

Evan H. Anders

NASA EARTH AND SPACE SCIENCE GRADUATE RESEARCH FELLOW

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Education

University of Colorado – Boulder (CU Boulder)

Boulder, CO

PH.D IN ASTROPHYSICAL AND PLANETARY SCIENCES · EXPECTED MAY 2020

Aug. 2014 - Present

M.S. IN ASTROPHYSICAL AND PLANETARY SCIENCES · DECEMBER 2016

Whitworth University

Spokane, WA

B.S. IN PHYSICS; MINORS IN COMPUTER SCIENCE & MATH · CUMULATIVE GPA 4.0/4.0

Aug. 2010 - May 2014

Research Experience

CU Boulder & Laboratory for Atmospheric and Space Physics (LASP)

Boulder, CO

GRADUATE RESEARCH FELLOW / ASSISTANT

May 2015 - Present

- Published four first-author papers in the Astrophysical Journal and Physical Review Fluids
- Became proficient in creating and analyzing simulations using the Dedalus pseudospectral framework.

Laser Interferometer Gravitational-Wave Observatory (LIGO)

Hanford, WA

NSF SURF FELLOW

Summer 2013

Pacific Northwest National Laboratory (PNNL)

Richland, WA

DOE SULI INTERN

Summer 2012

Relevant Publications

Anders, E.H.; Lecoanet, D.; and Brown, B.P. “Entropy Rain: Dilution and Compression of Thermals in Stratified Domains.” Accepted to ApJ.

Anders, E.H. et al. “Predicting the Rossby Number in Convective experiments.”. 2019. The Astrophysical Journal 872, 2.

Anders, E.H.; Brown, B.P; and Oishi, J. S. “Accelerated evolution of convective simulations.”. 2018. Phys. Rev. Fluids 3, 083502.

Anders, E.H. and Brown, B.P. “Convective heat transport in stratified atmospheres...”. 2017. Phys. Rev. Fluids 2, 083501.

Conference Talks & Posters

Foreign Conferences

Compressible Convection Conference 2019, 25-minute talk. “Entropy Rain...”.

Newcastle, UK

Stellar Hydro Days V, Speed talk & Poster. “Accelerating the evolution...”.

Exeter, UK

Compressible Convection Conference 2017, 25-minute talk. “Convective heat transport...”.

Lyon, France

Domestic Conferences

APS Division of Fluid Dynamics 2019, 10-minute talk. “Dilution and Compression of Thermals...”.

Seattle, Washington

American Astronomical Society’s 233rd Meeting, Poster. “Accelerating the evolution...”.

Seattle, Washington

APS Division of Fluid Dynamics 2018, 10-minute talk. “Predicting the Rossby number...”.

Atlanta, Georgia

APS Division of Fluid Dynamics 2017, 10-minute talk. “The effects of Mach number...”.

Denver, Colorado

APS Division of Fluid Dynamics 2016, 10-minute talk. “Sustained shear flows...”.

Portland, Oregon

AAS Solar Physics Division 2016, Poster. “The structure and evolution of boundary layers...”.

Boulder, Colorado

Awards & Honors

2018- **NASA Earth And Space Science Fellowship – Heliophysics**, providing full research funding

NASA

2015-18 **George Ellery Hale Graduate Fellowship**, providing funding for three years of graduate research

CU Boulder / NSO

2016 **High Pass**, for defense of publication-ready research on CU APS Comprehensive Exam II

CU Boulder

2016 **Carl Hansen Graduate Fellowship**, awarded to a graduate student studying stellar interiors

CU Boulder

2014 **President’s Award for Outstanding Academic Achievement**, for graduating with a 4.0 GPA

Whitworth U.

2013 **Johnston-Hansen Foundation Scholarship**, awarded to a Physics student

Whitworth U.

2012 **Carl Hansen Pre-Engineering Scholarship**, awarded to an Engineering student

Whitworth U.

2012 **Math / Comp. Sci. Departmental Scholarship**, awarded to a student in the Math / Comp. Sci. department

Whitworth U.

2011 **Carl Hansen Pre-Engineering Scholarship**, awarded to an Engineering student

Whitworth U.

2010 **Mind & Heart Scholarship**, awarded to an entering undergraduate to assist with four years of tuition

Whitworth U.

Departmental Service

2018-19	Graduate admissions committee , Full member	CU Boulder
2018	Exam committee for CU APS Comprehensive Exam 1 , Graduate Student Member	CU Boulder
2017-18	Graduate admissions committee , Full member	CU Boulder
2016-17	Hiring committee for director of Fiske Planetarium , Full member	CU Boulder
2016	Exam committee for CU APS Comprehensive Exam 1 , Graduate Student Member	CU Boulder
2016	Graduate student search committee for NSO/CU faculty appointment , Chair	CU Boulder
2015	Graduate student search committee for three-year NSO/CU faculty appointment , Member	CU Boulder

Professional Development and Teaching Experience

UCSC ISEE Professional Development Program

Monterey, CA

DESIGN TEAM LEADER & PARTICIPANT

2017 & 2019

- Developed two day-long inquiry activities which taught incoming college freshmen about exoplanet transits (2017) and buoyancy (2019).
- Approached course design in a backwards-design framework with special attention to equity & inclusion and meaningful assessments.
- Led a team of three fellow graduate students through a roughly 100-hour, 4-month design process.

CU Boulder

Boulder, CO

GRADUATE PART-TIME INSTRUCTOR FOR ASTR 2600

Summer 2017

- Instructor of record (co-instructed with Jhett Bordwell) for an introductory course on Python programming in astrophysics.
- Developed half of a new course curriculum including lectures, tutorials, homework, and the final exam.

GRADUATE TEACHING ASSISTANT FOR ASTR 1010

August 2014 - December 2015, Fall 2017

- Delivered mini-lectures to familiarize students with lab material, held office hours, and helped staff the Astronomy Help Room (AHR).

LEAD GRADUATE TEACHER

August 2016-May 2017

- Led video consultations with Graduate Teaching Assistants
- Coordinated and ran orientation for new Teaching Assistants in the department.

Whitworth University

Spokane, WA

COMPUTATIONAL PHYSICS TEACHING ASSISTANT

January 2014

PHYSICS TUTOR

Fall 2012 - May 2014

PHYSICS LAB TEACHING ASSISTANT

August 2011 - May 2012

Public Outreach

CU STARS (CU Boulder Science, Technology, and Astronomy Recruits)

Boulder, CO

GRADUATE COORDINATOR

August 2016-May 2019

- Guided undergraduate students in designing hands-on lessons to teach high schoolers basic concepts in astronomy and astrophysics.
- Assisted in coordination and execution of outreach trips to underserved middle and high schools across Colorado.

CU Boulder Department of Astrophysical and Planetary Sciences

Boulder, CO

SOMMERS-BAUSCH OBSERVATORY OPEN HOUSE HOST

Fall 2014 - Spring 2017

- Operated telescopes and interfaced with the public during free observing nights once or twice per semester.