Ben Lakeland

Research Fellow

University of Birmingham

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Education

University of Exeter *Exeter, UK*

PhD in Astrophysics *Sept 2020 - May 2024*

- Passed, subject to minor revisions
- Supervisor: Prof. Tim Naylor
- Title: *An investigation into the physical processes of stellar variability: from accretion outbursts to the quiet Sun.*

University of Oxford *Oxford, UK*

MPhys in Physics *Oct 2016 - June 2020*

- Final grade: First Class (75 %, individual highest module of 94%)
- Supervisors: Prof. Suzanne Aigrain, Dr. Oscar Barragán & Dr. Nora Eisner
- Title: *Detection of Transiting Exoplanets with the TESS Space Mission and Machine Learning*
- Cross-disciplinary module in Spanish (assessed as First Class)

Awards

2023	**Nominated to be a UK representative at the 2024 Lindau Nobel Laureate meeting,** The Royal Society	
2023	**Travel bursary to attend the *National Astronomical Meeting*,** University of Exeter	*£435*
2023	**Travel bursary to attend the *Extreme Precision Radial Velocities 5* conference,** CalTech	*£2020*
2019	**Scholarship for performance in Final Honour School Examinations,** Corpus Christi College, Oxford	*£200*
2016-2019	**Two-time recipient of the William Buckland prize for performance in examinations.,** Corpus Christi College, Oxford	*£50*
2015	**Top 60 in UK-wide Sixth Form Chemistry Challenge (∼ 8500 participants),** University of Cambridge	

Selected publications

A comprehensive publication list is attached to this application

B. Lakeland, T. Naylor (2022), Towards an understanding of YSO variability: a multi-wavelength analysis of bursting, dipping, and symmetrically varying light curves of disc-bearing YSOs, MNRAS, 514, 2736. `https://doi.org/10.1093/mnras/stac1477`

B. Lakeland *et al.* (2024), The magnetically-quiet solar surface dominates HARPS-N solar RVs during low activity, MNRAS, 527, 7681. `https://doi.org/10.48550/arXiv.2311.16076`

Presentations

Talks

2023	***Magnetically-inactive regions can dominate solar RVs*. Invited talk. ,** Terra Hunting Experiment Late Spring Science meeting	*University of Warwick, UK*
2022	***Comparing SDO and HARPS-N data with structure functions.* Invited talk.,** HARPS-N solar meeting	*Online*
2022	***Comparing SDO and HARPS-N data with structure functions.* Invited talk.,** Terra Hunnting Experiment Late Autumn Science meeting	*University of Oxford, UK*
2022	***Exploring the variability of disc-bearing young stars*.,** University of Exeter College of Engineering, Maths, and Physics conference	*University of Exeter, UK*

Posters

2023 ***Magnetically inactive regions can dominate solar RVs.***, National Astronomical Meeting — *Cardiff, UK*

2023 ***Magnetically inactive regions can dominate solar RVs.***, Extreme Precision Radial Velocities 5 — *Santa Barbara, CA, US*

2022 ***A measurement of YSO accretion with structure functions***, Cool Stars 21 — *Tolouse, France*

2021 ***Identifying TESS exoplanets with Citizen Science and Machine Learning***, STFC introductory summer school — *Online*

Conferences/Workshops

2023 **Understanding and mitigating stellar activity (*co-organiser*)**, National Astronomical Meeting — *Cardiff, UK*

2023 **Terra Hunting Experiment Late Spring Science Meeting**, University of Warwick — *Warwick, UK*

2023 **Extreme Precision Radial Velocities 5**, Hilton Beachfront Hotel — *Santa Barbara, CA, US*

2023 **Sun-as-a-star workshop (*personally invited to attend*)**, Flatiron institute — *New York City, NY, US*

2022 **Terra Hunting Experiment Late Autumn Science Meeting**, University of Oxford — *Oxford, UK*

2022 **Cool Stars 21**, IRAP — *Toulouse, France*

2022 **Gaussian Processes for Radial Velocities workshop**, University of Oxford — *Oxford, UK*

Teaching and Outreach

Qualifications

Level 1 Learning and Teaching in Higher Education, — *University of Exeter*

Teaching (∼ 500 hours)

2020-2024 **First year Mathematics**, Module demonstrator — *University of Exeter*

2020-2021 **First year Communication Skills**, Module demonstrator — *University of Exeter*

2020-2024 **First year Physics**, Module demonstrator — *University of Exeter*

2022-2024 **First year Physics**, Lead demonstrator — *University of Exeter*

2020-2022 **Physics and Mathematics tutor**, Personal tutor — *Online*

Outreach (∼ 250 hours)

2017-2020 **North West Science Centre Summer School**, Undergraduate lead — *Corpus Christi College, Oxford*

2019 **Summer School**, Undergraduate lead — *Pembroke College, Oxford*

Skills

Programming Python, MatLab

Miscellaneous Linux, Shell (Bash/Zsh), LaTeX, Microsoft Office, Git.

Soft Skills Scientific Writing, Time Management, Teamwork, Problem-solving, Engaging Presentation.

Languages

English Native

Spanish Beginner

French Beginner

Professional collaborations

Member of the WEAVE SCIP science team,

Member of the Terra Hunting Experiment Science Working Group,

Collaborator of the HARPS-N GTO Solar team,