

RICHARD HENDRIK WANNINKHOF

a. Professional Preparation

Berea College	Chemistry	B.A. 1980
Columbia University	Geology	M.A. 1983
Columbia University	Geology	Ph.D. 1986
Columbia University	Ocean Carbon and Tracer Studies	1986-1989 (post-doc)

b. Appointments

- 1991-present Oceanographer at the Atlantic Oceanographic and Atmospheric Laboratory (AOML) of the National Oceanographic and Atmospheric Administration (NOAA) in Miami.
- 1993-present Adjunct professor of the Rosenstiel School of Marine and Atmospheric Science of the University of Miami.
- 1989-1991 Research Associate LDGO, Columbia University

c. Publications

Publications of direct relevance to the proposed project

- Wanninkhof, R., S. Doney, J. L. Bullister, N. M. Levine, M. J. Warner, and N. Gruber (2010), Detecting anthropogenic CO₂ changes in the interior Atlantic Ocean between 1989 and 2005, *J Geophys. Res.*, 115, C11028, <http://dx.doi.org/10.1029/2010JC006251>.
- Wanninkhof, R., W. E. Asher, D. T. Ho, C. S. Sweeney, and W. R. McGillis (2009), Advances in Quantifying Air-Sea Gas Exchange and Environmental Forcing, *Annual Reviews Mar. Science*, 1, 213-244, <http://dx.doi.org/10.1146/annurev.marine.010908.163742>.
- Wanninkhof, R. (2007), The impact of different gas exchange formulations and wind speed products on global air-sea CO₂ fluxes, in *Transport at the Air Sea Interface, Measurements, Models and Parametrizations*, edited by C. S. Garbe, et al., pp. 1-23, Springer, Heidelberg. http://dx.doi.org/10.1007/978-3-540-36906-6_1.
- Wanninkhof, R., A. Olsen, and J. Triñanes (2007), Air-Sea CO₂ Fluxes in the Caribbean Sea from 2002-2004, *Journal of Marine Systems*, 66, 272-284. <http://dx.doi.org/10.1016/j.jmarsys.2005.11.014>.
- Levine, N. M., S. C. Doney, I. Lima, R. Wanninkhof, N. Bates, and R. A. Feely (2010), The impact of the North Atlantic Oscillation on the uptake and accumulation of anthropogenic CO₂ in the North Atlantic Ocean Thermocline, *Global Biogeochem cycles*, 25, GB3022, <http://dx.doi.org/10.1029/2010GB003892>.

Other selected publications

- Wanninkhof, R., Sullivan, K., Damman, P., Proni, J., Bloetscher, F., Cooke, P., Soloviev, A., and Carsey, T., 2005b, Farfield tracing of a point source fresh water discharge in the coastal ocean using sulfur hexafluoride: *Environ. Sci. Technol.*, v. 39, no. 22, p. 8883-8890. <http://dx.doi.org/10.1021/es048126>.
- Wanninkhof, R., Sullivan, K. F., and Top, Z., 2004, Air-sea gas transfer in the Southern Ocean: *J. Geophys. Res.*, v. 109, p. C08S19, <http://dx.doi.org/10.1029/9822003JC001767>.
- Bender, M. L., S. Kinter, N. Cassar, and R. Wanninkhof (2011), Evaluating gas transfer velocity parameterizations using upper ocean radon distributions, *J Geophys. Res.*, 116, C02010, <http://dx.doi.org/10.1029/2009JC005805>.
- DeGrandpre, M. D., Wanninkhof, R., McGillis, W. R., and Strutton, P. G., 2004, A Lagrangian study of pCO₂ dynamics in the eastern equatorial Pacific Ocean: *J. Geophys. Res.*, v. 109, p. <http://dx.doi.org/10.1029/2003JC001960>.

Takahashi, T., Sutherland, S.C., Wanninkhof, R., Sweeney, C., Feely, et al. 2009. Climatological mean and decadal change in surface ocean pCO₂, and net sea-air CO₂ flux over the global oceans. *Deep-Sea Res II* 2009, 554-557, <http://dx.doi.org/10.1016/j.dsr2.2008.12.009>.

d. Synergistic Activities

- NOAA Ocean acidification steering group: 2011-
- Joint analysis group (JAG) for the Deep Water Horizon oil spill: 2011-
- Member of the Steering committee of the Carbon Cycle Science Program; 2000-2003
- Member of the organizing committee for the International Gas Transfer at water surfaces (ITWG) symposia in 1995, 2000, 2005 & 2010
- Fellow of the CIMAS Cooperative Institute: 1994-2010

e. Collaborators and Other Affiliations

Collaborators and Co-editors

Asher, William (U. of Washington); Bakker, Dorothee (U of E. Anglia); Bender, Michael (Princeton U.); Borges, Alberto Vieira (U. of Liege); Byrne, Robert H. (U. of S. Florida); Cai, Wei-Jun (U. of Georgia); Chavez, Francisco (MBARI); Doney, Scott (WHOI); Feely, Richard (PMEL); Gledhill, Dwight (NOAA); Glover, David (WHOI); Goodkin, Nathalie (U. of Hong Kong); Hales, Burke E. (Oregon State U.); Ho, David T. (U. of Hawaii); Jiang, Li-Qiang (Yale U.); Juranek, Laurie (NOAA); Komori, Satoru (Kyoto U.); Levine, Naomi M. (Harvard U.); Lima, Ivan D. (WHOI); Lindsay, Keith (NCAR); Mahowald, Natalie (Cornell U.); McGillis, Wade (Columbia U.); Millero, Frank (U. of Miami); Moore, J.K. (NCAR); Olsen, Are (U. of Gothenburg); Peng, Tsung-Hung (NOAA); Rodgers, Keith B. (Princeton U.); Sabine, Christopher (NOAA); Schuster, Ute (U. of E. Anglia); Sweeney, Colm (NOAA); Telszewski, Maciej (Intergovernmental Oceanographic Commission of UNESCO); Wang, Y. (WHOI); Watson, Andrew (U. of E. Anglia)

Graduate Advisors and Postdoctoral Sponsors

Thesis Advisors

Broecker, Wallace (Columbia)
Ledwell, James (WHOI)

Postdoctoral Sponsor

Takahashi, Taro (Columbia)

Thesis Advisor and Postgraduate-Scholar Sponsor

Postdoc Advisees (Total = 5)

Barbaro, Leticia (Miami)
Lee, Kitack (Pohang University of Science and Technology)
Park, Geun Ha (Miami)
Pierrot, Denis (Miami)
Ward, Brian (National University of Ireland)