

Corwin Wright

Personal Details

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Research Positions

2010-date: National Center for Atmospheric Research

Postdoctoral Scientist

Analysis of data from the High Resolution Dynamics Limb Sounder (HIRDLS) on NASA's Aura satellite to investigate the behaviour of internal gravity waves in the terrestrial atmosphere. Direct experience of working with large geophysical datasets, including comparisons to a range of other instruments and data sources such as MLS, SABER, COSMIC, ECMWF analyses, and radiosonde data.

Education

2006–2010: Trinity College, University of Oxford

DPhil (PhD) in Atmospheric, Oceanic and Planetary Physics

Supervisor: Dr John J. Barnett (deceased)

Thesis title: "Detection of Stratospheric Gravity Waves Using HIRDLS Data"

2005–2006: University of St. Andrews and Heriot-Watt University

MSc in Photonics and Optoelectronic Devices

Industrial Placement: CST Global Semiconductors, Ltd., Glasgow, UK

Dissertation title: "Characterisation of 1310nm Semiconductor Laser Diodes"

2001–2005: Collingwood College, University of Durham

MSci in Physics with Upper Second Class (2:1) Honours

Supervisor: Dr Gordon D. Love

Dissertation title: "Atmospheric Turbulence Measurements Using SLODAR"

Employment

Summer 2005: Distance Learning Office, Durham Business School

Projects Officer

Responsible for contributing to the efficient running of the MBA Distance Learning Office at the Durham Business School, with special responsibilities to identify where systems can be improved, as well as responsibility for student IT access and answering technical queries.

Summer 2004: Marketing Division, PPG Aerospace Europe

Intranet Developer

Responsible for developing and collating information for the corporate intranet of a continent-wide marketing division, including development of searchable product information in an ASP/SQL Server environment, liaising with international colleagues, and converting existing product specifications to new formats.

2001–2005: Service for Students with Disabilities, University of Durham

Disabled Amanuensis

Responsible for assisting a visually impaired student with lecture material and associated academic work, including providing detailed notes and clear explanations of material displayed during lectures.

Publications

HIRDLS observations of gravity wave momentum fluxes over the monsoon regions

C.J. Wright and J.C. Gille

Journal of Geophysical Research, Volume 115, D015725 (2011; in press)

Intercomparisons of HIRDLS, COSMIC and SABER for the detection of stratospheric gravity waves

C. J. Wright, M. Belmonte-Rivas and J. C. Gille

Atmos. Meas. Tech. Discuss., Volume 4, pp. 737-764 (2011; in review for Atmos. Meas. Tech.)

HIRDLS Measurements of gravity wave activity in the 2006 Arctic stratosphere

C.J. Wright, S.M. Osprey, J.J. Barnett, L.J. Gray and J.C. Gille

Journal of Geophysical Research, Volume 115, D02105 (2010)

SLODAR as turbulence monitor for free space optical communications

G.D. Love, C.N. Dunlop, S. Patrick, C.D. Saunter, R W. Wilson, and C. Wright.

Proceedings of the SPIE, Volume 6018, pp. 133-138 (2006)

Horizontal turbulence measurements using SLODAR

G.D. Love, C.N. Dunlop, S. Patrick, C.D. Saunter, R W. Wilson, and C. Wright.

Proceedings of the SPIE, Volume 5891, pp. 27-32 (2005)

Significant Posters

HIRDLS Observations of Gravity Wave Momentum Fluxes over the Monsoon Regions

C.J. Wright and J. C. Gille

European Geosciences Union General Assembly, Vienna, April 2011

HIRDLS Gravity Wave Validation and Monsoon Studies

C.J. Wright, J. C. Gille, M. Belmonte Rivas and the HIRDLS Team

AGU Chapman Conference on Atmospheric Gravity Waves and Their Effects on General Circulation and Climate, Honolulu, March 2011

HIRDLS Analyses of Planetary Wave Filtering of the Gravity Wave Spectrum

C.J. Wright, S.M. Osprey, and J.J. Barnett

Aura Science Team, Leiden, September 2009

HIRDLS Analysis of Gravity Waves in the 2006 Arctic Stratosphere

C.J. Wright, S.M. Osprey, J.J. Barnett, and L.J. Gray

European Geosciences Union General Assembly, Vienna, Austria, April 2009

Aura Science Team, Columbia, Maryland, USA, October 2008

Significant Presentations

International Space Science Inst. Bern, Switzerland, February 2010 and April 2011 (solicited)

NCEO Annual Science Meeting. Leicester, UK, September 2010 (solicited)

NCEO Atmospheric Composition Meeting. Cambridge, UK, April 2010 (solicited)

Institute of Physics Environmental Physics Day. London, UK, March 2009

HIRDLS Science Team Meeting. Oxford, UK, June 2008

AOPP Seminar Series. Oxford, UK, April 2008

HIRDLS Science Team meeting. Boulder, Colorado, January 2008

Teaching Experience

2007– 2010: Second Year Computational Physics Laboratory, University of Oxford

2007– 2008: Third Year Atmospheric Physics Laboratory, University of Oxford

2006– 2007: First Year Optical Physics Laboratory, University of Oxford

Demonstrator

Responsible for assisting with the delivery of lab-based teaching to undergraduate physics students at the University of Oxford, including assisting understanding of experiments, troubleshooting, and outlining key underlying principles.

Languages

English – native speaker

German – intermediate skill level (General Certificate of Education, Advanced Level, grade B, 2001)

French – basic skill level (General Certificate of Secondary Education, grade A, 1999)

Programming Languages and Operating Systems

Proficient: IDL, MS-Windows, Linux

Intermediate: FORTRAN, PHP, SQL, LabVIEW, MacOS

Basic: C, Python, Visual Basic, Matlab, Mathcad

Awards and Honours

2006–2010 NERC Doctoral Studentship: full funding for doctoral studies, with fees and maintenance

2005–2006 EPSRC MSc Studentship: full funding for MSc studies, with fees and maintenance

2005 Honorary Life Membership, Collingwood College Junior Common Room

2005 Honorary Life Membership, Durham Students' Union

2002 Community Sports Leader Award, Grand National Archery Society

2000 Sixth Form Modern Foreign Languages Prize, Beckfoot School

Professional Memberships

2006–date American Geophysical Union

2006–date Royal Meteorological Society

2001–date Institute of Physics

References

Dr J.C. Gille

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Dr S.M. Osprey

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