

References

- Antonov, J. I., D. Seidov, T. P. Boyer, R. A. Locarnini, A. V. Mishonov, H. E. Garcia, O. K. Baranova, M. M. Zweng, and D. R. Johnson (2010): World Ocean Atlas 2009, Volume 2: Salinity. S. Levitus, Ed. NOAA Atlas NESDIS 69, U.S. Government Printing Office, Washington, D.C., 184 pp.
- Ardizzone, J., R. Atlas, R. N. Hoffman, J. C. Jusem, S. M. Leidner, and D. F. Moroni (2009): New multiplatform ocean surface wind product available. *EOS Trans.* 90, 231.
- Chierici, M., A. Olsen, T. Johannessen, J. Triñanes, and R. Wanninkhof (2009): Algorithms to estimate the carbon dioxide uptake in the northern North Atlantic using shipboard observations, satellite and ocean analysis data. *Deep-Sea Res. II*, 56, 630-639, doi:10.1016/j.dsr2.2008.12.014
- Cosca, C. E., R. A. Feely, J. Boutin, J. Etcheto, M. J. McPhaden, F. P. Chavez, and P. G. Strutton (2003): Seasonal and interannual CO₂ fluxes for the central and eastern equatorial Pacific Ocean as determined from fCO₂-SST relationships. *J. Geophys. Res.*, 108(C8), 3278, doi:10.1029/2000JC000677
- Feely, R. A., T. Takahashi, R. Wanninkhof, M. J. McPhaden, C. E. Cosca, S. C. Sutherland, and M.-E. Carr (2006): Decadal variability of the air-sea CO₂ fluxes in the equatorial Pacific Ocean. *J. Geophys. Res.*, 111, C08S90, doi:10.1029/2005JC003129.
- Feldman, G. C. and C. R. McClain (2010a): Ocean Color Web, SeaWiFS Reprocessing 2009.1, NASA Goddard Space Flight Center. Eds. Kuring, N., Bailey, S. W. May 2010. <http://oceancolor.gsfc.nasa.gov/>
- Feldman, G. C. and C. R. McClain (2010b): Ocean Color Web, MODIS-Aqua Reprocessing 2009.1, NASA Goddard Space Flight Center. Eds. Kuring, N., Bailey, S. W. May 2010. <http://oceancolor.gsfc.nasa.gov/>
- Friederich, G. E., J. Ledesma, O. Ulloa, and F. P. Chavez (2008): Air-sea carbon dioxide fluxes in the coastal southeastern tropical Pacific. *Progress in Oceanography*, 76, 156-166, doi:10.1016/j.pocean.2008.10.001.
- Inoue H. Y. and M. Ishii (2005): Variations and trends of CO₂ in the surface seawater in the Southern Ocean south of Australia between 1969 and 2002. *Tellus*, 57B, 58-69.
- Inoue, H.Y., M. Ishii, H. Matsueda, S. Saito, T. Midorikawa, and K. Nemoto (1999): MRI measurements of partial pressure of CO₂ in surface waters of the Pacific during 1968 to 1970: re-evaluation and comparison of data with those of the 1980s and 1990s. *Tellus*, 51B, 830-848.
- [IPCC] Intergovernmental Panel on Climate Change (2007): Climate Change 2007: The Physical Science Basis. Working Group I Contribution to the Fourth Assessment Report of the IPCC. Cambridge University Press, Cambridge, UK and New York, NY, USA, 996 pp.
- Ishii, M., H. Y. Inoue, T. Midorikawa, S. Saito, T. Tokieda, D. Sasano, A. Nakadate, K. Nemoto, N. Metzl, C. S. Wong, and R. A. Feely (2009): Spatial variability and decadal trend of the oceanic CO₂ in the western equatorial Pacific warm/fresh water. *Deep-Sea Res. II*, 56, 591-606, doi:10.1016/j.dsr2.2009.01.002.

- Kalnay, E., M. Kanamitsu, R. Kistler, W. Collins, D. Deaven, L. Gandin, M. Iredell, S. Saha, G. White, J. Woollen, Y. Zhu, M. Chelliah, W. Ebisuzaki, M. Chelliah, W. Ebisuzaki, W. Higgins, J. Janowiak, K. C. Mo, C. Ropelewski, J. Wang, A. Leetmaa, R. Reynolds, R. Jenne, and D. Joseph (1996): The NCEP/NCAR 40-Year Reanalysis Project. *Bull. Amer. Meteor. Soc.*, 77, 437-472.
- Kurihara, Y., T. Sakurai, and T. Kuragano (2006): Global daily sea surface temperature analysis using data from satellite microwave radiometer, satellite infrared radiometer and in-situ observations. *Sokko-jiho*, 73, S1-S18 (in Japanese).
- Locarnini, R. A., A. V. Mishonov, J. I. Antonov, T. P. Boyer, H. E. Garcia, O. K. Baranova, M. M. Zweng, and D. R. Johnson (2010): World Ocean Atlas 2009, Volume 1: Temperature. S. Levitus, Ed. NOAA Atlas NESDIS 68, U.S. Government Printing Office, Washington, D.C., 184 pp.
- Maki, T., M. Ikegami, T. Fujita, T. Hirahara, K. Yamada, K. Mori, A. Takeuchi, Y. Tsutsumi, K. Suda, and T. J. Conway (2010): New technique to analyse global distributions of CO₂ concentrations and fluxes from non-processed observational data. *Tellus*, 62B, 797-809, doi:10.1111/j.1600-0889.2010.00488.x.
- Murata, A., K. Fushimi, H. Yoshikawa, M. Hirota, K. Nemoto, M. Okabe, H. Yabuki, and I. Asanuma (1996): Evaluation of the CO₂ Exchange at Sea Surface in the Western North Pacific: Distributions of the ΔpCO₂ and the CO₂ Flux. *J. Meteor. Res.*, 48, 2, 33-58.
- Nakadate, A. and M. Ishii (2007): Estimation of the Sea-to-Air CO₂ Flux in the Equatorial Pacific. *Sokko-jiho*, 74, S163-S176 (in Japanese).
- Nightingale, P. D., G. Malin, C. S. Law, A. J. Watson, P. S. Liss, M. I. Liddicoat, J. Boutin, and R. C. Upstill-Goddard (2000): In situ evaluation of air-sea gas exchange parameterizations using novel conservative and volatile tracers. *Global Biogeochem. Cycles*, 14, 373-387.
- Ono, T., T. Saino, N. Kurita, and K. Sasaki (2004): Basin-scale extrapolation of shipboard pCO₂ data using satellite SST and Chla. *Int. J. Remote Sens.*, 25, 3803- 3815.
- Onogi, K., J. Tsutsui, H. Koide, M. Sakamoto, S. Kobayashi, H. Hatsushika, T. Matsumoto, N. Yamazaki, H. Kamahori, K. Takahashi, S. Kadokura, K. Wada, K. Kato, R. Oyama, T. Ose, N. Mannoji, and R. Taira (2007): The JRA-25 Reanalysis. *J. Meteor. Soc. Japan*, 85, 369-432.
- Park, G.-H., K. Lee, R. Wanninkhof, and R. A. Feely (2006): Empirical temperature-based estimates of variability in the oceanic uptake of CO₂ over the past 2 decades. *J. Geophys. Res.*, 111, C07S07, doi:10.1029/2005JC003090.
- Park, G.-H., R. Wanninkhof, S. C. Doney, T. Takahashi, K. Lee, R. A. Feely, C. Sabine, J. Triñanes, and I. Lima (2010): Variability of global air-sea CO₂ fluxes over the last three decades. *Tellus*, 62B, doi:10.1111/j.1600-0889.2010.00498.x, 352-368.
- Sarma, V. V. S. S., T. Saino, K. Sasaoka, Y. Nojiri, T. Ono, M. Ishii, H. Y. Inoue, and K. Matsumoto (2006): Basin-scale pCO₂ distribution using satellite sea surface temperature, Chl *a*, and climatological salinity in the

- North Pacific in spring and summer. *Global Biogeochem. Cycles*, 20, GB3005, doi:10.1029/2005GB002594
- Sweeney, C., E. Gloor, A. R. Jacobson, R. M. Key, G. McKinley, J. L. Sarmiento, and R. Wanninkhof (2007): Constraining global air-sea gas exchange for CO₂ with recent bomb 14C measurements. *Global Biogeochem. Cycles*, 21, GB2015, doi:10.1029/2006GB002784.
- Takahashi, T., J. Olafsson, J. Goddard, D. W. Chipman, and S. C. Sutherland (1993): Seasonal variation of CO₂ and nutrients in the high-latitude surface oceans: A comparative study. *Global Biogeochem. Cycles* 7, 843-878.
- Takahashi, T., S. C. Sutherland, C. Sweeney, A. Poisson, N. Metzl, B. Tilbrook, N. Bates, R. Wanninkhof, R. A. Feely, C. Sabine, J. Olafsson, and Y. Nojiri (2002): Global sea-air CO₂ flux based on climatological surface ocean pCO₂, and seasonal biological and temperature effects. *Deep-Sea Res. II*, 49(9-10), 1601-1622.
- Takahashi, T., S. C. Sutherland, and A. Kozyr (2008): Global Ocean Surface Water Partial Pressure of CO₂ Database: Measurements Performed during 1968-2006 (Version 1.0). ORNL/CDIAC-152, NDP-088, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U. S. Department of Energy, Oak Ridge, TN, 20 pp.
- Takahashi, T., S. C. Sutherland, and A. Kozyr (2009a): Global Ocean Surface Water Partial Pressure of CO₂ Database: Measurements Performed during 1968-2008 (Version 2008). ORNL/CDIAC-152, NDP-088(V2008), Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U. S. Department of Energy, Oak Ridge, TN, 20 pp.
- Takahashi, T., S. C. Sutherland, R. Wanninkhof, C. Sweeney, R. A. Feely, D. W. Chipman, B. Hales, G. Friederich, F. Chavez, C. Sabine, A. Watson, D. C. E. Bakker, U. Schuster, N. Metzl, H. Yoshikawa-Inoue, M. Ishii, T. Midorikawa, Y. Nojiri, A. Kortzinger, T. Steinhoff, M. Hoppe, J. Olafsson, T. S. Arnarson, B. Tilbrook, T. Johannessen, A. Olsen, R. Bellerby, C. S. Wong, B. Delille, N. R. Bates, and H. J. W. de Baar (2009b): Climatological mean and decadal changes in surface ocean pCO₂, and net sea-air CO₂ flux over the global oceans. *Deep-Sea Res. II*, 56, 554-577.
- Usui, N., S. Ishizaki, Y. Fujii, H. Tsujino, T. Yasuda, and M. Kamachi (2006): Meteorological Research Institute multivariate ocean variational estimation (MOVE) system: Some early results. *Adv. Space Res.*, 37, 806-822.
- Wanninkhof, R. (1992): Relationship between wind speed and gas exchange over the ocean. *J. Geophys. Res.*, 97, 7373-7392.
- Weiss, R. F. (1974): Carbon dioxide in water and seawater: the solubility of a nonideal gas. *Mar. Chem.*, 2, 203-215.