

Curriculum Vitae – Agatha M. De Boer

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EDUCATION

2003 Ph.D. in Physical Oceanography, Florida State University, FL, United States
1997 M.Sc. coursework in Nuclear Reactor Physics,
Potchefstroom University, South Africa
1994 B.Sc. Honors, Physics, University of Pretoria, South Africa
1993 B.Sc. (cum laude), Physics, Mathematics,
University of the Orange Free State, South Africa

PROFESSIONAL EXPERIENCE

RESEARCH

2010 Guest Lectureship over summer. Gothenburg University, Sweden.
2007 ... RCUK academic fellow on faculty in the School of Environmental Science, University of East Anglia.
2006-2007 Senior Research Associate, School of Environmental Science, University of East Anglia.
2003-2006 Postdoctoral Research Associate, Princeton University/GFDL's joint Program of Atmospheric and Oceanic Sciences.
1998-2003 Graduate Research Assistant, Florida State University.

TEACHING

2010 Atmosphere and Oceans
First year environmental field course in Slapton.
2009 Oceanography Field Course in Oban Scotland
2008 Introductory Computing for Environmental Scientists, University of East Anglia.
2007 Basic Environmental Physics module, University of East Anglia.
1999 Teaching Assistant, Florida State University. First year Oceanography honors class
1992 Teaching assistant, Uni. of the Orange Free State (South Africa). First year physics lab.

PHD SUPERVISION

2010 ... Robert Graham
2008 ... Matthew Thomas

FIELD WORK

2009 JC32 South Atlantic section. Performed dissolved inorganic carbon and alkalinity measurements.
2001 SFTREII research cruise to measure mixing in salt finger regions. Assisted in instrument deployment, recovery and data analysis

CORPORATE

1994-1997 Senior Physicist. Eskom, South Africa. Responsible for reactor physics, shielding and radiation protection studies to ensure the safe handling and storage of nuclear fuel for Koeberg nuclear power station.

AWARDS AND GRANTS

2010 UEA Teaching fellowship (£4,200)
2010 Guest Lectureship (~£10,000)
2009 Royal Society networking grant (~£4,000)
2007 RCUK academic fellowship
2002 Outstanding Graduate Student Award, Dept. of Oceanography, Florida State University
1990-1993 Full Scholarships from Eskom (Electricity Utility Company), South Africa
1990-1993 Academic Scholarships, Uni. of Orange Freestate and Uni. of Pretoria, South Africa

OUTREACH AND SERVICE

- 2010** Co-organized Royal Society UK-Australia Frontiers of Science meeting for bi-national collaboration between promising young scientists.
- 2010** Public lecture for the Birkberk Ecology Society, Imperial College, London.
- 2007 ...** Serving on the leadership board of the international Earth Science Women's Network. Created and lead the committee for Europe, Africa and Middle East and, among other things, responsible for the annual reception at the EGU conference.
- 2006 ...** Reviewed papers, proposals and book outlines, for Nature GeoScience, Ocean Science, Willey publishers, J. Geophys. Res., Solas AGU, Reviews of Geophys., Atmosphere-Oceans, J. Phys. Ocean., Global Biochem. Cycles, UK Nat. Env.Res. Council, USA national science foundation,

PUBLICATIONS

- Sime, L. C., K. E. Kohfeld, C. Le Quere, E. W. Wolff, **A. M. de Boer**, and L. Bopp, 2010, Strengthening of the Southern Ocean westerlies during glaciations. *Submitted to Nature Geoscience*
- De Boer, A. M.**, A. J. Watson, N. R. Edwards, K. I. C. Oliver, 2010, A comprehensive, multi-process box-model approach to glacial-interglacial carbon cycling., *In press in Climates of the Past*
- De Boer, A. M.**, 2010, Oceanography: Sea change, *Nature Geoscience*, **3(10)**: 668-669
- De Boer, A. M.**, A. Gnanadesikan, N. R. Edwards, A. J. Watson, 2010, Meridional density gradients do not control the Atlantic overturning circulation. *J. of Phys. Oceanography*, **40(2)**:368-380.
- De Boer, A. M.**, J. R. Toggweiler and D. M. Sigman, 2008, Atlantic dominance of the Meridional Overturning Circulation. *J. of Phys. Oceanography*, **38(2)**: 435
- De Boer, A. M.** and H. L. Johnson, 2007, Inferring the zonal distribution of measured changes in the meridional overturning circulation. *Ocean Science*, **3**, 55-57
- De Boer, A. M.**, D. M. Sigman, J. R. Toggweiler and J. L. Russell, 2007, The effect of global ocean temperature change on deep ocean ventilation. *Paleoceanography*, **22**, PA2210, doi:10.1029/2005PA001242
- Sigman, D. M., **A. M. de Boer** and G. H. Haug, 2007, An Antarctic overturning hypothesis for deglaciations. Ocean Circulation: Mechanisms and Impacts, *Geophysical Monograph Series 173*, Washington, DC: American Geophysical Union, 335-349
- Gnanadesikan, A., **A. M. de Boer**, B. K. Mignone, 2007, A simple theory of the pycnocline and overturning – revisited. Ocean Circulation: Mechanisms and Impacts, *Geophysical Monograph Series 173*, Washington, DC: American Geophysical Union, 19-32
- Nof, D., S. van Gorder and **A. M. de Boer**, 2007, Does the Atlantic meridional overturning cell really have more than one stable steady state? *Deep-Sea Res. I*, **54 (II)**, 2005-2021
- De Boer, A. M** and D. Nof, 2005, The Island Wind-Buoyancy Connection. *Tellus*, **57A**, Issue 5, 783-797.
- De Boer, A. M** and D. Nof, 2004, The exhaust valve of the North Atlantic. *Letter in J. Climate*, **17**, 417-422
- Nof, D. and **A. M. de Boer**, 2004, From the Southern Ocean to the North Atlantic in the Ekman layer? *Bull. Amer. Meteor. Soc.* **85**, 79-87
- De Boer, A. M** and D. Nof, 2004, The Bering Strait's Grip on the Northern Hemisphere Climate. *Deep-Sea Res.*, **51**, 1347-1366

FULLY SPONSORED INVITED PRESENTATIONS AND LECTURES

- 2010** Gothenburg University, Gothenburg, Sweden;
Imperial College, London, UK;
UK Met Office, Exeter;
Stockholm University, Sweden.
- 2009** UK-RAPID workshop. Reading, UK.
Hermanus Magnetic Observatory, Hermanus, South Africa
- 2008** Forum on Ocean and Climate, New Haven, USA.
- 2007** Potsdam Institute for Climate Impact Research, Germany.
British Antarctic Survey, UK.
Reading University, UK
- 2006** Southampton Oceanography Centre, UK
Workshop on the Nordic Seas. Bergen, Norway

REFERENCES

- 1) Prof. D. Nof
Dept. of Oceanography, 4320, Florida State University
Tallahassee, FL, 32306-4320. Tel: +1-850-644-2736
nof@ocean.fsu.edu
- 2) Prof. D. M. Sigman
Dept. of Geosciences, Guyot Hall, Princeton University
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sigman@princeton.edu
- 3) Dr. J. R. Toggweiler
Geophys. Fluid Dyn. Lab. PO Box 308, Forrestal Campus.
Princeton, NJ, 08540, Tel: +1-609-452-6659
Robbie.Toggweiler@noaa.gov
- 4) Prof. A. J. Watson
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- 5) Dr. N. R. Edwards
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