

Amanda C. Maycock

CONTACT INFORMATION

Department of Meteorology,
University of Reading, UK

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RESEARCH INTERESTS

Links between stratospheric water vapour and climate, stratosphere-troposphere coupling, seasonal-decadal predictability

EDUCATION

University of Reading, UK

Ph.D., Atmosphere, Oceans and Climate (CASE student), *submitted* November 2011

Thesis: *The impact of changes in stratospheric water vapour on climate*

Supervisors: Keith P. Shine, Manoj M. Joshi and Adam A. Scaife (Met Office)

Research Summary: The amount of water vapour in the stratosphere has varied considerably in the past and is projected to change in a warming climate. The focus of this thesis is 'Could observed changes in stratospheric water vapour (SWV) drive changes in regional surface climate via stratosphere-troposphere interaction?'. Offline radiation codes and general circulation models are used to understand how changes in SWV affect stratospheric temperatures and to quantify the impact this has on the coupled stratosphere-troposphere system.

M.Sc., Atmosphere, Oceans and Climate: Distinction, December 2008.

Dissertation: *The role of the stratosphere in seasonal forecasting*

Supervisors: Andrew J. Charlton-Perez, Sarah P.E. Keeley and Francisco J. Doblas-Reyes (ECMWF)

The University of Manchester, UK

M.Phys. (Hons), Physics with Astrophysics: First class, June 2006.

PUBLICATIONS

Maycock A. C., K. P. Shine and M. M. Joshi, The temperature response to stratospheric water vapour changes, *Q. J. Roy. Meteorol. Soc.*, 137, 1070-1082, 2011, doi: 10.1002/qj.822..

Maycock A. C., A. J. Charlton-Perez, S. P. E. Keeley and F. J. Doblas-Reyes, Stratospheric circulation in seasonal forecasting models: Implications for seasonal prediction, *Clim. Dyn.*, 36 (1-2), 309-321, 2011, doi: 10.1007/s00382-009-0665-x.

Joshi M. M., M. J. Webb, A. C. Maycock and M. Collins, Stratospheric water vapour and high climate sensitivity in a version of the HadSM3 climate model, *Atmos. Chem. Phys.*, 10, 7161-7167, 2010, doi:10.5194/acp-10-7161-2010.

CONFERENCE PRESENTATIONS

WCRP Open Science Conference, Denver, October 2011 (poster).

16th Conference on the Middle Atmosphere, AMS 91st Annual Meeting, Seattle, January 2011 (poster & talk).

DynVar Workshop II, SPARC WCRP Programme, Boulder, November 2010 (poster & talk).

WAVACS Summer School on Water Vapour in the Climate System, Corsica, September 2009 (poster).

MOCA Joint Assembly, Montreal, July 2009 (poster).

Royal Meteorological Society Student Conference, Reading, July 2009 (presentation).

Royal Meteorological Society Conference, Reading, June 2009 (poster).

- INVITED TALKS AND SEMINARS
- ‘Stratospheric water vapour and climate: sensitivity to the radiative properties of water vapour’, NOAA, Boulder, October 2011.
 - ‘The impact of dehydration in the Antarctic stratosphere’, NOAA, Boulder, October 2011.
 - ‘Could changes in stratospheric water vapour influence regional surface climate?’, Department of Meteorology, University of Reading, June 2011.
 - ‘Understanding the atmospheric response to changes in stratospheric water vapour’, NCAR, Boulder, October 2010.
 - ‘Understanding the atmospheric response to changes in stratospheric water vapour’, NOAA, Boulder, October 2010.
 - ‘The role of the stratosphere in seasonal forecasting’, ECMWF, Reading, May 2008.
- AWARDS
- Outstanding Student Poster Award, WCRP Open Science Conference, 2011.
 - Outstanding Student Paper Award, 16th Conference on the Middle Atmosphere, AMS 91st Annual Meeting, 2011.
 - Fugro-GEOS Award for students in Meteorology and Oceanography, M.Sc. Section, 2009.
 - Sutcliffe Prize for overall achievement at M.Sc. level, University of Reading, 2008.
 - Award for excellence at A-level, University of Manchester, 2002.
- PROFESSIONAL ACTIVITIES
- Referee for *Geophysical Review Letters*.
 - Associate Fellow, Royal Meteorological Society, 2008-present.
 - Student member, American Geophysical Union, 2011-12.
- RESPONSIBILITIES
- Member of Meetings Committee, Royal Meteorological Society, 2010-present.
 - Organiser of stratosphere and climate seminar series, 2010-11.
 - Co-ordinator of Ph.D. visiting scientist programme, 2009-11.
 - Technical coordinator and co-presenter, Weather and Climate Discussion seminars, Univ. of Reading, 2009-11.
 - Science, Technology, Engineering and Mathematics (STEM) programme outreach volunteer, various science festivals and public engagement events, 2009-2011.
 - Higher Degree by Research Forum representative, Univ. of Reading, 2008-11.
 - Member of peer mentoring circle for women in science, engineering and technology, UK Resource Centre, 2010.
 - Discussion group member, Athena SWAN Awards for women in science, 2009.
 - Teaching assistant, B.Sc. and M.Sc. courses in numerical methods and computing, 2008-09.
 - Student Council Science and Engineering representative, Univ. of Manchester, 2003-04.
 - Peer Assisted Study Sessions (PASS) leader in Physics, 2003.
- INTERESTS
- Amateur cook, hiker and cyclist, enthusiastic reader, lover of live music.
- REFERENCES
- Prof. Keith Shine FRS, Dept. of Meteorology, P.O. Box 243, Univ. of Reading, Reading, RG6 6BB.
 - Dr. Manoj Joshi, contact as above.
 - Dr. Andrew Charlton-Perez, contact as above.