

ROBERT M. KEY

(a) Professional Preparation:

Southwestern University, Honors Program	Chemistry	B.S. 1972
Texas A&M University	Oceanography	Ph.D. 1981

(b) Appointments:

Research Oceanographer, Atmospheric & Oceanic Sciences Program, Princeton Univ., 1988 - present
Lecturer w/ rank of Associate Professor, Dept. of Geosciences, Princeton Univ., 1990 - 1993

(c) Publications:

Five Most Relevant Publications:

- Key, R.M., A. Kozyr, C.L. Sabine, K. Lee, R. Wanninkhof, J. Bullister, R.A. Feely, F. Millero, C. Mordy, T.-H. Peng, A global ocean carbon climatology: Results from Global Data Analysis Project (GLODAP), *Global Biogeochem. Cycles*, 18, GB4031, 2004, <http://dx.doi.org/10.1029/2004GB002247>.
- Key, R.M., T. Tanhua, A. Olsen, M. Hoppema, S. Jutterström, C. Schirnack, S. van Heuven, A. Kozyr, X. Lin, A. Velo, D.W.R. Wallace and L. Mintrop, The CARINA data synthesis project: introduction and overview, *Earth Sys. Sci. Data*, 2, 105-121, 2010. <http://dx.doi.org/10.5194/essd-2-105-2010>
- McNeil, B.I., N. Metzl, R.M. Key, R.J. Matear and A. Corbiere, An empirical estimate of the Southern Ocean air-sea CO₂ flux, *Global Biogeochem. Cycles*, 21(3), GB3011, 2007, <http://dx.doi.org/10.1029/2007GB002991>.
- Sweeney, C., T. Takahashi, T. Newberger, T. Guilderson, N.S. Lovenduski, J.L. Sarmiento, R.M. Key, J. Majkut, and C. Le Quere, Observational evidence for an increased vertical mixing south of the Antarctic Polar Front, *Geophys. Res. Lett.*, submitted 12/2011.
- Tanhua, T., S. van Heuven, R.M. Key, A. Velo, A. Olsen, C. Schirnack, Quality control procedures and methods of the CARINA database, *Earth Sys. Sci. Data*, 2, 35-49, 2010, <http://dx.doi.org/10.5194/essd-2-35-2010>

Five Other significant publications:

- Downes, S.M., R.M. Key, A.H. Orsi, K.G. Speer, and J.H. Swift, Tracing dense Circumpolar Deep Water in the South Pacific using potential vorticity and Helium-3, *J. Phys. Oceanogr.*, submitted 12/2011.
- Rodgers, K.B., R.M. Key, A. Gnanadesikan, J.L. Sarmiento, O. Aumont, L. Bopp, S.C. Doney, J.P. Dunne, D.M. Glover, A. Ishida, M. Ishii, A.R. Jacobson, C. Lo Monaco, E. Maier-Reimer, N. Metzl, F.F. Perez, A.F. Rios, R. Wanninkhof, P. Wetzel, C.D. Winn and Y. Yamanaka, Altimetry helps to explain patchy changes in hydrographic carbon measurements, *J. Geophys. Res.*, 114, C09013, <http://dx.doi.org/10.1029/2009JC005305>, 2009.
- Sabine, C.L., J. Bullister, R. Feely, N. Gruber, R. Key, A. Kozyr, K. Lee, F. Millero, T. Ono, T.-H. Peng, B. Tillbrook, D. Wallace, R. Wanninkhof, C.S. Wong, The oceanic sink for anthropogenic CO₂, *Science*, 305, 367-371, 2004, <http://dx.doi.org/10.1126/science.1097403>.
- Sweeney, C., E. Gloor, A.J. Jacobson, R.M. Key, G. McKinley, J.L. Sarmiento, R. Wanninkhof, Constraining global air-sea gas exchange for CO₂ with recent bomb ¹⁴C measurements, *Global Biogeochem. Cycles*, 21, GB2015, 2007, <http://dx.doi.org/10.1029/2006GB002784>.
- Waugh, D.W., T.M. Hall, B.I. McNeil and R.M. Key, Anthropogenic CO₂ in the oceans estimated using transit-time distributions, *Tellus*, 58B(5), 376-389, 2006, <http://dx.doi.org/10.1111/j.1600-0889.2006.00222.x>.

(d) Synergistic Activities:

- CDIAC, ORNL/DOE, Advisory Board 2005-present, chairman 2008-present.
- Compilation of global data sets of very high quality results for use by the general Biogeochemical research community.

- Global “climatology” of 1 degree gridded biogeochemical parameters made available to the community via the CDIAC.

Collaborators and co-editors

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