

# CLAIRE LAMMAN

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*Last Updated: 04/12/19*

## EDUCATION

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### Harvard University

Center for Astrophysics PhD program

*Aug 2019 - Present*

### University of Colorado Boulder

Astrophysical and Planetary Sciences Department  
BA Astronomy (Astrophysics Track), BA Physics

*Aug 2015 - May 2019*

Cumulative GPA: 3.9/4.0  
Department GPA: 3.8/4.0

## SELECTED HONORS

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### 2019 NSF GRFP Fellow

*Awarded through the Graduate Research Fellowship Program*

### Chambliss Astronomy Achievement Award

*For undergraduate poster at 231st American Astronomical Society Meeting*

### 2018 Jacob Van Ek Scholar

*“One of the highest honors in CUs College of Arts & Sciences” recognizing superior academic achievement and outstanding contributions to the university*

### Boettcher Scholar

*Merit-based, four-year, full-ride scholarship to any Colorado university*

### AAAS Science Policy Student Competition

*To attend Catalyzing Advocacy in Science and Engineering (CASE) Workshop in D.C*

### Invited panelist, Honors Thesis Symposium, University of Colorado

*Selected by faculty to present honors thesis work to the university community*

## RESEARCH EXPERIENCE

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### Large M Dwarf Multiplicity Study

*Independent Research Project under the guidance of Zachory Berta-Thompson*

Aug 2017 - Present

- Further analyzed data resulting from 2017 REU project
- Compared and combined results to previous multiplicity surveys and Gaia DR2
- Created catalog of nearby M dwarfs multiples
- Currently writing honors thesis on overall multiplicity trends

### REU at the University of Hawai'i

*Worked with Christoph Baranec at the Institute for Astronomy*

May 2017 - Aug 2017

- Analyzed visual images of M dwarfs taken by the Robo-AO system on Kitt Peak
- Conceived, created, and used a Graphical User Interface to perform a series of visual checks on over 7,000 observations
- Successfully tested above program on the Robo-AO Kepler Asteroseismic Survey
- Selected and obtained further imaging of 11 targets using NIRC2 on the KECK II telescope

### Fine Scale CMB Anisotropy Measurements

*At CU with Nils Halverson*

Jan 2017 - May 2017

- Analyzed data from the 10m mm-wave South Pole Telescope

- Investigated a series of unexplained gaps in the detector readout

**Kilodegree Extremely Little Telescope (KELT) Follow-up** Dec 2015 - May 2017

*As part of the CU KELT team led by Erica Ellingson and Zachory Berta-Thompson*

- Became part of a global exoplanet follow-up network
- Observed and analyzed potential exoplanet transits using the university's 18" telescope

**Searching for Supernovae** Aug 2016 - Dec 2016

*Independent study with Erica Ellingson*

- Processed galaxy images from Las Cumbres Observatory
- Helped assess an experimental Python pipeline

## TEACHING AND OUTREACH: EMPLOYMENT

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**Fiske Planetarium** Sept 2015 - Present

*At CU Boulder*

- Presented over 300 astronomy shows to the public and school groups
- Present specialty public talks (topics include gravitational waves, cosmology, exoplanets, and M dwarfs)
- Mentor four undergraduate presenters
- Work with guest lecturers and professors to develop theater shows
- Train and evaluate other student employees
- Additional Roles: theater operator, outreach trip leader, laserist

**NASA Film Grant** Jan 2017 - Present

*To develop and disseminate a series of short planetarium films*

- Conceived and wrote scripts about Parker Solar Probe and Transiting Exoplanet Survey Satellite
- Help design and conduct research on public interest/knowledge about NASA and space topics

**Learning Assistant** Aug 2016 - Dec 2016

*For Stars and Galaxies for Non-Majors, taught by Doug Duncan*

- Independently led two recitations a week
- Worked with students in office hours and one-on-one sessions
- Graded recitation activities, homework, and exams

## TEACHING AND OUTREACH: VOLUNTEERING

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**CU STARS** Aug 2015 - Present

*University group for astronomy outreach and STEM inclusivity*

- Visit under-privileged Colorado high schools to teach astronomy lessons
- Helped organize group trip to my high school, Cañon City
- Operate telescopes and interact with the public for observatory open houses
- On-campus outreach, such as eclipse viewings and setting up solar telescope/IR camera around campus

**Imiloa Astronomy Center** June 2017 - Aug 2017

*Planetarium and Hawai'ian cultural center*

- Volunteered while in Hilo, Hawaii for an REU
- Co-presented public show
- Made two short videos about my current research for future student visitors

## SKILLS

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Python	Public speaking
DigitalSky 2: Operating and Programming	AutoCAD

## RELEVANT COURSEWORK

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Gravitational Theory	Nuclear and Particle Physics
Cosmology and Relativity	Astro Data Analysis
Solar and Space Physics	Computational Techniques
Thermodynamics and Stat. Mech.	Astrophysics 1 & 2
Quantum Mechanics 1 & 2	Research Methods
Plasma Physics	Electronics Physical Sciences

## GRANTS

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<b>Boettcher Educational Enrichment Grant</b>	2018
<i>For independent summer research on Robo-AO M dwarf multiplicity survey</i>	\$3,000

## PAPERS AND PRESENTATIONS

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### *Paper*

**C. Lamman**, C. Baranec, Z. K. Berta-Thompson, N. M. Law, J. Schonhut-Stasik, C. Ziegler, M. Salama, R. Jensen-Clem, D. A. Duev, R. Riddle, S. R. Kulkarni, J. G. Winters, J. M. Irwin, “Robo-AO M Dwarf Multiplicity Survey”, *Submitted December 11, 2018*.

PDF: <https://bit.ly/2SF6qEp>

### *Paper*

J. Schonhut-Stasik, D. Huber, C. Baranec, **C. Lamman**, M. Salama, R. Jensen-Clem, D. A. Duev, R. Riddle, S. R. Kulkarni, N. M. Law, “Robo-AO Kepler Asteroseismic Survey. II. Do Stellar Companions Inhibit Stellar Oscillations?”, *Planned Submission: December 2018*

### *Conference Talk*

**C. Lamman**, C. Baranec, N. M. Law, Z. K. Berta-Thompson, C. Ziegler, J. Schonhut-Stasik, Robo-AO M Dwarf Multiplicity Survey, 2018, in American Astronomical Society Meeting Abstracts #232, Vol. 232, 306.01

### *Conference Poster*

**C. Lamman**, Z. K. Berta-Thompson, C. Baranec, N. M. Law, J. Schonhut-Stasik, Robo-AO M Dwarf Multiplicity Survey, 2018, in American Astronomical Society Meeting Abstracts #231, Vol. 231, 349.13

PDF: <https://bit.ly/2EqGadQ>