Aylecia S. Lattimer

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Curriculum Vitae

EMPLOYMENT

Oct. 2024 - *present* ..... Postdoctoral Researcher, Anton Pannekoek Institute for Astronomy, University of Amsterdam

EDUCATION

Aug. 2017 - Aug. 2024 .... Ph.D. Astrophysical & Planetary Science, University of Colorado - Boulder
Dissertation: *Calculations & Impacts of the Spectral Line-Driving Radiation Force in Various Astrophysical Environments*, Advisor: Dr. Steven Cranmer

Aug. 2017 - Dec. 2019 ..... M.S. Astrophysics, University of Colorado - Boulder
Thesis: *A Twenty-First Century Atomic Database for Line-Driven Outflows in a Variety of Astrophysical Environments*, Advisor: Dr. Steven Cranmer

Aug. 2012 - May 2016 ..... B.S. Physics, University of Missouri (*summa cum laude*)
Senior Honors Thesis: *The Effect of Chemical Abundance on Dust Formation: Stellar Nucleosynthesis vs. Metallicity*, Advisor: Dr. Angela Speck

Aug. 2012 - May 2016 ..... B.A. German Studies, University of Missouri (*summa cum laude*)

Jan. 2015 - May 2016 ..... Undergraduate Research Mentorship Program, University of Missouri

Aug. 2012 - May 2016 ..... Minor in Mathematics, University of Missouri

Aug. 2012 - May 2016 ..... Multicultural Studies Certificate, University of Missouri

GRANTS

Sept. 2022 - Sept. 2023 .... FI (Future Investigator), Future Investigators in NASA Earth and Space Science and Technology (FINESST)
Expanding the Spectral Database: An Updated Formalism for Line-Driven Winds and Consequences for Stellar and Quasar Outflows

PEER-REVIEWED PUBLICATIONS

June 2024 ..... **Lattimer, A. S.** & Cranmer, S.R. 2024, ApJ, 968 61,*A Self-Consistent Treatment of the Line-Driving Radiation Force for Active Galactic Nuclei Outflows: New Prescriptions for Simulations*

March 2021 ..... **Lattimer, A. S.** & Cranmer, S. R. 2021, ApJ, 910, 48, *An Updated Formalism for Line-driven Radiative Acceleration and Implications for Stellar Mass Loss*

TALKS, CODE, & OTHER PUBLICATIONS

March 2024 ..... **Lattimer, A. S.** 2024a, FLOWR, 2.0, Zenodo, doi: 10.5281/zenodo.10846556

March 2024 ..... **Lattimer, A. S.** AGNwind, 1.0, Zenodo, doi: 10.5281/zenodo.10846554

Feb. 2024 ..... **Lattimer, A. S.** & Cranmer, S., 2024, AAS, *A Self-Consistent Treatment of the Spectral Line-Driving Radiation Force for Active Galactic Nuclei: Consequences on Ionization and Outflow Strength* (Research Contributed Talk)

March 2023 ..... **Lattimer, A. S.** & Cranmer, S.R., 2023, Proceedings of the International Astronomical Union, Symposium S378: Black Hole Winds at All Scales, *Updated Calculations of the Spectral-Line Radiation Force & Mass-Loss Rates for AGN Outflows* (Research Contributed Talk & Conference Proceeding)

January 2023 ..... **Lattimer, A. S.** & Cranmer, S., 2023, AAS, *Going with the Flows: Updated Calculations of the Spectral-Line Radiation Force for Stellar & AGN Outflows* (Research Contributed Talk)

January 2021 ..... **Lattimer, A. S.** & Cranmer, S. 2021, AAS, *An Updated Formalism for Line-Driven Outflows and Consequences for Mass Loss* (Research Contributed Talk)

January 2020 ..... **Lattimer, A. S.** & Cranmer, S. 2020, AAS. *A New Atomic Database for Line-Driven Outflows in a Variety of Astrophysical Environments* (Poster)

TEACHING EXPERIENCE

Lab TA duties include: Unassisted teaching and grading of up to two lab sections each week, holding weekly office hours, and grading class exams.

Lecture TA duties include: giving guest lectures, proctoring exams, holding weekly office hours, grading homework and exams, and managing course Canvas page, including grades and due dates.

Recitation TA duties include: Writing and teaching weekly recitations covering both review and new material, weekly office hours, grading, & managing course Canvas pages.

Nov. 8, 2024 ..... Extreme Astrophysics, University of Amsterdam - Guest Lecture

Jan. - May 2024 ..... CU ASTR 1030: Accelerated Introductory Astronomy I - Lab & lecture TA

Sept. - Dec. 2023 ..... CU ASTR 2040: The Search for Life in the Universe - Lecture TA

Jan. - May 2022 ..... CU ASTR 1200: Stars & Galaxies - Lecture TA

Sept. - Dec. 2021 ..... CU ASTR 2030: Black Holes - Lecture & Recitation TA

Jan. - May 2021 ..... CU ASTR 1200: Stars & Galaxies - Lecture TA
CU ASTR 2010: Modern Cosmology - Lecture & Recitation TA

Jan. - May 2019 ..... CU ASTR 1040: Accelerated Introductory Astronomy II - Recitation TA

Aug. - Dec. 2018 ..... CU ASTR 1010: Introductory Astronomy I - Lab TA

Jan. - May 2018 ..... CU ASTR 1020: Introductory Astronomy II - Lecture TA
CU ASTR 1200: Stars & Galaxies - Lecture TA

Aug. - Dec. 2017 ..... CU ASTR 1030: Accelerated Introductory Astronomy I - Lab TA

HONORS & AWARDS

2023 ..... Chance Irick Cooke Endowed Fellowship, 2023
2021 ..... J. Tour Scholarship in Arts and Sciences, 2021
2016 ..... University Honors, University of Missouri, 2016
2016 ..... General Honors, University of Missouri, 2016
2012 - 2016 ..... Curators' Scholar Award, 4 annual awards, 2012-2016
2012 - 2016 ..... Dean's List, College of Arts and Science, 2012-2016
2015 ..... Clifford W. Tompson Scholarship, 2015
2014 ..... Ernest Landon Fellowship, 2014
2013 ..... Gingrich Astronomy Scholarship, 2013

SKILLS & LANGUAGES

English ..... Native
German ..... Proficient, 4 years study
Spanish ..... Intermediate, 3 years study
Python ..... Proficient, extensive experience
IDL ..... Basic, moderate experience
Julia ..... Beginner, some experience
C/C++ ..... Beginner

SOCIETIES & OUTREACH

2025 - *present* . . . . . Royal Netherlands Astronomical Society

2023 - 2024 . . . . . Association for Women in Science

2023 - 2024 . . . . . Outreach and Development Committee
Organized professional development & networking events, determined departmental funding goals

2022 - 2023 . . . . . Faculty Committee
Graduate student representative in twice-monthly department faculty meetings

Dec. 8, 2021 . . . . . AAS Journal Author Series
https://www.youtube.com/watch?v=gWo5zuEQTJQ

2019 - 2022 . . . . . Social & Planning Committee
Planned intradepartmental activities
Planned & executed departmental prospective graduate student visits

2020 - 2021 . . . . . Graduate Admissions Committee
Evaluated and selected applicants for admission to the Astrophysical & Planetary Sciences graduate program at CU Boulder

2019 - 2020 . . . . . Graduate Student Instructor Search Committee
Interviewed & evaluated potential undergraduate instructors

2019 - *present* . . . . . American Astronomical Society

2016 - *present* . . . . . Phi Beta Kappa

2013 - *present* . . . . . National Society of Collegiate Scholars

2011 - *present* . . . . . National Honor Society