

# Robert Ridgway

University of Exeter  
Physics Building, Stocker Road, Exeter, EX4 4QL  
rr364@exeter.ac.uk [ORCID: 0000-0001-5534-0561](https://orcid.org/0000-0001-5534-0561)  
[RobertRidgway.github.io](https://RobertRidgway.github.io), [@robbieridgway](https://twitter.com/robbieridgway) — Updated August 2021

## EDUCATION

*PhD in Physics*, University of Exeter, 2018-Present — Supervisor: Prof. Nathan Mayne

- Used the Met Office Unified Model (UM) to look at the climate of exoplanets in 3D
- Combined a chemical kinetics scheme with a photolysis scheme and the UM to look at the effects of stellar flares on terrestrial planets in 3D

*Master of Science in Space Physics*, University of Calgary, 2015-2018 — Supervisor: Prof. Brian Jackel

- Analysis of the usage of travel-time magnetoseismology to construct density profiles of the near-Earth plasma environment
- Used magnetometer data from the GOES and THEMIS spacecraft to look at determining the relative travel-times of signals through the magnetosphere

*P.U.R.E. Studentship*, University of Calgary, 2014 — Supervisor: Prof. Rene Plume  
Awarded P.U.R.E. Studentship

- Work on characterising the D/H ratio of star-forming regions of the Orion Nebula using data from Herschel

*Bachelor of Science in Astrophysics* Honours First Class, University of Calgary, 2011-2015

## PUBLICATIONS

Benjamin Drummond, Eric Hebrard, Nathan J. Mayne, Olivia Venot, **Robert J. Ridgway**, Quentin Changeat, Shang-Min Tsai, James Manners, Pascal Tremblin, Nathan Luke Abraham, David Sing, and Krisztian Kohary. Implications of three-dimensional chemical transport in hot Jupiter atmospheres: Results from a consistently coupled chemistry-radiation-hydrodynamics model. *Astronomy & Astrophysics*, 636:A68, April 2020. ISSN 0004-6361. doi:10.1051/0004-6361/201937153

Ian A. Boutle, Manoj Joshi, F. Hugo Lambert, Nathan J. Mayne, Duncan Lyster, James Manners, **Robert Ridgway**, and Krisztian Kohary. Mineral dust increases the habitability of terrestrial planets but confounds biomarker detection. *Nature Communications* 11, 2731, June 2020. ISSN 2041-1723. doi:10.1038/s41467-020-16543-8

Jake K. Eager, David J. Reichelt, Nathan J. Mayne, F. Hugo Lambert, Denis E. Sergeev, **Robert J. Ridgway**, James Manners, Ian A. Boutle, Timothy M. Lenton, and Krisztian Kohary. Implications of different stellar spectra for the climate of tidally locked Earth-like exoplanets. *Astronomy & Astrophysics*, 639:A99, July 2020. ISSN 0004-6361. doi:10.1051/0004-6361/202038089

## SCIENTIFIC

### TALKS &

### CONFERENCES

1 contributed conference talk, 2 contributed conference posters.

April 2021, UK Exoplanet Community Meeting (UKEXOM) 2021, Contributed Talk  
December 2016, American Geophysical Union (AGU) Fall Meeting, Contributed Poster  
June 2015, Canadian Association of Physicists (CAP) Congress, Contributed Poster

## Competitive Scholarships and Awards

|   |                  |
|---|------------------|
| Alberta Graduate Student Scholarship - \$3000 CAD                     | 2017             |
| Queen Elizabeth II Graduate Scholarship (Master's) - \$3600 CAD       | 2016             |
| Queen Elizabeth II Graduate Scholarship (Master's) - \$10800 CAD      | 2016             |
| University of Calgary Undergraduate Merit Award - \$750 CAD           | 2014             |
| P.U.R.E. (Program for Undergraduate Research Experience) - \$6000 CAD | 2014             |
| Jason Lang Scholarship - \$1000 CAD (x3)                              | 2012, 2013, 2014 |
| Alexander Rutherford Scholarship - \$2500 CAD                         | 2011             |
| University of Calgary Entrance Scholarship - \$1250 CAD               | 2011             |

## TEACHING EXPERIENCE

*Undergraduate Teaching Assistant*, 2015-2017

- Assisted in teaching of 20-30 second year undergraduates in physics labs and computer science
- Demonstrated use of UNIX commands, analysis of experimental results, scientific use of Python, & report writing