

LUCY WRIGHT

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Senior Research Associate in Planetary Science the University of Bristol. Using remote sensing to investigate the atmosphere of Saturn’s moon Titan.

EDUCATION

PhD Geophysics

2021 - 2025

University of Bristol | School of Earth Sciences

Analysed mid-infrared spectroscopic observations of Titan, acquired by the Cassini spacecraft which explored the Saturn system 2004–2017. Used the [NEMESIS](#) radiative transfer and retrieval suite to perform atmospheric temperature and composition retrievals to investigate the dynamics and seasonal evolution of Titan’s middle atmosphere. I was 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 school 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.

Undergraduate-level modules: Classical and Quantum Mechanics, Fluid Dynamics, Thermodynamics, Electromagnetism, Optics, Electronics, Special and General Relativity, Mathematics, and Statistics.

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)
2. **Wright, L.**, Teanby, N. A., Irwin, P. G. J., Nixon, C. A., Lombardo N. A., Lora, J. M., and Mitchell, D. “Seasonal Evolution of Titan’s Stratospheric Tilt and Temperature Field at High Resolution from Cassini/CIRS”, *Planet. Sci. J.*, **6**, 114 (2025)

CONFERENCE CONTRIBUTIONS

1. **Jul 2024** 1st 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** PLANET-ESLAB “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.
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 Troposphere

Oct 2019 - May 2020

University of Oxford | Atmospheric, Oceanic and Planetary Physics (AOPP)

Investigated martian atmospheric vortices or ‘dust devils’ by analysing (using Python) atmospheric pressure and seismic signals detected by NASA’s [InSight](#) lander. 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. Took time understanding the network connectivity (Python) to communicate with observatories remotely and investigated dynamics of microquasar SS433 from GJW-acquired spectra.

TEACHING AND OUTREACH

Teaching Support Assistant

Oct 2021 - present

University of Bristol | School of Earth Sciences

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

Mar 2022 & 2023

University of Bristol | School of Earth Sciences

Environmental Geoscience Fieldwork, 2nd year undergraduate 4-day fieldwork in Wales.

Designing Tools for Astrophysics Education 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).

Royal Astronomical Society (RAS) Fellow (2020 - present).

Women's 1st Team Captain (2017 - 2018, Oxford University Water Polo Club).

Elected member of Vincent's Blues Sports Club (2019 - present).