LUCY WRIGHT

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EDUCATION

PhD Geophysics – nearing completion Sept 2021 - present
University of Bristol | School of Earth Sciences
Analysing mid-infrared spectroscopic observations of Saturn's moon Titan, acquired by the Cassini spacecraft. Using the NEMESIS radiative transfer suite to perform temperature and composition retrievals of Titan's atmosphere. Investigating the global-scale dynamics and seasonal evolution of Titan's stratosphere. Supervised by Professor Nick Teanby, and funded by the Science and Technology Facilities Council (STFC).

PGCE Secondary Science (Physics) Sept 2020 - Jul 2021
University of Cambridge | Faculty of Education
Taught science in secondary schools to students aged 11–18 years, specialising in Physics at ages 16–18. Conducted education research, including literature review and dissertation.

MPhys Physics (Second Class, Division One) Sept 2016 - Jul 2020
University of Oxford | Department of Physics
Masters research dissertation: "Exploring the Time Delay Between the Pressure and Seismic Signals Generated by Dust Devils on Mars" (First Class in Masters).
Masters-level modules: The Physics of Atmospheres and Oceans; Particle Physics.

PEER-REVIEWED PUBLICATIONS

1. **Wright, L.**, Teanby, N. A, Irwin, P. G. J., Nixon, C. A. "Forward modelling low-spectral-resolution Cassini/CIRS observations of Titan", *Exp Astron*, **57**, 15 (2024)

SELECTED CONFERENCE CONTRIBUTIONS

1. **Jul 2024** Planetary Science and Space Exploration "Seasonal variation of Titan's stratospheric tilt", **Wright, L.**, et al. (poster)
2. **Jun 2024** NEMESIS Meeting "Forward modelling low-spectral-resolution Cassini/CIRS observations of Titan", **Wright, L.**, et al. (talk)
3. **Jun 2024** British Planetary Science Conference "Seasonal variation of Titan's stratospheric tilt", **Wright, L.**, et al. (poster)
4. **Oct 2023** Meeting of the Division for Planetary Sciences/EuroPlanet Science Congress "Seasonal Evolution of Titan's Stratospheric Composition as a Probe of Atmospheric Dynamics at the Equator", **Wright, L.**, et al. (abstract) (poster)
5. **Jul 2023** Bristol Earth Sciences Enhancing Research Culture "What's going on at Titan's equator?", **Wright, L.**, et al. (talk)
6. **Jun 2023** Titan Through Time VI "A HCN Gradient at Titan's Stratospheric Equator", **Wright, L.**, et al. (poster)
7. **Mar 2023** ESLAB Symposium "Evolution of Titan's Stratospheric HCN in High Spatial Resolution", **Wright, L.**, et al. (poster)
8. **Sept 2022** EuroPlanet Science Congress "Stratospheric HCN and Evolution of a Mixing Barrier in Titan's Equatorial Region from Low-Resolution Cassini/CIRS Spectra", **Wright, L.**, et al. (poster)
9. **Jun 2022** British Planetary Science Conference "High-Resolution Observations of Titan's Equatorial Dynamics using Cassini CIRS Spectra", **Wright, L.**, et al. (poster)
10. **Mar 2020** Lunar and Planetary Science Conference "Exploring the Miss-Distance as a Possible Cause of Non-Simultaneity in Pressure and Seismic Signals of Martian Dust Devils", **Wright, L.**, et al. (abstract) (poster)

PROFESSIONAL AWARDS

2023 Winner of the Outstanding Poster Contest (Outer Solar System and Comets), Meeting of the Division for Planetary Sciences/EuroPlanet Science Congress
2023 Best Talk, Bristol Earth Sciences Enhancing Research Culture
2022 Winner of the Outstanding Poster Contest (Outer Planet Systems), EuroPlanet Science Congress
2020–2021 Institute of Physics Scholarship

PREVIOUS ACADEMIC PROJECTS

Dust Devils in the Martian Planetary Boundary Layer Oct 2019 - May 2020
University of Oxford | Atmospheric, Oceanic and Planetary Physics (AOPP)
Investigated Martian atmospheric vortices or 'dust devils' through analysis of atmospheric pressure and seismic signals detected by NASA's InSight lander (Python). Appointed as a science team member of NASA's InSight mission and presented research to the InSight Atmospheres Working Group.

Telescope Network Connectivity and Microquasar Spectral Analysis Jul - Aug 2020
University of Oxford | Astrophysics
Worked for Professor Katherine Blundell OBE, who has built observatories in schools in India, Chile, South Africa and Australia as part of her Global Jet Watch (GJW) Project. Investigated dynamics of microquasar SS433 using GJW-acquired spectra, and now familiar with the observatory communication network (Python).

TEACHING AND OUTREACH

Teaching Support Assistant Oct 2021 - present
University of Bristol | School of Earth Sciences
Supported teaching undergraduate courses in: Atmospheric Processes; Global Seismology; Tectonics, Mapping, and Remote Sensing; Numerical Methods and Programming; Computing (MATLAB); Physics and Chemistry.

Fieldwork Teaching Support Assistant (Environmental Geoscience) Mar 2022 & 2023
University of Bristol | School of Earth Sciences

Astrophysics educational tool development for Global Jet Watch Jun - Sept 2018 & 2019
University of Oxford | Astrophysics
Designed infographics to educate the children in schools in India, Chile, South Africa and Australia, particularly girls who might not otherwise be given the opportunity to learn Physics. Developed prototypes of an education website and created the front-end (HTML/CSS).

OTHER ROLES AND RELEVANT EXPERIENCE

Served on a NASA funding panel.
Atmospheres session chair at the British Planetary Science Conference (2024, Leicester).
Organiser of the School of Earth Sciences PhD student seminar series (2023, University of Bristol).
UK Planetary Forum (UKPF) Member (2023 - present).
Fellow of the Royal Astronomical Society (RAS) (2020 - present).
Elected member of Vincent's Blues Sports Club (2019 - present).
Women's 1st Team Captain (2017 - 2018, Oxford University Water Polo Club).

SKILLS

Languages: **Python** (very proficient). **MATLAB**, **HTML/CSS** (competent). **FORTRAN**, **IDL** (familiar).
Tools: **Unix**, **Git** (proficient). **NEMESIS** (very proficient).
Databases: **NASA Planetary Data System (PDS)**, **JPL Horizons** (competent).