

TYLER D. ROBINSON

Curriculum Vitae

Mailing Address

Lunar and Planetary Laboratory
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Contact Information

Phone: 520-907-8369
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Education UNIVERSITY OF WASHINGTON (UW) 2006 – 2012
Ph.D. in Astronomy and Astrobiology

UNIVERSITY OF ARIZONA 2002 – 2006
B.S. with Honors in Physics and Mathematics, Summa Cum Laude

Current Position ASSOCIATE PROFESSOR
University of Arizona
Lunar and Planetary Laboratory

Previous Positions ASSISTANT PROFESSOR 2017– 2022
Northern Arizona University

NASA CARL SAGAN FELLOW 2015 – 2017
University of California, Santa Cruz

NASA POSTDOCTORAL PROGRAM FELLOW 2013 – 2015
NASA Ames Research Center

Grants and Fellowships Total: **\$3.7M** ——— PI: **\$1.8M** ——— Co-I: **\$360K** ——— Fellowship: **\$1.5M**
Cottrell Scholar Award - Exoplanet Science & Diversifying STEM (PI; 2021) (\$100K)

NASA Habitable Worlds - Exoplanet Habitability Indicators (PI; 2019) (\$570K)

NASA Exobiology - Biosignature Remote Sensing (PI; 2019) (\$470K)

NASA Nexus for Exoplanet System Science (NExSS) - The Virtual Planetary Laboratory (Co-I; 2018) (\$11M; \$310K @ NAU)

NASA Exoplanets Research Program - Super-Earths and Mini-Neptunes (PI; 2018) (\$540K)

NASA Exobiology - Miller-Urey Atmospheres (Co-I; 2018) (\$540K; \$50K @ NAU)

WFIRST Science Invest. Team - Starshade Considerations (Science PI; 2016) (\$100K)

WFIRST Science Invest. Team - Optimizing Coronagraph Science (Co-I; 2015) (\$1.1M)

Sagan Fellowship (2015–2018) (\$310K)

Hubble Fellowship (declined) (2015) (\$310K)

NSF Astronomy and Astrophysics Postdoctoral Fellowship (declined) (2015) (\$270K)

Simons Collaboration on the Origins of Life Fellowship (declined) (2015) (\$210K)

NASA Nexus for Exoplanet System Science (NExSS) - Habitability of Solar System Rocky Planets through Time (Co-I; 2014) (\$6.5M)

NASA Postdoctoral Program Fellowship (2013–2015) (\$145K)

NSF Astronomy and Astrophysics Postdoctoral Fellowship (declined) (2013) (\$270K)

NASA Astrobiology Institute Cooperative Agreement Notice 6 - The Virtual Planetary Laboratory (Co-I; 2012) (\$10M)

**Honors
and
Awards**

[Cottrell Scholar](#) (2021)

Research Corporation for Science Advancement [Scialog](#) Fellow (2020)

Assoc. of College and Uni. Educators Certificate in [Effective Teaching Practices](#) (2019)

Excellence in Undergraduate Research Mentoring: NAU Mentor of the Year (2019)

Member of U.S. Delegation to Lindau Nobel Laureate Meeting (2015)

Excellence in Reviewing Award from *Earth, Planets, and Space* (2014)

Service

NASA Planetary Science Advisory Committee (2021–present)

NASA Science and Technology Definition Team for HabEx Mission Concept (2016–2020)

Exoplanet Science Team Member for LUVOIR and Origins Mission Concepts (2016–2020)

NASA Exoplanet Exploration Program Analysis Group Executive Committee (2016–2019)

Contributor to Exo-C Mission Study for NASA’s Exoplanet Exploration Program (2015)

Contributor to Exo-S Mission Study for NASA’s Exoplanet Exploration Program (2015)

Leading Author and Co-Editor for NASA Astrobiology Strategic Plan (2013–2015)

**Mentoring
& Advising**

Hezron Acosta, Cal Poly Pomona (Cal-Bridge Summer)

Gabby Jones, undergraduate & Space Grant Scholar, NAU (research co-advisor)

Schuyler Borges, Ph.D. student & NSF GRFP Fellow, NAU (co-advisor)

Patrick Tribbett, Ph.D. student, NAU (research advisor)

Will Oldroyd, Ph.D student, NAU (research advisor)

Ryder Strauss, Ph.D. student, NAU (research advisor)

Amber Britt, Ph.D. student & NASA Trainee Fellow, NAU (primary advisor)

James Windsor, Ph.D. student, NAU (primary advisor)

Colin O. Chandler, Ph.D. student & NSF GRFP Fellow, NAU (co-primary advisor)

Chris Wolfe, Ph.D. student, NAU (co-primary advisor)

Megan Gialluca, Goldwater Scholar & NSF GRFP Fellow, NAU (now UW Ph.D. student)

Anna Ross, B.S., NAU (research advisor; 1 paper published; now U Idaho Ph.D. student)

Juan Tolento, B.S., Cal Poly (REU mentor; 1 paper pub.; now UC Irvine Ph.D. student)

Y. ‘Kat’ Feng, Ph.D., UCSC (Kavli student; 1 paper published)

Alfredo Calderon, B.S., Humboldt State (Lamat Program; 1 poster presented)

Zafar Rustamkulov, undergraduate, UCSC (Lamat Program; now JHU Ph.D. student)

Michael Nayak, Ph.D., UC Santa Cruz (1 paper published; now with US Air Force)

Edward J. Schwieterman, Ph.D., UW (2 papers published; now UC Riverside faculty)

Tiffany Jansen, B.S., UW (1 paper published; now SDSS engineering asst.)

Brianna Lacy, B.S., UW (1 paper published; now Princeton graduate student)

Teaching

Primary Instructor, AST501 “Planetary Physics I” (NAU, 2017/2019/2021)

Primary Instructor, AST183 “Life in the Universe” (NAU, 2019)

Primary Instructor, AST510 “Exoplanets” (NAU, 2018/2020)

Primary Instructor, AST599 “Graduate Fellowship Writing” (NAU, 2017–2021)

Instructor and Coordinator, ASTR 599 “Astrobiology Seminar” (UW, 2012)

Instructor, ASTR 599 “Communicating Science to the Public Effectively” (UW, 2011)

Editor and Contributing Author to *The Astrobiology Activities Manual* (2009)

Instructor, ASTR 190 “Astronomy and Astrobiology” (UW, 2009)

Co-Instructor, ASTBIO 115 “Introduction to Astrobiology” (UW, 2009)

Outreach and Diversity

Dept. Inclusivity, Diversity, and Equity Committee Co-Founding Member (2020–present)

Led successful NAU-wide proposal to join [GEM Consortium](#)

[Cal-Bridge Summer](#) REU Mentor (2018/2021)

Co-Designer and Advisor to [Engage](#) Graduate Outreach Training Program (2011–present)

Editor and Lead Author for Publicly-Available [Engage](#) Curriculum ([link](#))

Designer and Instructor of NAU Proposal Design Course for NSF [GRFP](#), supporting GRFP goal to broaden participation in STEM from under-represented groups (2017–present)

NAU [Interns-to-Scholars](#) Program Mentor (2019–present)

Invited Speaker at Flagstaff Star Party (2019)

Presenter and Representative to Flagstaff Lunar Legacy Kick-Off Event (2018)

Invited Speaker at “NASA Social” Event at Astrobiology Science Conference (2017)

Science Communication Fellow, Pacific Science Center (2009–2013) ([link](#))

Lead Organizer of *UW Science Now!* public lecture series at Seattle Town Hall (2011–2013)

**Add'l
Service**

NAU Astronomy and Planetary Science Ph.D. Program Chair (2020–present)

NAU Astronomy and Planetary Science Colloquium Coordinator (2017–2020)

Reviewer for: *Nature*, *Science*, *Icarus*, *Geophysical Research Letters*, *Astronomy and Astrophysics*, *Astrobiology*, *Earth, Planets, and Space*, *Advances in Space Research*, *Monthly Notices of the Royal Astronomical Society*, *Astrophysical Journal*, *Astronomical Journal*, *Journal of Astronomical Telescopes, Instruments, and Systems*, and *Planetary and Space Science*

Session Co-Planner for “Characterizing Exoplanet Habitability and Life with Future Observatories” at the Astrobiology Science Conference (2019)

Session Co-Planner and Co-Chair for “Bridging Modeling and Observations in the Search for Habitable Worlds” at the Astrobiology Science Conference (2017)

Session Co-Planner and Co-Chair for “The Diversity of Worlds: Exoplanets and Habitability” at the Astrobiology Science Conference (2015)

**Invited
Conference
Talks**

“HabEx Exoplanet Direct Imaging Science,” AAS, Honolulu, HI, Jan 2020

“Physics of the 0.1 bar Temperature Minimum in Planetary Atmospheres,” APS, Prescott, AZ, Oct 2019

“Characterizing Exoplanet Atmospheres and Biosignatures,” Sagan Summer Symposium, Pasadena, CA, Jul 2019

“HabEx: The Habitable Exoplanet Observatory,” AAS, Seattle, WA, Jan 2019

“Characterizing Exo-Earths with Coronagraphy,” High Dispersion Coronagraphy Conference, Caltech, CA, Jun 2018

“Are We Alone? Habitable Planets and Biosigs.,” AAS National Harbor, MD, Jan 2018

“Characterizing Exoplanet Habitability with Emission Spectroscopy,” AAS, National Harbor, MD, Jan 2018

“Astronomy and Life’s Origins: From Specks to Special,” Gordon Research Seminar (Origin of Life), Galveston, TX, Jan 2016

“Completely Colorblind: Advances in Gray Techniques and Applications to Planets Near and Far,” [Comparative Climatology of Terrestrial Planets II](#), NASA Ames Research Center, CA, Sep 2015

“Strengths and Limitations of Reflected-light Observations of the Pale Blue Dot,” Earth-Life Science Institute Symposium, Tokyo, Japan, Jan 2015

“So you Want to Find an Exoplanet and Say Something about its Habitability,” Astrobiology Science Conference, Atlanta, GA, Apr 2012

**Academic
Seminars**

“Towards New Worlds: Exploring Exoplanets with Next-Gen Missions,” University of Arizona, Tucson, AZ, Nov 2021

“Understanding Planets Near and Far,” Notre Dame University, South Bend, IN, Feb 2021

“Characterizing Exoplanets with Next Generation Space Telescopes,” The Ohio State University Astronomy Seminar, Columbus, OH, Mar 2017

“Studying Earth-like Exoplanets with Next-Gen Space Telescopes,” UC Riverside Joint Earth Sciences and Astro Seminar, Riverside, CA, Dec 2016

“Characterizing Exoplanets Atmospheres,” UW Madison Atmospheric Sciences Seminar, Madison, WI, Oct 2016

“Characterizing Exoplanets in Reflected Light with Next Generation Space Telescopes,” Yale Astronomy Seminar, New Haven, CT, Sep 2016

“A 0.1 bar Tropopause Rule,” UC Santa Cruz IGPP Seminar, Santa Cruz, CA, Feb 2015

“Titan in Transit,” University of Washington Astro Lunch Seminar, Seattle, WA, Jun 2014

“Transit Spectra of a Hazy World,” Bay Area Exoplanet Meeting, SETI, Jun 2014

“Brown Dwarf Atmospheres: Observations, Variability, and Outstanding Questions,” Division Seminar, Ames Research Center, Apr 2014

“Exploring Earth as an Exoplanet,” GSFC, Greenbelt, MD, Mar 2014

“A ‘0.1 bar Tropopause Rule’ in Thick Atmospheres of Planets and Large Moons,” Extrasolar Planet Seminar, Goddard Space Flight Center, Mar 2014

“Understanding Temperature Profiles in Planetary Atmospheres of the Solar System and Beyond,” University of Washington Atmospheric Sciences Colloquium, UW, May 2012

“Understanding the Pale Blue Dot: Galileo to EPOXI,” UCSC Planetary Lunch & NASA Ames Special Seminar, CA, May 2012

“Understanding the Pale Blue Dot with EPOXI,” Yuk Lunch Talk, Caltech, Oct 2011

“The Search for Other Earths Begins at Home,” LSST Lunch Talk, University of Washington, Jun 2011

“Once in a Pale Blue Dot: Modeling the Spectrum of an Unresolved Earth-Moon System,” Planetaryum Talk, University of Washington, Dec 2010

“Earth as an Extrasolar Planet,” NASA Astrobiology Institute Exec. Council, Feb 2010

“Earth as an Extrasolar Planet: Modeling EPOXI Earth Observations,” Goddard Space Flight Center, Greenbelt, MD, Jan 2010

“Earth as an Extrasolar Planet: The Virtual Planetary Laboratory’s 3-D Spectral Earth Model,” Planetaryum Talk, UW, Dec 2009

TYLER D. ROBINSON

Publications

Refereed Publications Total: **63** ——— 1st author: **16** ——— 2nd author: **14** ——— h-index: **35**¹

U = Undergraduate Mentee-Led | G = Graduate Mentee-Led

- 2022** **Robinson, T. D.** and Salvador, A. 2022, “Exploring and Validating Exoplanet Atmospheric Retrievals with Solar System Analog Observations,” *PSJ*, in rev. ([arXiv:2204.04231](https://arxiv.org/abs/2204.04231))
- Ryan, D. J. and **Robinson, T. D.** 2022, “Detecting Oceans on Exoplanets with Phase-Dependent Spectral Principal Component Analysis,” *PSJ*, 3, 33 ([arXiv:2109.11062](https://arxiv.org/abs/2109.11062)) (U)
- 2021** Tang, S.-Y., **Robinson, T. D.**, Marley, M. S., Batalha, N. E., Lupu, R., and Prato, L. 2021, “Impacts of Water Latent Heat on the Thermal Structure of Ultra-Cool Objects: Brown Dwarfs and Free-Floating Planets,” *ApJ*, 922, 26 ([arXiv:2105.07000](https://arxiv.org/abs/2105.07000)) (G)
- Tribbett, P. D., **Robinson, T. D.**, and Koskinen, T. T. 2021, “Titan in Transit: Ultraviolet Occultation Observations Reveal a Complex Atmospheric Structure,” *PSJ*, 2, 109 ([arXiv:2006.14670](https://arxiv.org/abs/2006.14670)) (G)
- Gialluca, M. T., **Robinson, T. D.**, Wunderlich, F., and Rugheimer, S. 2021, “Characterizing Atmospheres of Transiting Earth-like Exoplanets Orbiting M Dwarfs with James Webb Space Telescope,” *PASP*, 133, 054401 ([arXiv:2101.04139](https://arxiv.org/abs/2101.04139)) (U)
- Mayorga, L. C., **Robinson, T. D.**, Marley, M. S., May, E. M., and Stevenson, K. B. 2021, “Variable Irradiation on 1D Cloudless Eccentric Exoplanet Atmospheres,” *ApJ*, 915, 41 ([arXiv:2105.08009](https://arxiv.org/abs/2105.08009))
- Morgan, R. M., and 11 co-authors (including **T. D. Robinson**) 2021, “Faster Exo-Earth Yield for HabEx and LUVOIR via Extreme Precision Radial Velocity Prior Knowledge,” *JATIS*, 7, 021220 ([link](#))
- Romero-Wolf, A., and 35 co-authors (including **T. D. Robinson**) 2021, “Starshade Rendezvous: Exoplanet Sensitivity and Observing Strategy,” *JATIS*, 7, 021210 ([link](#))
- Checlair, J. H., and 8 co-authors (including **T. D. Robinson**) 2021, “Probing the Capability of Future Direct-imaging Missions to Spectrally Constrain the Frequency of Earth-like Planets,” *AJ*, 161, 150 ([arXiv:2101.07378](https://arxiv.org/abs/2101.07378))
- 2020** **Robinson, T. D.** and Reinhard, C. T. 2020, “Earth as an Exoplanet,” in *Planetary Astrobiology* (V. S. Meadows et al., eds.), University of Arizona Press, pp. 379 ([arXiv:1804.04138](https://arxiv.org/abs/1804.04138))
- Behr, P. R., Tribbett, P. D., **Robinson, T. D.**, and Loeffler, M. J. 2020, “Compaction of Porous H₂O Ice via Energetic Electrons,” *ApJ*, 900, 147
- Smith, A. J. R. W., and 6 co-authors (including **T. D. Robinson**) 2020, “Detecting and Characterizing Water Vapor in the Atmospheres of Earth Analogs through Observation of the 0.94 Micron Feature in Reflected Light,” *AJ*, 159, 36 ([arXiv:1911.09211](https://arxiv.org/abs/1911.09211))
- 2019** Ross, A. S., and **Robinson, T. D.** 2019, “Simulated Reflected-light Direct Imaging Detections of Water Vapor for Exo-Earths,” *Res. Notes AAS*, 3, 177 ([arXiv:1912.02228](https://arxiv.org/abs/1912.02228)) (U)

¹See: <http://scholar.google.com/citations?user=X7rYp8EAAAAJ>

Tolento, J. P., and **Robinson, T. D.** 2019, “A simple model for radiative and convective fluxes in planetary atmospheres,” *Icarus*, 329, 34 ([arXiv:1808.00579](#)) (U)

Lustig-Yaeger, J., **Robinson, T. D.**, and Arney, G. 2019, “**coronagraph: Telescope Noise Modeling for Exoplanets in Python**,” *Journal of Open Source Software*, 4, 1387 (G)

Chandler, C. O., and 5 co-authors (including **T. D. Robinson**) 2019, “Six Years of Sustained Activity in (6478) Gault,” *ApJL*, 877, L12 ([arXiv:1904.10530](#)) (G)

Glenar, D. A., Stubbs, T. J., Schwieterman, E. W., **Robinson, T. D.**, and Livengood, T. A. 2019, “Earthshine as an illumination source at the Moon,” *Icarus*, 321, 841

2018

Robinson, T. D., and Crisp, D. 2018, “Linearized Flux Evolution (LiFE): A technique for rapidly adapting fluxes from full-physics radiative transfer models,” *JQSRT*, 211, 78 ([arXiv:1803.02378](#))

Robinson, T. D. 2018, “Characterizing Exoplanets for Habitability,” *Handbook of Exoplanets*, Springer International ([arXiv:1701.05205](#))

Feng, Y. K., **Robinson, T. D.**, et al. 2018, “Characterizing Earth Analogs in Reflected Light: Atmospheric Retrieval Studies for Future Space Telescopes,” *AJ*, 155, 200 ([arXiv:1803.06403](#)) (G)

Lustig-Yaeger, J., and 6 co-authors (including **T. D. Robinson**) 2018, “Detecting Ocean Glint on Exoplanets Using Multiphase Mapping,” *AJ*, 156, 301 ([arXiv:1901.05011](#))

Lincowski, A. P., and 6 co-authors (including **T. D. Robinson**) 2018, “Evolved Climates and Observational Discriminants for the TRAPPIST-1 Planetary System,” *ApJ*, 867, 76 ([arXiv:1809.07498](#)) (G)

Farr, B., Farr, W. B., Cowan, N. B., Haggard, H. M., and **Robinson, T. D.**, “exocartographer: A Bayesian Framework for Mapping Exoplanets in Reflected Light,” *AJ*, 156, 146 ([arXiv:1802.06805](#))

Gaudi, B. S., and 7 co-authors (including **T. D. Robinson**) 2018, “The Habitable Exoplanet Observatory (HabEx),” *Proc SPIE*, 10698, 106980P

Catling, D. C., and 7 co-authors (including **T. D. Robinson**) 2018, “Exoplanet Biosignatures: A Framework for Their Assessment,” *Astrobiology*, 18, 709 ([arXiv:1705.06381](#))

2017

Robinson, T. D., Fortney, J. S., and Hubbard, W. B. 2017, “Analytic Scattering and Refraction Models for Exoplanet Transit Spectra,” *ApJ*, 850, 128 ([arXiv:1711.01278](#))

Robinson, T. D. 2017, “A Theory of Exoplanet Transits with Light Scattering,” *ApJ*, 836, 236 ([arXiv:1701.05564](#))

Trilling, D. E., **Robinson, T. D.**, et al. 2017, “Implications for planetary system formation from Interstellar object 1I/2017 U1 (‘Oumuamua),” *ApJL*, 850, L38 ([arXiv:1711.01344](#))

Morley, C. V., and 4 co-authors (including **T. D. Robinson**) 2017, “Observing the Atmospheres of Temperate Earth-sized Planets with JWST,” *ApJ*, 850, 121 ([arXiv:1708.04239](#))

Roberge, A., and 12 co-authors (including **T. D. Robinson**) 2017, “Finding the Needles in the Haystacks: High-Fidelity Models of the Modern and Archean Solar System for Simulating Exoplanet Observations,” *PASP*, 129, 124401 ([arXiv:1710.06328](#))

Nayak, M., and 5 co-authors (including **T. D. Robinson**) 2017, “Atmospheric Retrieval for Direct Imaging Spectroscopy of Gas Giants in Reflected Light II: Orbital Phase and Planetary Radius,” *PASP*, 973, 034401 ([arXiv:1612.00342](#))

Arney, G. N., and 7 co-authors (including **T. D. Robinson**) 2017, “Pale Orange Dots: The Impact of Organic Haze on the Habitability and Detectability of Earthlike Exoplanets,” *ApJ*, 836, 49 ([arXiv:1702.002994](#))

Gao, P., Marley, M. S., Zahnle, K., **Robinson, T. D.**, and Lewis, N. K. 2017, “Sulfur Hazes in Giant Exoplanet Atmospheres: Impacts on Reflected Light Spectra,” *AJ*, 153, 139 ([arXiv:1701.00318](#))

Meadows, V. S., and 13 co-authors (including **T. D. Robinson**) 2017, “The Habitability of Proxima Centauri b: II: Environmental States and Observational Discriminants,” *Astrobiology*, 18, 133 ([arXiv:1608.08620](#))

Snellen, I., Desert, J.-M., Waters, L., **Robinson, T. D.**, et al. 2017, “Detecting Proxima b’s Atmosphere with JWST Targeting CO₂ at 15 μ m Using a High-pass Spectral Filtering Technique,” *AJ*, 154, 77 ([arXiv:1707.08596](#))

2016 **Robinson, T. D.**, Stapelfeldt, K. R., and Marley, M. S. 2016, “Characterizing Rocky and Gaseous Exoplanets with 2-meter Class Space-based Coronagraphs: General Considerations,” *PASP*, 128, 025003 ([arXiv:1507.00777](#))

Krissansen-Totton, J. and 6 co-authors (including **T. D. Robinson**) 2016, “Is the Pale Blue Dot Unique? Optimized Photometric Bands for Identifying Earth-like Exoplanets,” *ApJ*, 817, 31 ([arXiv:1512.00502](#))

Stark, C. C. and 11 co-authors (including **T. D. Robinson**) 2016, “A Direct Comparison of ExoEarth Yields for Starshades and Coronagraphs,” *SPIE*, 9904, 99041U

2015 **Robinson, T. D.** 2015. “Completely Colorblind: Advances in Gray Techniques and Applications to Planets Near and Far,” *Proceedings from Comparative Climates of Terrestrial Planets II.* ([arXiv:1511.03288](#))

Marley, M. S., and **Robinson, T. D.** 2015, “On the Cool Side: Modeling the Atmospheres of Brown Dwarfs and Giant Planets,” *ARAA*, 53, 279 ([arXiv:1410.6512](#))

Schwieterman, E. W., **Robinson, T. D.**, Meadows, V. S., et al. 2015, “Detecting and Constraining N₂ Abundances in Planetary Atmospheres Using Collisional Pairs,” *ApJ*, 810, 57 ([arXiv:1507.07945](#)) (**G**)

Gao, P., Hu, R., **Robinson, T. D.**, Li, C., Yung, Y. L. 2015, “Stability of CO₂ Atmospheres on Desiccated M Dwarf Exoplanets,” *ApJ*, 806, 249 ([arXiv:1501.06876](#))

Agol, E., Jansen, T., Lacy, B., **Robinson, T. D.**, and Meadows, V. S. 2015, “The Center of Light: Spectroastrometric Detection of Exomoons,” *ApJ*, 812, 5 ([arXiv:1509.01615](#))

2014 **Robinson, T. D.**, Maltagliati, L., Marley, M. S., and Fortney, J. J. 2014, “Titan solar occultation observations reveal transit spectra of a hazy world,” *PNAS*, 111, 9042 ([arXiv:1406.3314](#))

Robinson, T. D., Ennico, K., Meadows, V. S., et al. 2014, “Detection of Ocean Glint and Ozone Absorption Using LCROSS Earth Observations,” *ApJ*, 787, 2 ([arXiv:1405.4557](#))

Robinson, T. D., and Marley, M. S. 2014, “Temperature Fluctuations as a Source of Brown Dwarf Variability,” *ApJ*, 785, 158 ([arXiv:1403.2438](#))

Robinson, T. D., and Catling, D. C. 2014, “Common 0.1 bar Tropopause in Thick Atmospheres Set by Pressure-Dependent Infrared Opacity,” *Nature Geoscience*, 7, 12 ([arXiv:1312.6859](#))

- Stark, C. C., Roberge, A., Mandell, A., and **Robinson, T. D.** 2014, “Maximizing the ExoEarth Candidate Yield from a Future Direct Imaging Mission,” *ApJ*, 795, 122 ([arXiv:1409.5128](#))
- Arney, G. and 5 co-authors (including **T. D. Robinson**) 2014, “Spatially-resolved measurements of H₂O, HCl, CO, OCS, SO₂, cloud opacity, and acid concentration in the Venus near-infrared windows,” *JGR*, 119, 1860 ([link](#))
- Domagal-Goldman, S., and 4 co-authors (including **T. D. Robinson**) 2014, “Abiotic O₃ and O₂ in Atmospheres Similar to Prebiotic Earth,” *ApJ*, 792, 90 ([arXiv:1407.2622](#))
- Shields, A. L., and 4 co-authors (including **T. D. Robinson**) 2014, “Spectrum-driven Deglaciation due to Increases in Stellar Luminosity,” *ApJ*, 785, L9 ([arXiv:1403.3695](#))
- Ramirez, R. M., and 6 co-authors (including **T. D. Robinson**) 2014, “Warming early Mars with CO₂ and H₂,” *Nature Geosciences*, 7, 59 ([arXiv:1405.6701](#))
- 2013** Goldblatt, C., **Robinson, T. D.**, Zahnle, K. J., and Crisp, D. 2013, “Low Simulated Radiation Limit for Runaway Greenhouse,” *Nature Geoscience*, 6, 661 ([link](#))
- Kopparapu, R. K., and 9 co-authors (including **T. D. Robinson**) 2013, “Habitable Zones around Main Sequence Stars: New Estimates,” *ApJ* 765, 131 ([arXiv:1301.6674](#))
- Shields, A. L., and 5 co-authors (including **T. D. Robinson**) 2013, “The Effect of Host Star Spectral Energy Distribution and Ice-Albedo Feedback on the Climate of Extrasolar Planets,” *Astrobiology*, 13, 715 ([arXiv:1305.6926](#))
- 2012** **Robinson, T. D.**, and Catling, D. C. 2012, “An Analytic Radiative-Convective Model for Planetary Atmospheres,” *ApJ*, 757, 104 ([arXiv:1209.1833](#))
- 2011** **Robinson, T. D.** 2011, “Modeling the Infrared Spectrum of the Earth-Moon System: Implications for the Detection and Characterization of Earthlike Planets and their Moonlike Companions,” *ApJ*, 741, 51 ([arXiv:1110.3744](#))
- Robinson, T. D.**, Meadows, V. S., Crisp, D., et al. 2011, “Earth as an Extrasolar Planet: Earth Model Validation Using EPOXI Earth Observations,” *Astrobiology*, 11, 393 (issue cover) ([link](#))
- Cowan, N. B., **Robinson, T. D.**, Livengood, T. A., et al. 2011, “Rotational Variability of Earth’s Polar Regions: Implications for Detecting Snowball Planets,” *ApJ*, 731, 76 ([arXiv:1102.4345](#))
- Livengood, T. A., and 10 co-authors (including **T. D. Robinson**) 2011, “Properties of an Earth-Like Planet Orbiting a Sun-Like Star: Earth Observed by the EPOXI Mission,” *Astrobiology*, 11, 907 ([link](#))
- Crow, C. A., McFadden, L. A., **Robinson, T. D.**, et al. 2011, “Views from EPOXI: Colors in Our Solar System as an Analog for Extrasolar Planets,” *ApJ*, 729, 130 ([link](#))
- 2010** **Robinson, T. D.**, Meadows, V. S., and Crisp, D. 2010, “Detecting Oceans on Extrasolar Planets Using the Glint Effect,” *ApJL*, 721, L67 ([arXiv:1008.3864](#))
- 2009** Cowan, N. B., Agol, E., Meadows, V. S., **Robinson, T. D.**, et al. 2009, “Alien Maps of an Ocean-bearing World,” *ApJ*, 700, 915 ([arXiv:0905.3742](#))
- Conference Publications (Oral)** **Robinson, T. D.**, and the HabEx Science and Technology Definition Team. “HabEx Direct Imaging Exoplanet Science,” AAS, Honolulu, HI, Jan 2020

Young, A., and **Robinson, T. D.** “Quantifying Chemical Disequilibrium Biosignatures in Analogs for Earth-like Exoplanet Atmospheres,” AAS, Honolulu, HI, Jan 2020 (**G**)

Oldroyd, W., and **Robinson, T. D.** “Orbital Solutions for Revisit Optimization of Directly Imaged Exoplanets,” AAS, Honolulu, HI, Jan 2020 (**G**)

Robinson, T. D., and the HabEx Science and Technology Definition Team. “HabEx: The Habitable Exoplanet Observatory,” AAS, Seattle, WA, Jan 2019

Robinson, T. D. “Constraining Exoplanet Habitability with Future Space Telescopes,” AGU, Washington, D.C., Dec 2018

Feng, Y. K., **Robinson, T. D.**, and Fortney, J. J. “Characterizing Earth Analogs in Reflected Light: Information Content from the Ultraviolet Through the Near-Infrared,” Comparative Climatology of Terrestrial Exoplanets III, Houston, TX, Aug 2018 (**G**)

Robinson, T. D. “Charactering Exo-Earths with Coronagraphy,” High Dispersion Coronagraphy Conference, Caltech, CA, June 2018

Robinson, T. D. “Are We Alone? Habitable Planets and Biosignatures,” AAS, National Harbor, MD, Jan 2018

Robinson, T. D. “Characterizing Exoplanet Habitability with Emission Spectroscopy,” AAS, National Harbor, MD, Jan 2018

Robinson, T. D., and Domagal-Goldman, S. “Characterizing Exoplanets with HabEx,” AAS, National Harbor, MD, Jan 2018

Robinson, T. D. “Characterizing Exoplanet Habitability with Space-Based Telescopes,” Astrobiology Science Conference, Phoenix, AZ, Apr 2017

Robinson, T. D., Marley, M. S., and Stapelfeldt, K. “WFIRST Instrument Modeling and Filter Selection,” STScI WFIRST / High Contrast Imaging in Space Workshop, Baltimore, MD, Nov 2016

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