

Curtis R. Wood PhD MInstP FRMetS

Atmospheric Physicist

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Education

- PhD 2003–2007. Jointly between University of Reading UK, Rothamsted Research UK and the Met Office UK. **Biometeorology of high-altitude insect layers in the boundary layer using radar**
- BSc(Hons) 2000–2003. University of Reading UK. **Meteorology, 1st class degree**. Final-year project: *developing an electric psychrometer*

Employment

- 2011– Science researcher in experimental meteorology at the Finnish Meteorological Institute, [Air Quality Department](#)
- 2009–2011 Project manager and post-doctoral researcher in urban experimental meteorology at University of Reading UK, ACTUAL (project working with private and public bodies), www.actual.ac.uk
- 2007–2009 Post-doctoral researcher in urban dispersion based at University of Reading UK in the DAPPLE consortium (on a Home Office government contract), www.dapple.org.uk
- 2007 Fixed-term lectureships (2 posts: Spring and Autumn) at University of Reading UK
- 2002–2003 Hydrometric technical officer in Severn Region at Environment Agency UK, 2 summer positions of 10 weeks each

Research interests

- Urban dispersion, turbulence and boundary-layer structure
- Boundary-layer meteorology
- General environmental physics

Positions in professional organisations

- Associate Editor for the *Atmospheric Science Letters*
- Member of the Council of the *Royal Meteorological Society* (RMetS)

Grants

Autumn 2011	Collaboration	£450	RMetS legacies fund
March 2010	Science week	£1860	RCUK (H. Dacre lead applicant)
June 2008	AMS 18th BLT	£300	RMetS legacies fund
"	"	£400	University's research travel grant
May 2006	AMS 17th BLT	£300	RMetS legacies fund
July 2005	Fieldwork	£400	RMetS legacies fund

Peer-reviewed publications (ISI statistics: 43 citations in 2011, h-index 5)

- [15](#) Harrison RG & [Wood CR](#) (2012) **Ventilation effects on humidity measurements in thermometer screens**. *Quart J Roy Meteorol Soc*, 138: in press (10.1002/qj.985)
- [14](#) Barlow JF, Harrison J, Robins AG & [Wood CR](#) (2011) **A wind-tunnel study of flow distortion at a meteorological sensor on top of the BT Tower, London, UK**. *J Wind Eng & Indust Aerodyn*, 99:899–907

- [13](#) Helfter C, Grimmond CSB, Barlow JF, [Wood CR](#), Famulari D, Phillips GJ & Nemitz E (2011) **Controls of carbon dioxide concentrations and fluxes above central London.** *Atmos. Chem. Phys.*, 11:1913–1928
- [12](#) [Wood CR](#) & Harrison RG (2011) **Scorch marks from the sky.** *Weather*, 66:39–41
- [11](#) Barlow JF, Dunbar TM, Nemitz EG, [Wood CR](#), Gallagher IM, Davies F, O'Connor E & Harrison RM (2011) **Boundary layer dynamics over London, UK as observed using Doppler lidar.** *Atmos. Chem. Phys.*, 11:2111–2125
- [10](#) Martin D, Petersson KF, White IR, Henshaw SJ, Nickless G, Lovelock A, Barlow JF, Dunbar T, [Wood CR](#) & Shallcross DE (2011) **Tracer concentration profiles measured in central London as part of the REPARTEE campaign.** *Atmos. Chem. Phys.*, 11: 227–239
- [9](#) [Wood CR](#), Lacser A, Barlow JF, Padhra A, Belcher SE, Nemitz E, Helfter C, Famulari D & Grimmond CSB (2010) **Turbulent flow at 190 metres above London during 2006–2008: a climatology and the applicability of similarity theory.** *Boundary-Layer Meteorology*, 137:77–96
- [8](#) Balogun AA, Tomlin AS, [Wood CR](#), Barlow JF, Belcher SE, Smalley RS, Lingard JL, Arnold SA, Dobre A, Robins AG, Martin D & Shallcross DE. (2010) **In-street wind direction variability in the vicinity of a busy intersection in central London.** *Boundary-Layer Meteorology*, 136:489–513
- [7](#) [Wood CR](#), Clark SJ, Barlow JF & Chapman JW (2010) **Layers of nocturnal insect migrants at high-altitude: the influence of atmospheric conditions on their formation.** *Agricultural and Forest Entomology*, 12:113–121
- [6](#) [Wood CR](#) & Harrison RG (2009) **An anthropogenic snowfall event in the UK: an example of urban weather modification?** *Weather*, 64:277–280
- [5](#) [Wood CR](#), Reynolds DR, Wells PM, Barlow JF, Woiwod IP & Chapman JW (2009) **Flight periodicity and the vertical distribution of high-altitude moth migration over southern Britain.** *Bulletin of Entomological Research*, 99:525–535
- [4](#) [Wood CR](#), O'Connor EJ, Hurley R, Reynolds DR & Illingworth AJ (2009) **Cloud-radar observations of insects in the UK convective boundary layer.** *Meteorological Applications*, 16:491–500
- [3](#) [Wood CR](#), Arnold SJ, Balogun AA, Barlow JF, Belcher SE, Britter RE, Cheng H, Dobre A, Lingard JJN, Martin D, Neophytou M, Petersson FK, Robins AG, Shallcross DE, Smalley RJ, Tate JE, Tomlin AS & White IR (2009) **Dispersion experiments in central London: the 2007 DAPPLE project.** *Bulletin of the American Meteorological Society*, 90:955–969
- [2](#) [Wood CR](#), Chapman JW, Reynolds DR, Barlow JF, Smith AD & Woiwod IP (2006) **The influence of the atmospheric boundary layer on nocturnal layers of noctuids and other moths migrating over southern Britain.** *International Journal of Biometeorology*, 50:193–204
- [1](#) Reynolds DR, Chapman JW, Edwards AS, Smith AD, [Wood CR](#), Barlow JF & Woiwod IP (2005) **Radar studies of the vertical distribution of insects migrating over southern Britain: the influence of temperature inversions on nocturnal layer concentrations.** *Bulletin of Entomological Research*, 95:259–274

Reports

- [7](#) Charlton-Perez A, Dacre H, Maskell K, Reynolds R, South R & [Wood C](#) (2010) **Meteorology and climate inspire secondary science students.** *School Science Review*, 92: 75–81

- 6 [Wood CR](#) (2010) **Adapting our cities for future climates**. *Weather*, 65: 307–309
- 5 [Wood CR](#) (2009) **Insects, weather and climate**. *Weather*, 64:221–223
- 4 [Wood CR](#) & Harrison RG (2009) **Some reports of snowfall from fog during the UK winter of 2008/09**. *ArXiv*, <http://arxiv.org/abs/0902.1326>
- 3 Robins AG, *et al.* (2008) **DAPPLE Fieldwork Experiments**. *HPA Chemical Hazards and Poisons Report*, September
- 2 Hardiman S, Patmore N, [Wood C](#) (2006) **Meeting report Student Community 2005 and 2006 Assemblies**. *Weather*, 61:57
- 1 [Wood CR](#) (2005) **Nocturnal Layers of Airborne Insects: The Meteorological Impacts**. *Antenna*, 30:92–93

Book (editorial assistant)

Wright PB (2000) *Weather of the 90s*. Westwind Services. ISBN10: 0953971007

Peer-reviewing academic manuscripts

Quarterly Journal of the Royal Meteorological Society, Atmospheric Environment, Atmospheric Chemistry and Physics, Weather, Meteorological Applications, Aerobiologia, Central European Journal of Geosciences, Integrative and Comparative Biology

Freelance editing

- 4 Holopainen *et al.* (2012), Plant phenological records in northern Finland since the 18th century as retrieved from databases, archives and diaries for biometeorological purposes, *re-submitted to the International Journal of Biometeorology*
- 3 Parkkila *et al.* (2012), *submitted to the Journal of Environmental Economics and Policy*
- 2 Pilli-Sihvola *et al.* (2012), Climate change and science—policy interface in Finland, Sweden, and Norway. *Submitted*
- 1 Sofiev *et al.* (2012), Evaluation of the smoke-injection height from wild-land fires using remote-sensing data. *Atmospheric Chemistry and Physics*

Invited presentations

- 2011 **Lidar observations of wind and turbulence over central London** at Risoe in Denmark, November
- 2011 **Some aspects of flux observations above the roughness sublayer over complex land-use** at NordFlux workshop in Denmark, November
- 2011 **Observing London's climate using Doppler lidar** in a special working group on 'Intercomparison of Wind measurement from Lidar and Wind Profiler' (COST ACTION ES0702) Cardington UK, March
- 2011 **Observing London's climate** at the University of Helsinki's Atmospheric Physics Division, February
- 2010 **Boundary-layer urban turbulence, as measured atop the BT-Tower in London** at University of Manchester's Centre for Atmospheric Science, February
- 2007 **Detection of insects in the boundary layer using radar** at The Royal Meteorological Society's north-west local centre evening meeting, 24 April
- 2007 **Lagrangian trajectory modelling and the nocturnal boundary layer** at Birmingham University's School of Mathematics, applied seminar series for postgraduates, 14 March

- 2006 **The impact of the nocturnal boundary layer on layers of insects** at The Royal Meteorological Society Scottish Centre Postgraduate Evening, 10 February
- 2005 **Nocturnal Layers of Airborne Insects: The Meteorological Impacts** at The Royal Entomological Society Postgraduate Forum, 2 February
- 2005 **The Impacts of Meteorology on Vertical Insect Distribution** at the Met Office dispersion research seminar, 20 January

Conference presentations (listed are presenting or first author only)

- 2011 **Boundary-layer dynamics over London, UK, as observed using doppler lidar and scintillometers (oral)** at the European Meteorological Society Annual Conference in Berlin, September
- 2011 **Observing London's Boundary Layer Using Lidar and Scintillometers (oral)** at the International Workshop on Urban Weather and Climate, Observation and Modelling in Beijing, July
- 2010 **Stable air over London UK (oral)** at the American Meteorological Society (AMS)'s conference on boundary layers and turbulence in Colorado, August
- 2010 **Boundary layer dynamics over London, UK as observed using Doppler lidar (oral)** at the ISARS conference, near Paris, June
- 2009 **A climatology of flow and turbulence at 190 m above central London (poster)** at the RMetS biennial conference in Reading UK, July [<http://cedadocs.badc.rl.ac.uk/358/>]
- 2009 **An overview of methods of full-scale urban dispersion in experiments during DAPPLE (oral)** at the AMS 8th Urban Symposium in Phoenix, January
- 2009 **Line source tracer release experiments in central London (oral)** at the AMS 8th Urban Symposium in Phoenix, January [http://ams.confex.com/ams/89annual/techprogram/paper_147929.htm]
- 2008 **Turbulence and dispersion in central London: the DAPPLE 2007 project (oral)** at the Wind Engineering Society conference in Guildford UK, July
- 2008 **Atmospheric turbulence characteristics in central London (poster)** at the American Meteorological Society (AMS)'s conference on boundary layers and turbulence in Stockholm Sweden, June
- 2007 **Lagrangian modelling of insects in the nocturnal boundary layer (oral)** at the Royal Meteorological Society's biennial conference in Herriot-Watt UK, September
- 2006 **The impact of the nocturnal boundary layer on layers of insects (oral)** at the Royal Meteorological Society's student conference in UEA (Norwich) UK, 21 August
- 2006 **The impact of the nocturnal boundary layer on layers of insects (oral)** at the American Meteorological Society (AMS)'s conference on aerobiology and biometeorology in San Diego USA, 22 May
- 2006 **Atmospheric impacts on night-time layers of insects (oral)** at Rothamsted's annual PhD symposium in Harpenden UK, 11 May
- 2005 **Insects in the nocturnal jet (oral)** at Royal Meteorological Society's biennial conference in Exeter UK, September
- 2005 **Insects in the nocturnal jet (oral)** at Royal Meteorological Society's annual student conference in Exeter UK, September

- 2005 **The Influence of Temperature on Nocturnal Insect Layers (poster)** at Rothamsted PhD symposium in Harpenden UK, May
- 2004 **The Impacts of Nocturnal Boundary Layer Structure on Vertical Insect Distribution (oral)** at the UWERN biennial conference in Salford UK, December
- 2004 **The biometeorology of high-altitude insect layers using vertical-looking radar (poster)** at Royal Meteorological Society Student Conference in Leeds UK, September
- 2004 **The biometeorology of high-altitude insect layers: a case study (poster)** at the AMS 16th conference on biometeorology and aerobiology in Vancouver Canada, August
- 2004 **The biometeorology of high-altitude insect layers (poster)** at Rothamsted PhD symposium in Harpenden UK, May

Professional activities

- 2012 Co-organized workshop in Helsinki on urban meteorology, January
- 2011 Member of working group for the strategic plan for the RMetS 2012–2014
- 2010–2011 Member of organising committee of the 2011 staff-development conference for research staff within the *University of Reading*
- 2009–2011 Member of the *University of Reading's* Research Staff Committee
- 2009–2011 Member of the 'research-funded staff forum' in the *Meteorology Department*
- 2008–2011 Member of the *Institute of Physics'* Environ. Physics committee
- 2010–2011 Fire Warden in the *Meteorology Department*
- 2009–2011 Associate Editor (Atmospheric Physics) for the *Central European Journal of Geosciences*
- 2009 Organiser of a half-day *RMetS* meeting "Insects, Weather & Climate", 18 March
- 2009 Member of the Health, Safety & House Committee in the *Meteorology Department*
- 2008–2009 Chair of the Research-funded Staff Forum in the *Meteorology Department*
- 2007–2009 Member of the Meetings Committee of the *RMetS*
- 2006 Chair of organising committee of the 2006 *RMetS* Student Conference (UEA Norwich UK)
- 2005 Member of organising committee of the 2005 *RMetS* Student Conference (Exeter University UK)
- 2004–present Designed, built and maintain a research group website: www.met.rdg.ac.uk/bl_met
- 2004–2006 Newsletter editor for *Meteorology Department*
- 2002 Co-founder of the annual *Meteorology Department* Photography Competition: (Bain and Wood, 2003, *Weather* 58:280)

Visits to other institutions (medium–long term only)

- 2011 4 weeks at Finnish Meteorological Institute during Jan, Feb, Mar

Teaching experience (all at University of Reading)

- 2008–2011 A marker of MSc and BSc dissertations

- 2003–2010 Group leader on Field Courses at Arran and Dorset: micro-meteorology, radiosondes, weather forecasting, surface-layer dynamics
- 2007–2010 Lead and support for Weather and Climate Discussion
- 2007 Lectured Atmospheric Physics (including exam setting)
- 2007 Lectured Introduction to Computing (Matlab, Fortran, HTML)
- 2007 Lectured Weather Systems
- 2003–2006 Demonstrated on many courses given to BSc and MSc students

Student supervision (at University of Reading until 2011 inclusive, then at FMI 2012 onwards)

- 2012 Two summer student projects planned on urban meteorology
- 2011 Digitization of sunshine cards, computer science project
- 2011 Boundary layer depth estimates in lidar, MSc student
- 2011 Humidity measurements in Stevenson Screens, MSc student
- 2010 Micrometeorology, MMet student
- 2010 Gaseous fluxes and micrometeorology, MSc student
- 2009–2010 Wind in urban areas, MMet student
- 2009 Wind power in urban areas, MSc student
- 2008–2009 Wind power in urban areas, BSc student
- 2008–2009 Solar beam intensity from sunshine recorders, BSc student
- 2007 Personal tutor of two MSc students

Wider community interaction

- 2010 Organiser of tour of meteorology laboratories for general public; 8 November
- 2010 Joint-organiser of a Weather Forecasting schools event held during National Science and Engineering Week; March
<http://tinyurl.com/ForecastingTheWeather>
- 2009 Invited to give a talk at the Geography Club, King's School (Canterbury); 28 September
- 2008 Participant in Berkshire's i-Festival teentech, presenting a day-in-the-life approach about science to school students (featured on the BBC South TV Politics show); 12 November
- 2008 Presented at the BA Festival of Science on "Climate change: the facts and myths" at Liverpool University; September
- 2007 Host visits of my former High School (Wigmore UK) to Reading University, two visits per year (2007–2008 inclusive)
- 2007 Evening science talk at Sandhurst School (Berkshire UK); 5 July
- 2007 A NERC/RCUK public briefing for Science Week about the science of climate change at Swindon UK; 17 March
- 2003 Analysing model output from climateprediction.net with students at Bulmershe School in Reading UK; Autumn

Media interviews & articles

- 2011 BBC News article: "[Could it rain apples?](#)" – comment on tornadoes and wind; December
- 2010 Local TV interview (Meridian News) during the science week activities (see above); March

- 2010 Local press (Reading) on preparations for climatological observations on BT Tower in London; February
- 2010 Local radio interviews (Heart FM) on the cold weather and deep snow in January
- 2009 Telegraph and Guardian articles (and radio interviews with BBC Oxford, Heart FM, BBC Berkshire); following the release of Wood & Harrison (2009) on snowfalls from freezing fog; October
- 2009 Guardian's *WeatherWatch*; following the release of papers on insect layers
- 2009 BBC Berkshire (radio) interview on the highlights of a RMetS national meeting (Insects, Weather & Climate); 18 March
- 2008 BBC Leeds (radio), talking about the 'Weekend Effect' of weather; 12 November
- 2008 BBC Berkshire (radio) had a feature on the Meteorology Department at Reading. A series of short features were done on the observatory, in the laboratories and with a computer; 6 November

Field experiments

- 2010 Field manager for experiments in central London as part of ACTUAL project (Advanced Climate Technology: Urban Atmospheric Laboratory), July
- 2008 Joint field manager of line emission dispersion experiments in central London as part of DAPPLE project (Dispersion of Pollution and its Penetration into the Local Environment), March
- 2007 Participant in dispersion experiments in central London as part of REPARTEE project (REgent's PARk and Tower ExperimEnt), November
- 2007 Joint field manager of dispersion and turbulence experiments in central London as part of DAPPLE project, May–June
- 2005 Joint operations manager for aerial insect netting campaign and nocturnal boundary layer studies at Cardington Airfield in Bedfordshire UK, Summer
- 2004 Joint operations manager for aerial insect netting campaign and nocturnal boundary layer studies at Cardington Airfield in Bedfordshire UK, Summer

Computing & technical

Write code in Matlab, Octave, Fortran, HTML, unix (ksh scripts)
 Extensive PC application use (Office, Windows, Photoshop, Illustrator, GenStat)
 Design and build logging systems (Campbell Scientific) for atmospheric measurements: such as micro-meteorological eddy-covariance installations (anemometers, gas analyzers, thermometers, radiometers)
 Build, fix and install PCs and their software
 Build and maintain websites

Professional development courses (if not stated, at the University of Reading: UoR)

- 2011 **Facing your fears**, May
- 2010 **Media workshop**, Walker Institute, June
- 2010 **Research leadership & management**, Henley Business School, May
- 2010 **Project management**, April
- 2010 **Fire safety for fire wardens**, April
- 2010 **Freedom of Information and Data Protection**, April

- 2010 **Media workshop**, Royal Institution, March
- 2010 **Supervising research students**, March
- 2009 **Research staff conference**, November
- 2009 **Interviewing skills for staff recruitment**, November
- 2009 **Masterclass in research proposals**, October
- 2009 **Moving to a university lectureship**, June
- 2008 **Peer-reviewing papers**, November
- 2008 **Photoshop: beginner and intermediate**, Summer
- 2008 **Presentation skills**, July
- 2008 **Placement and project students**, May
- 2008 **Endnote**, February
- 2007 **Time management**
- 2007 **Writing grant proposals**, December
- 2007 **Making a professional start with teaching**, January
- 2006 **Marking and feedback**, November
- 2006 **Induction for new teaching staff**, October
- 2005 **Career development**, BBSRC, 3 May
- 2005 **Technical writing**, BBSRC, 18–19 January
- 2005 **Inter-personal skills**, BBSRC, 13 January
- 2004 **Presentation skills**, BBSRC, 19–20 May

Society membership

- Royal Meteorological Society (Fellow)
- Institute of Physics (Member)
- International Association for Urban Climate (Member)
- Wind Engineering Society (past)
- American Meteorological Society (past)
- American Geophysical Union (past)

BSc(Hons) Meteorology 2000–2003

- Year1 Applied Mathematics, Mathematics for Scientists, Concepts in Physics, Classical Mechanics, Atmosphere Oceans and Climate, Measuring the Atmosphere, Synoptic Meteorology 1&2
- Year2 Fluid Motion, Meteorological Essay Project (sea breezes), Surface Energy Exchange, Dynamics, IT for Environmental Science, Calculus of Several Variables, Atmospheric Chemistry, Climate and Climate Change, Numerical Methods for Environmental Science, Partial Differential Equations & Fourier Series, Geophysical Fluid Dynamics, Linear Algebra, Cloud Processes, Radiative Transfer, The Hydrological Cycle, Statistical Concepts in Environmental Science, Middle Latitude Dynamics, Environmental Systems
- Year3 Meteorology Field Class, Microscale Meteorology, Ocean Science, Remote Sensing, Surface Layer Processes, General Studies, Clouds Radiation & Climate, Middle-latitude Dynamics, Numerical Weather Prediction, Atmospheric Analogues, Tropical Dynamics, The Global Circulation, Weather systems in Middle Latitudes, Tropical Latitude Laboratory, Final-year project: *developing a hand-held direct-reading electric psychrometer*

(Yearbook editor)