

Sebastien Bigorre

PhD in Physical Oceanography

266 Woods Hole Rd, MS#29. Woods Hole, MA 02543. (508) 289 2686

Born in 1973 (France). Marital status: married

WORK EXPERIENCE

2009-present: Research Associate. Data analysis, instrument and cruise preparation, work at sea (~ 190 days), chief scientist at sea. Woods Hole Oceanographic Institute, Massachusetts.

2006, January: Postdoctoral scholar. Data preparation, quality control and analysis for CLIMODE program; work at sea. Woods Hole Oceanographic Institute, Massachusetts.

1998 - 2005: Research assistant. Doctoral student research. Florida State University.

2001, January-May: Visiting scientist at LEGI (Laboratoire des Ecoulements Géophysiques et Industriels). Comparison of QG and primitive equations models. University Joseph-Fourier, Grenoble, France.

1997: Internship at LEMA (Laboratoire d'Electrodynamique des Matériaux Avancés). Experimental validation of vortex dynamics in high temperature superconductors. University of Tours, France.

1997: Tutor for students in mathematics and physics. University of Cergy-Pontoise, France.

EDUCATION

Ph.D in Physical Oceanography: "Topographic effects on wind driven oceanic circulation".
Advisor: William K. Dewar. Florida State University, Tallahassee, 2005

M. Sc. in Statistical Physics, University of Cergy-Pontoise, France, 1997

M. Sc. in Physics, University of Tours, France, 1996

B. Sc. in Physics and Mathematics, University of Orleans, France, 1994

PUBLICATIONS

2014. Bigorre et al. "Stratus 13: Thirteenth Setting of the Stratus Ocean Reference Station. Cruise On Board RV Ron Brown, February 25 – March 15, 2014, Valparaiso, Chile – Arica, Chile". WHOI Technical Report

2014. Stramma, L., R. A. Weller, R. Czeschel, S. Bigorre . "Eddies and an extreme water mass anomaly observed in the eastern south Pacific at the Stratus mooring", *J. Geophys. Res. Oceans*, 119, 1068–1083, doi:10.1002/2013JC009470.

2013. Edson, J., V. Jampana, R. Weller, S. Bigorre, A. Plueddemann, C. Fairall, S. Miller, L. Mahrt, D. Vickers, and H. Hersbach. "On the exchange of momentum over the open ocean". *J. Phys. Oceanogr.*, 43, 1589–1610, doi:10.1175/JPO-D-12-0173.1.

2013. Davis, X., R. Weller, S. Bigorre, and A. Plueddemann. "Local oceanic response to atmospheric forcing in the Gulf Stream region", *Deep-Sea Research II*, 91, 71-83, doi: 0.1016/j.dsr2.2013.02.028.

2013. Bigorre, Weller, Edson, Ware. "A surface mooring for air-sea interaction research in the Gulf Stream. Part 2: Analysis of the observations and their accuracies", *J. Atmos. Ocean. Tech.*, v. 30 (3), pp. 450-469. doi: <http://dx.doi.org/10.1175/JTECH-D-12-00078.1>

2012. Weller, Bigorre, Lord, Ware, Edson. "A surface mooring for air-sea interaction research in the Gulf Stream. Part 1: Mooring design and instrumentation", *J. Atmos. Ocean. Tech.*, v. 29, pp. 1363-1376.

2011, "Stratus 11. Eleventh Setting of the Stratus Ocean Reference Station. Cruise On Board RV Moana Wave March31 – April16, 2011. Arica – Arica, Chile ". WHOI Technical Report 2011-06.

2010, "Stratus 10. Tenth Setting of the Stratus Ocean Reference Station. Cruise RB-10-01 January2 – January30, 2010. Charleston, South Carolina – Valparaiso, Chile ". WHOI Technical Report 2010-05.

2009, "Oceanic variability near a large scale topographic circulation", *Ocean Modelling*, v. 29, p176-188.

2008, "Making progress and wanting more: one-year near-surface current measurements from a surface mooring in the Gulf Stream and other thoughts", Proceedings of IEEE/OES/CMTC, pp 111-118.

2007, "CLIVAR Mode Water Dynamics Experiment (CLIMODE). Fall 2006 R/V Oceanus Voyage 434 November 16, 2006-December 3, 2006", WHOI Technical Report.

CONFERENCE PRESENTATIONS

2014, August: "Air-sea interaction observations from a surface mooring in the Gulf Stream", CASPER workshop, Naval Postgraduate School, Monterey CA.

2012, July: "In-situ Air- Sea Fluxes: Accuracy and Representativeness", Climode workshop, WHOI.

2011, July: "Observations of winter surface conditions near the Gulf Stream", Climode workshop, WHOI, Massachusetts.

2010, August: " Atmospheric forcing near the Gulf Stream: observations and comparisons with NWP", Climode workshop, WHOI, Massachusetts.

2009, January: "Long -Term Air-Sea In-Situ Observations in the Gulf Stream", American Meteorological society, Phoenix, Arizona.

2008, April: "Long-Term Air-Sea In-Situ Observations in the Gulf Stream", European Geophysical Union, Vienna, Austria.

2006, December: "Air-Sea Interactions in CLIMODE: In-Situ Observations," American Geophysical Union, San Francisco, USA

2002, April: "Topographic Effects on Wind Driven Oceanic Circulation," European Geophysical Society, Nice, France.

WORK AT SEA

2014: STRATUS (subtropical Pacific): data quality control and analysis, instrument setup, mooring work, float deployment, watch leader, cruise report writing.

2013: ASIRI (Bay of Bengal): UCTD operation and data quality control. Watch leader.

NTAS (tropical Atlantic): data integration, quality control and analysis.

Deepwater Expedition onboard PlanetSolar (Gulf Stream): Oceanography consultant, CTD work.

2012: NTAS cruise on R/V Pisces. Instrumentation preparation, data collection, mooring work.

STRATUS 12 cruise on R/V Melville. CTD and Underway CTD, mooring, float and drifters.

2011, STRATUS 11 cruise, on RV Moana Wave. Chief scientist at sea, UCTD and atmospheric radiosondes watches.

2010, January: STRATUS 10 cruise, on R/V Ron Brown. CTD and Underway CTD, mooring, float and drifters, Vertical Microstructure Profiler measurements, eddy tracking.

2007, September: Access to the sea cruise: CLIMODE 2, on R/V Oceanus. Mooring and dragging operations.

2006, November: CLIMODE cruise, on R/V Oceanus. CTD, mooring work.

2006, October: STRATUS 7 cruise, on R/V Ron Brown. CTD, mooring work, float and drifter deployment, atmospheric radiosondes.

SKILLS

Computer: Fortran, C, Matlab, Unix, Windows. Quasigeostrophic numerical modeling.

Data analysis. Spectral analysis, EOFs, CEOFs, cyclo-stationary EOFs.

Languages: English, French, Spanish (beginner).

RESEARCH INTERESTS

Large scale and mesoscale dynamics. Eddy-topography interaction. Argentine Basin circulation. Upwelling systems. Climate. Marine ecology. Air-Sea interactions. Frontal dynamics.

REFERENCES

Robert A. Weller
266 Woods Hole Rd, MS#29
Woods Hole, MA 02543
rweller@whoi.edu

William K. Dewar
Florida State University
Department of Oceanography
Tallahassee, Florida 32306-4320
dewar@ocean.fsu.edu

James Edson
University of Connecticut
Department of Marine Sciences
1080 Shennecossett Road Groton, CT 06340
james.edson@uconn.edu

Albert Plueddemann
266 Woods Hole Rd, MS#29,
Woods Hole, MA 02543
aplueddemann@whoi.edu