-2024):* co-founded committee to establish conversations and engagement at the interface of astronomy and climate advocacy; facilitate series of climate+astro related posts and host our annual Earth Week x Astrobites virtual, global event
- *Author (2021-2023):* wrote undergraduate-level summaries of astronomy papers for Astrobites website; published 21 articles over two-year regular author rotation

COSMOS-Web Outreach Committee Co-Chair *2022-present*

COSMOS.ASTRO.CALTECH.EDU/PAGE/COSMOSWEB

- *Outreach Committee Co-Chair (2022-present)*: founding co-chair of Outreach Committee; facilitate international group of astronomers interested in engaging the public in COSMOS-Web science and building accessibility of our science products for astronomers outside of the collaboration

Science Writing (Selected)

O. Cooper. "Eyes Up." Celebrating the Wonder of Science in the Shadow, BAAS. 2024 Mar 01

O. Cooper. "Climate change and space debris, a vicious cycle." Astrobites. 2023 Jan 20

O. Cooper. "Can you explain these long dark gaps in your cosmological resume?" Astrobites. 2022 May 16

O. Cooper. "A serving of X-rays in a stack of galaxies." Astrobites. 2022 Mar 22

O. Cooper. "Rethinking the science conference format." Astrobites. 2022 Jan 10

O. Cooper. "Replacing our constellations with satellites." Astrobites. 2021 Sep 10

O. Cooper. "Blazing Hot DOGs at the Cosmic BBQ." Astrobites. 2021 Jul 21

O. Cooper. "Gotta catch 'em all: the first neutron star-black hole merger detection!" Astrobites. 2021 Jun 30

O. Cooper. "Teaching Change: The Importance of Climate Communication." SPS Observer. 2020 Spring

Media Appearances & Interviews

Cosmic Radio, KZYX Mendocino County NPR (radio): "Cosmic Radio Interview with Olivia Cooper" 2024 Apr 3

Point of Discovery, UT Austin College of Natural Sciences (podcast): "Right Place, Right Time" 2022 Dec 13

Astronomy on Tap Jena (vodcast): "Did early galaxies go through climate change?" 2022 Nov 8

Service & Leadership

Leadership Roles

2024 - now	**choir collaboration Leadership**, co-founder of the choir collaboration, organize workshops and events, facilitate science and community initiatives within galaxy evolution and justice efforts in astronomy *(see website)*
2022 - now	**COSMOS-Web Outreach Committee Chair**, organize and manage outreach, informal publication, social media, education, and citizen science efforts from the COSMOS-Web team
2022 - 2023	**Graduate Student Representative**, serve as grad student liaison for dept, attend faculty meetings, host town halls, facilitate dept journal club, organize dept social events, serve on DEI & grad admissions committees
2021 - 2024	**Astrobites Climate Change Committee Chair**, founder and co-chair for climate change committee within Astrobites, post ∼1 climate/astro related post per month, host special Earth Week programming annually
2021 - 2022	**TAURUS+REU Social Event Coordinator**, organize social events for the summer scholars in the NSF REU & TAURUS program and the graduate students, planned average one event per week for 10 weeks each summer

Refereeing & Reviews

Reviewer for AAS Journals 2024

External Reviewer for Canadian Time Allocation Committee 2022