

Eliza Kempton
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POSITIONS

Professor of Astronomy & Astrophysics – University of Chicago	2025 - present
Professor of Astronomy – University of Maryland, College Park	2024 - 2025
Associate Professor of Astronomy – University of Maryland, College Park	2020 - 2024
Assistant Professor of Astronomy – University of Maryland, College Park	2018 - 2020
Associate Professor of Physics – Grinnell College (on leave)	2018 - 2020
Assistant Professor of Physics – Grinnell College	2012 - 2018
Sagan Postdoctoral Fellow – University of California, Santa Cruz	2009 - 2012

EDUCATION

Harvard University , Cambridge, MA – Ph.D. Astronomy Dissertation: Towards Detecting and Characterizing Earth-like Extrasolar Planets Advisor: Dimitar Sasselov	2009
Middlebury College , Middlebury, VT – B.A. <i>summa cum laude</i> Major: Physics, Minors: Mathematics & French Senior Thesis: The Molecular Zeeman Effect and the G-Band: Stokes Polarimetry Modeling of Solar CH Lines (Advisors: Rich Wolfson & Han Uitenbroek)	2003

RESEARCH INTERESTS

Theoretical models of planetary atmospheres
Detection and characterization of extrasolar planets
Exoplanet origins and evolution

HONORS & AWARDS

University of Maryland Astronomy Department Distinguished Faculty Teaching Prize	2022
University of Maryland Astronomy Department Prize for Excellence in Mentoring	2021
University of Maryland Research Leaders Fellow	2020 - 2021
Research Corporation for Science Advancement – Scialog Fellow	2018, 2021
Iowa Women of Innovation Award Finalist, “Rising Star” Category	2017
NSF CAREER Award	2017
American Association for University Women (AAUW) – American Postdoctoral Fellowship (fellowship for sabbatical leave)	2016
Research Corporation for Science Advancement – Cottrell Scholar Award	2016
Grinnell College Harris Faculty Fellowship (yearlong sabbatical fellowship)	2016
Research Corporation for Science Advancement – Cottrell College Science Award	2015
Kavli Frontiers Fellow (National Academy of Sciences)	2010, 2011, 2012
ADVANCE Junior Scientist Lecturer – University of Arizona	2011
Sagan Postdoctoral Fellowship	2009
Harvard University Teaching Certificate of Distinction	2006
Phi Beta Kappa	2003

OBSERVATIONS & MISSION PLANNING

Monitoring Activity from Nearby sTars with UV Imaging and Spectroscopy (MANTIS) –
Co-I – NASA SmallSat UV Mission

Contribution to ARIEL Spectroscopy of Exoplanets (CASE) – **Co-I** – NASA partner mission
of opportunity

JWST – **PI** on 1 GO Program, *11.2 hours*
Co-PI on 1 GO Program, *48.7 hours*
Co-I on 1 ERS Program & working group co-lead, *86.9 hours*
Co-I on 12 additional GO Program, *372.1 hours*

Hubble Space Telescope – **Co-I** on 18 GO and DDT programs – *572 total orbits*

Ground-based Telescopes – **Co-I** on various observing programs on Magellan, Gemini, VLT,
Keck, CFHT, and smaller telescopes – *multiple total nights*

Spitzer Space Telescope – **Co-I** on 5 GO + DDT programs – *1,390 total hours*

GRANTS

\$4.4M in total funds, \$2.4M as PI *from the following funding sources:*

Alfred P. Sloan Foundation – Matter to Life

Heising-Simons Foundation – Science Grants

NASA – Planetary Atmospheres, Exoplanet Research (XRP), Habitable Worlds, FINESST, Astrophysics Theory (ATP)

NSF – CAREER, Astronomy and Astrophysics Grants (AAG)

Research Corporation for Science Advancement – Cottrell College Science Award, Cottrell Scholar Award

Space Telescope Science Institute – HST GO, HST Archival Theory, JWST ERS, JWST GO, JWST Archival, JWST Archival Theory

TEACHING

University of Maryland

ASTR-101, “General Astronomy”	fall 2019, 2021
ASTR-320, “Theoretical Astrophysics”	spring 2023, 2024
ASTR-380, “Life in the Universe – Astrobiology”	fall 2023
ASTR-435, “Astrophysics of Exoplanets”	spring 2019, 2021, 2025
ASTR-601, “Radiative Processes”	fall 2018, 2020, 2022, 2024
ASTR-688E, “Special Topics in Modern Astronomy: Exoplanetary Astrophysics”	spring 2022

Grinnell College

TUT-100, “First-Year Tutorial – Perspectives on Life in the Universe”	fall 2014
PHY-116, “The Universe and its Structure”	fall 2012, 2013
PHY-131, “General Physics I with Lab”	spring 2013, 2014, 2015, fall 2014, 2015, 2017
PHY-132, “General Physics II with Lab”	fall 2012, 2013, spring 2016, 2018
PHY-180, “Bridges, Towers, & Skyscrapers”	fall 2015
PHY-234L, “Computational Mechanics Lab” (college-sponsored course release for lab development – fall 2015)	spring 2016
PHY-314, “Thermodynamics and Statistical Physics”	spring 2013, 2014, 2016
PHY-395, “Stellar & Planetary Astrophysics”	spring 2015, 2018

STUDENTS & POSTDOCS MENTORED

Postdocs

Collin Cherubim – <i>NHFP Sagan fellow</i>	2026 - present
Caroline Piaulet-Ghorayeb – <i>51 Pegasi b fellow</i>	2026 - present
Maria Steinrueck – <i>51 Pegasi b fellow</i>	2026 - present
Jeehyun Yang	2025 - present
Matthew Nixon	2022 - 2025
Matej Malik – <i>Swiss National Science Foundation Early Postdoc Mobility fellow</i>	2018 - 2022
Sandra Bastelberger	2018 - 2022

Graduate Students

Tyler Fairington (University of Chicago, Astronomy & Astrophysics)	2025 - present
Brandon Park Coy (University of Chicago, Geophysical Sciences) <i>Co-advised with Edwin Kite</i>	2025 - present
Arjun Savel (University of Maryland, Astronomy) – PhD 2026 <i>Flatiron CCA predoctoral fellowship – fall 2022</i> <i>Current postdoctoral fellow at Caltech</i>	2020 - 2026
Sander Somers (University of Maryland, Astronomy)	2023 - 2025
Brian Davenport (University of Maryland, Astronomy) <i>Co-advised with Erin May (APL)</i>	2022 - 2025
Giannina Guzman Caloca (University of Maryland, Astronomy) <i>Co-advised with Kevin Stevenson (APL) & Drake Deming (UMD)</i>	2021 - 2025
Jegug Ih (University of Maryland, Astronomy) – PhD 2024 <i>UMD Outstanding Graduate Assistant Award – 2023</i> <i>Current postdoctoral fellow at STScI</i>	2018 - 2024
Benjamin Hord (University of Maryland, Astronomy) – PhD 2023 <i>Co-advised with Knicole Colón (NASA GSFC)</i> <i>Current NPP fellow</i>	2018 - 2023
D. J. Teal (University of Maryland, Astronomy) – PhD 2023 <i>Current software engineer at NOIRLab</i>	2018 - 2023

Undergraduate Students

Jacob Weglarz (University of Maryland '25)	2024 - present
Bodie Breza (University of Maryland '25)	2024 - 2025

Madeline Lessard (University of Maryland '24) <i>Current astronomy & astrophysics PhD student at UC Santa Cruz</i>	2021 - 2025
Kenneth Arnold (University of Maryland '22) <i>Current astronomy PhD student at U. Wisconsin, Madison</i>	2022 - 2023
Emily Whittaker (University of Maryland '21) <i>Current geophysics & space physics PhD student at UCLA</i>	2020 - 2021
Katie Futrowsky (University of Maryland '22) <i>Current physics PhD student at Georgia Tech</i>	2020
Chavonne Bowen (Notre Dame of Maryland '20) <i>UMD GRAD-MAP participant</i> <i>Current atmospheric science PhD student at Howard U.</i>	2019
Caleb Harada (University of Maryland '20) <i>NSF graduate research fellowship – 2020</i> <i>PhD, Astrophysics, UC Berkeley</i>	2018 - 2020
Josh Cottle (Grinnell '18)	2017
Hung Lee (Grinnell '19)	2017
Carlos Muñoz-Romero (Grinnell '20) <i>PhD, Astrophysics, Harvard</i>	2017 - 2020
Victoria DiTomaso (CUNY '18) <i>Fulbright fellow – 2018-2019</i> <i>Current astrophysics PhD student at Harvard</i>	2017-2018
Erin Flowers (Columbia '17) <i>PhD, Astrophysics, Princeton</i>	2016 - 2018
Jisheng Zhang (Grinnell '17) <i>PhD, Astronomy & Astrophysics, U. Chicago</i>	2016 - 2017
Yun (Sunny) Zhao (Grinnell '18) <i>MSc, Spatial Data Science and Visualization, University College London</i>	2016
Andrew Baldrige (Grinnell '17)	2015 - 2016
Jack Muskopf (Grinnell '16)	2015
Rostom Mbarek (Grinnell '16) <i>AAS Chambliss student poster prize honorable mention – 2015</i> <i>PhD, astronomy & astrophysics, U. Chicago</i>	2014 - 2015
Albert Owusu-Asare (Grinnell '16)	2014
Patrick Slough (Grinnell '15)	2013 - 2014
Bryson Cale (Grinnell '16) <i>PhD, physics, George Mason</i>	2012 - 2014
Roman Grigorii (Grinnell '15) <i>PhD, mechanical engineering, Northwestern</i>	2013 - 2014
Julia Sauerhaft (Grinnell '15)	2012 - 2014

Molly Gallagher (Grinnell '14)
PhD, astronomy, Ohio State

2012

SERVICE ACTIVITIES

Professional Service

HISPEC/MODHIS Science Definition Team member (High-Resolution Spectrograph concepts for Keck / TMT)	2019 - present
Exoplanet Atmospheres Science Organizing Committee (SOC) member	2025 - 2026
NASA Hubble Fellowship Program (NHFP) Selection Committee member and Exoplanet Panel chair	2019, 2026
JWST Time Allocation Committee (TAC) member	2023 - 2025
Exoplanets V Conference Science Organizing Committee (SOC) member	2023 - 2024
Habitable Worlds Observatory Exoplanet Science Metrics Steering Committee member	2023
51 Pegasi b Postdoctoral Fellowship Review Panel member	2022
NASA TESS Mission Atmospheric Characterization Working Group chair	2020 - 2022
NSF/NASA/DoE Astronomy and Astrophysics Advisory Committee (AAAC) member	2017 - 2021
NASA TESS Mission Atmospheric Characterization Working Group member	2017 - 2020
NASA Exoplanet Exploration Program Analysis Group (ExoPAG) Executive Committee member	2017 - 2020
"Rocky Exoplanets in the Era of JWST: Theory and Observation" Symposium Science Organizing Committee (SOC) co-chair	2019
NASA Origins Space Telescope Exoplanet Working Group member	2017 - 2019
U. S. ELT Program: Key Science Program development group member	2018
National Academy of Sciences Exoplanet Science Strategy Committee member	2018
Enabling Transiting Exoplanet Observations with JWST Workshop organizing committee member	2017
NASA Hubble Fellowship Selection Committee member	2016
Hubble Space Telescope Exoplanet Advisory Committee member	2015 - 2016
NASA Keck Telescopes Time Allocation Committee (TAC) member	2014 - 2015
NASA ROSES Planetary Atmospheres program review panel member	2011
Kavli Frontiers of Science Symposium organizing committee member	2010, 2011

Institutional Service

University of Chicago A&A Department Colloquium Committee member	2025 - present
University of Chicago A&A Department Graduate Admissions Committee member	2025 - present
University of Maryland Astronomy Department Graduate Director	2022 - 2025
University of Maryland institutional contact for the 51 Pegasi b postdoctoral fellowship and internal selection committee chair	2022 - 2025
University of Maryland Astronomy Faculty Search Committee member	2018 - 2020, 2023 - 2024
University of Maryland Astronomy Department Center for Theory and Computation (CTC) Director	2021 - 2022
University of Maryland Astronomy Department Chair Review Committee member	2022
University of Maryland Astronomy Department Graduate Admissions Committee member	2017 - 2018, 2020 - 2022
University of Maryland Astronomy Equity, Diversity, and Inclusion (EDI) Committee chair	2020 - 2021
University of Maryland Astronomy Department Graduate Admissions Committee chair	2019 - 2020
University of Maryland Astronomy Equity, Diversity, and Inclusion (EDI) Committee member	2018 - 2020
Grinnell College Center for Teaching, Learning, and Assessment (CTLA) Advisory Committee member	2017 - 2018
Grinnell College Science Teaching and Learning Group (STaLG) co-lead	2014 - 2016
Grinnell College Open Internship Grant Selection Committee member	2014 - 2016
Harvard Astronomy Department graduate student admissions committee member	2007

EQUITY, INCLUSION, & OUTREACH

University of Maryland Astronomy Peer Mentors (APM) program founder and organizer	2018 - 2025
Grinnell College Science Peer Mentors (SPM) program founder and organizer	2017 - 2018
Grinnell College Women in Physics co-lead	2013 - 2018
Grinnell Science Project lab facilitator (pre-orientation program for students from underrepresented backgrounds)	2013 - 2015
National Consortium for Specialized Secondary Schools of Mathematics, Science, and Technology workshop facilitator	2013
Bay Area Project ASTRO participant (yearlong partnership with a local teacher)	2011 - 2012

PROFESSIONAL AFFILIATIONS

American Astronomical Society

INVITED CONFERENCE TALKS

248 th American Astronomical Society (AAS) Meeting, <i>plenary talk</i> – Pasadena, CA	June 2026
American Physical Society (APS) Meeting “Molecular Astrophysics: Exoplanets; Spectroscopy and Dynamics ” – Minneapolis, MN	March 2024
PLATO Atmospheres Workshop – <i>virtual</i>	December 2021
Habitable Worlds Conference, <i>plenary talk</i> – <i>virtual</i>	February 2021
235 th American Astronomical Society (AAS) Meeting “Atmospheric Characterization of TESS Exoplanets” Special Session – <i>virtual</i>	January 2021
Simons Collaboration on the Origins of Life (SCOL) Meeting – <i>virtual</i>	June 2020
American Astronomical Society (AAS) Meeting “NASA’s TESS Mission” Splinter Session – Honolulu, HI	January 2020
Science with <i>HabEx</i> , Community Meeting – New York, NY	October 2018
HoRSE: High Resolution Spectroscopy for Exoplanet Atmospheres – Nice, France	October 2018
231 st American Astronomical Society (AAS) Meeting “Big Bang to Biosignatures: The Science of the LUVOIR Mission Concept” Splinter Session – National Harbor, MD	January 2018
The Origins of Volatiles in Habitable Planets: the Solar System and Beyond – Ann Arbor, MI	October 2017
Enabling Transiting Exoplanet Observations with <i>JWST</i> – Baltimore, MD	July 2017
CRAQ Exoplanet Atmospheres Summer School – Montreal, Canada	June 2017
Opportunity M – Cambridge, MA	August 2016
Planetary Systems: A Synergistic View – Quy Nhon, Vietnam	July 2015
Sagan Exoplanet Summer Workshop – Imaging Planets and Disks – Pasadena, CA	July 2014
<i>JWST</i> Transit Planning Meeting – Pasadena, CA	March 2014
The Future of Astronomy: Fellows at the Frontiers of Science – Evanston, IL	August 2011
IAU Symposium #276: The Astrophysics of Planetary Systems – Torino, Italy	October 2010

INVITED COLLOQUIA AND SEMINARS

Argonne National Laboratory Chemical Sciences and Engineering Division Colloquium – Lemont, IL	March 2026
University of Michigan Astronomy Colloquium – Ann Arbor, MI	December 2025
University of Illinois Urbana-Champaign Astrophysics Colloquium – Urbana, IL	November 2025
Northwestern University CIERA Colloquium – Evanston, IL	January 2025
University of Delaware Physics & Astronomy Colloquium – Newark, DE	May 2024
U.C. Berkeley Physical Chemistry Seminar – Berkeley, CA	February 2024
University of Chicago Astronomy & Astrophysics Colloquium – Chicago, IL	January 2024
Yale University Astronomy Colloquium – New Haven, CT	November 2022
Seattle University Physics Seminar – <i>virtual</i>	January 2021
Ohio State University Astronomy Colloquium – Columbus, OH	February 2020
Harvard Origins of Life Initiative, Forum Lecturer – Cambridge, MA	November 2019
MIT Astrophysics Colloquium – Cambridge, MA	May 2019
Johns Hopkins Physics and Astronomy Department Colloquium – Baltimore, MD	February 2019
Carnegie DTM Weekly Seminar Series – Washington D.C.	February 2019
Harvard-Smithsonian Center for Astrophysics Institute for Theory and Computation (ITC) Colloquium – Cambridge, MA	March 2018
NASA Goddard Astrophysics Science Division Colloquium – Greenbelt, MD	December 2017
University of Minnesota Institute for Astrophysics (MifA) Colloquium – Minneapolis, MN	October 2017
Drake University Physics & Astronomy Seminar – Des Moines, IA	September 2017
NASA JPL Astrophysics Colloquium – Pasadena, CA	May 2017
Space Telescope Science Institute Colloquium – Baltimore, MD	April 2017
University of Toronto Centre for Planetary Sciences Planet Day – Toronto, Canada	April 2017
University of Maryland Astronomy Colloquium – College Park, MD	February 2017
McGill University Physics Seminar – Montreal, Canada	February 2017
Cal State Los Angeles Physics & Astronomy Colloquium – Los Angeles, CA	October 2016
Truman State University Physics Colloquium – Kirksville, MO	October 2015
Iowa State University Astronomy Seminar – Ames, IA	September 2014
Swarthmore College Physics & Astronomy Colloquium – Swarthmore, PA	December 2013
University of Michigan Astronomy Colloquium – Ann Arbor, MI	November 2013
Université de Montréal CRAQ Colloquium – Montreal, Canada	December 2012
University of Colorado Department of Astronomical and Planetary Sciences (APS) Colloquium – Boulder, CO	October 2012

University of Iowa Physics & Astronomy Colloquium – Iowa City, IA	October 2012
Carnegie Observatories Colloquium Series – Pasadena, CA	November 2011
U.C. Santa Cruz Institute of Geophysics and Planetary Physics (IGPP) Seminar – Santa Cruz, CA	March 2011
University of Washington Astronomy Colloquium – Seattle, WA	February 2011
University of Florida Astronomy Colloquium – Gainesville, FL	February 2011
Joint Steward Observatory / NOAO Colloquium (ADVANCE Junior Scientist Lecturer) – Tucson, AZ	January 2011
Berkeley Theoretical Astrophysics Center (TAC) Seminar – Berkeley, CA	May, 2010

PUBLIC TALKS

National Capital Astronomers – <i>virtual</i>	February 2021
George Mason University, “Evening Under the Stars” – Fairfax, VA	October 2018
Cedar Amateur Astronomers Public Observatory Night – Ely, IA	November 2015
Lick Observatory Summer Visitors Program – Mount Hamilton, CA	June 2011
SETI Institute Science Talk Series – Mountain View, CA	June 2011
Steward Observatory Public Evening Lecture Series – Tucson, AZ	January 2011

PUBLICATIONS

153 total, 11,873 citations, h-index = 62

(* = undergrad advisee, ‡ = grad student advisee, † = postdoc group member)

Refereed Research Articles

- 1) ‡B. P. Coy, Q. Xue, M. Weiner Mansfield, J. D. Eastman, A. A. A. Piette, ‡T Fairnington, C. Smith, M. Zhang, **E. M.-R. Kempton**, J. L. Bean, X. Ji, P. Gao, J. Ih, D. D. B. Koll, R. Luque, J. Orell-Miquel, E. S. Kite, “An Atmosphere on the Ultra-Short Period super-Earth HD 3167 b”, *Astronom. Journal*, in press
- 2) †C. Piaulet-Ghorayeb, D. P. Thorngren, **E. M.-R. Kempton**, J. Lipper, L. Rogers, F. Correa Horta, S. L. Sun, “A Window for Water-Hydrogen Demixing on Warm Metal-Rich Sub-Neptunes”, *Astrophys. Journal*, in press
- 3) V. Parmentier, K. B. Stevenson, L. Welbanks, J. Taylor, E. Schlawin, L.-P. Coulombe, Y. Tang, M. Line, H. Shivkumar, X. Tan, J. L. Bean, J.-M. Désert, J. J. Fortney, P. Gao, M. Hammond, **E.**

- M.-R. Kempton**, T. D. Komacek, M. Weiner Mansfield, “Horizontal Transport as a Source of Disequilibrium Chemistry on the Nightside of a Hot Exoplanet”, *Nature Astronomy*, in press
- 4) J. Ih, **E. M.-R. Kempton**, H. Diamond-Lowe, J. Krissansen-Totton, M. Weiner Mansfield, Q. Xue, N. Wogan, †M. C. Nixon, B. J. Hord, “Do Rocky Planets Around M Stars Have Atmospheres? A Statistical Approach to the Cosmic Shoreline”, *Astrophys. Journal*, in press
 - 5) †J. Yang, **E. M.-R. Kempton**, ‡A. B. Savel, “Sub-Neptunes as Soot Factories: Deep Atmosphere Hydrocarbon Formation and Quenching as the Origin of Sub-Neptune Aerosol Trends”, *Astrophys. Journal Letters*, 1003, L16, 2026
 - 6) D. J. Wilson, A. Youngblood, G. M. Duvvuri, K. France, P. C. Schneider, A. Brown, I. Longo, C. S. Froning, J. L. Bean, J. S. Pineda, **E. M.-R. Kempton**, Y. Miguel, T. M. Evans-Soma, Z. Berta-Thompson, “The MUSCLES Extension for Atmospheric Transmission Spectroscopy: Spectral Energy Distributions for 20 Exoplanet Host Stars That JWST Observed in Cycle 1”, *Astronom. Journal*, 171, 120, 2026
 - 7) J. Li, E. A. Bergin, M. M. Hirschmann, G. A. Blake, F. J. Ciesla, **E. M.-R. Kempton**, “Soot Planets Instead of Water Worlds”, *Astrophys. Journal Letters*, 997, L29, 2026
 - 8) Q. Xue, M. Zhang, ‡B. P. Coy, M. Brady, X. Ji, J. L. Bean, M. Radica, A. Seifahrt, J. Stürmer, R. Luque, R. Basant, N. Brown, T. Das, D. Kasper, B. Piaulet-Ghorayeb, **E. M.-R. Kempton**, E. Kite, “The JWST Rocky Worlds DDT Program Reveals GJ 3929b to Likely be a Bare Rock”, *Astrophys. Journal Letters*, 995, L52, 2025
 - 9) †M. C. Nixon, ‡R. S. Somers, ‡A. B. Savel, J. Ih, **E. M.-R. Kempton**, E. D. Young, H. E. Schlichting, T. Lichtenberg, L. Welbanks, W. Misener, A. A. A. Piette, N. F. Wogan, “Magma Ocean Interactions Can Explain JWST Observations of the Sub-Neptune TOI-270 d”, *Astrophys. Journal*, 995, 95, 2025
 - 10) R. C. Challener, M. Weiner Mansfield, P. E. Cubillos, et al., (includes **E. M.-R. Kempton**, †M. C. Nixon + 30 co-authors), “A 3D Map of the Dayside of an Extrasolar Planet”, *Nature Astronomy*, 9, 1821, 2025
 - 11) *B. Breza, †M. C. Nixon, **E. M.-R. Kempton**, “Not All Sub-Neptune Exoplanets Have Magma Oceans”, *Astrophys. Journal Letters*, 993, L46, 2025
 - 12) L. Van Sluijs, E. Rauscher, **E. M.-R. Kempton**, T. Kennedy, I. Malsky, N. Matsunaga, M. Meyer, A. McWilliam, J. D. Monnier, S. Otsubo, Y. Sarugaku, T. Takeuchi, “First Results from WINERED: Detection of Emission Lines from Iron and a Combined Set of Trace Species on the Dayside of WASP-189 b”, *Astronom. Journal*, 170, 217, 2025
 - 13) A. Aguichine, N. Batalha, J. J. Fortney, N. Nettelmann, J. E. Owen, **E. M.-R. Kempton**, “Evolution of Steam Worlds: Energetic Aspects”, *Astrophys. Journal*, 988, 186, 2025
 - 14) B. P. Coy, J. Ih, E. S. Kite, D. D. B. Koll, M. Tenthoff, J. L. Bean, M. Weiner Mansfield, M. Zhang, Q. Xue, **E. M.-R. Kempton**, K. Wohlfarth, R. Hu, X. Lyu, C. Wöhler, “Population-level Hypothesis Testing with Rocky Planet Emission Data: A Tentative Trend in the Brightness Temperatures of M-Earths”, *Astrophys. Journal*, 987, 22, 2025
 - 15) *K. E. Arnold, ‡A. B. Savel, **E. M.-R. Kempton**, M. T. Roman, E. Rauscher, I. Malsky, H. Beltz, M. E. Steinrueck, “Out on a Limb: the Signatures of East-West Asymmetries in Transmission Spectra from General Circulation Models”, *Astrophys. Journal*, 986, 187, 2025

- 16) M. E. Steinrueck, V. Parmentier, L. Kreidberg, P. Gao, **E. M.-R. Kempton**, M. Zhang, K. B. Stevenson, I. Malsky, M. T. Roman, E. Rauscher, †M. Malik, R. Lupu, T. Kataria, A. A. A. Piette, J. L. Bean, †M. C. Nixon, “The Radiative Effects of Photochemical Hazes on the Atmospheric Circulation and Phase Curves of Sub-Neptunes”, *Astrophys. Journal*, 985, 98, 2025
- 17) ‡B. Davenport, **E. M.-R. Kempton**, †M. C. Nixon, J. Ih, D. Deming, G. Fu, E. M. May, J. L. Bean, P. Gao, L. Rogers, and M. Malik, “TOI-421 b: A Hot Sub-Neptune with a Haze-Free, Low Mean Molecular Weight Atmosphere”, *Astrophys. Journal Letters*, 984, L44, 2025
- 18) ‡B. Davenport, T. Kennedy, E. M. May, **E. M.-R. Kempton**, I. Malsky, K. B. Stevenson, J. L. Bean, M. Weiner Mansfield, “An Analysis of Spitzer Phase Curves for WASP-121b and WASP-77Ab”, *Astronom. Journal*, 169, 260, 2025
- 19) I. Malsky, E. Rauscher, K. Stevenson, ‡A. B. Savel, M. Steinrueck, P. Gao, **E. M.-R. Kempton**, M. T. Roman, J. L. Bean, M. Zhang, V. Parmentier, A. A. A. Piette, T. Kataria, “Clouds and Hazes in GJ 1214b’s Metal-Rich Atmosphere”, *Astronom. Journal*, 169, 221, 2025
- 20) ‡A. B. Savel, M. Bedell, **E. M.-R. Kempton**, P. Smith, J. L. Bean, L. L. Zhao, K. W. K. Wong, J. A. Sanchez, M. R. Line, “Peering into the Black Box: Forward Modeling the Uncertainty Budget of High-Resolution Spectroscopy of Exoplanet Atmospheres”, *Astronom. Journal*, 169, 135, 2025
- 21) L. Dang, T. J. Bell, Y. Shu, et al. (includes **E. M.-R. Kempton** + 18 co- authors), “A Comprehensive Analysis of Spitzer 4.5 μ m Phase Curves of Hot Jupiters”, *Astronom. Journal*, 169, 32, 2025
- 22) P. C. Thao, A. W. Mann, A. D. Feinstein, et al., (includes **E. M.-R. Kempton** + 26 co-authors), “The Featherweight Giant: Unraveling the Atmosphere of a 17 Myr Planet with JWST”, *Astronom. Journal*, 168, 297, 2024
- 23) P. B. Smith, J. A. Sanchez, M. R. Line, et al. (includes **E. M.-R. Kempton**, ‡A. B. Savel + 18 co-authors), “The Roasting Marshmallows Program with IGRINS on Gemini South II: WASP-121 b has Super-Stellar C/O and Refractory-to-Volatile Ratios”, *Astronom. Journal*, 168, 293, 2024
- 24) M. Weiner Mansfield, Q. Xue, M. Zhang, A. S. Mahajan, ‡J. Ih, D. Koll, J. L. Bean, B. Park Coy, J. D. Eastman, **E. M.-R. Kempton**, E. Kite, J. Lunine, “No Thick Atmosphere on the Terrestrial Exoplanet Gl 486b”, *Astrophys. Journal Letters*, 975, L22, 2024
- 25) Q. Xue, J. L. Bean, M. Zhang, A. Mahajan, ‡J. Ih, J. D. Eastman, J. Lunine, M. Weiner Mansfield, B. Park Coy, **E. M.-R. Kempton**, D. Koll, E. Kite, “JWST Thermal Emission of the Terrestrial Exoplanet GJ 1132b”, *Astrophys. Journal Letters*, 973, L8, 2024
- 26) H. Diamond-Lowe, G. W. King, A. Youngblood, et al. (includes **E. M.-R. Kempton** + 18 co-authors), “High Energy Spectra of LTT 1445A and GJ 486”, *Astronom. & Astrophys.*, 689, A48, 2024
- 27) N. Espinoza, M. E. Steinrueck, J. Kirk, et al. (includes **E. M.-R. Kempton**, ‡A. B. Savel, *K. Arnold + 35 co-authors), “The Morning and Evening Atmosphere of the Exoplanet WASP-39b”, *Nature*, 632, 1017, 2024

- 28) G. Fu, L. Welbanks, D. Deming, J. Inglis, M. Zhang, J Lothringer, ‡J. Ih, J. I. Moses, E. Schlawin, H. A. Knutson, G. Henry, T. Greene, D. K. Sing, ‡A. B. Savel, **E. M.-R. Kempton**, D. Louie, M. Line, "Hydrogen Sulfide Detection and Strong Methane Depletion in the Super-Stellar Metallicity Atmosphere of Hot Jupiter HD 189733b", *Nature*, 632, 752, 2024
- 29) A. L. Carter, E. M. May, N. Espinoza, et al. (**includes E. M.-R. Kempton** + 75 co-authors), "JWST Early Release Science: A Unified Near-Infrared Spectrum of WASP-39b", *Nature Astronomy*, 8, 1008, 2024
- 30) ‡A. B. Savel, M. Bedell, **E. M.-R. Kempton**, "cortecs: A Python Package for Compressing Opacities", *Journal of Open Source Software*, 9, 6104, 2024
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Invited Commentaries, and Reports

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