

## Biographical sketch

**Matthew C. Long**

National Center for Atmospheric Research

P.O. Box 3000, Boulder, CO 80307

Phone: 303-497-1311; e-mail: mclong@ucar.edu

ORCID: 0000-0003-1273-2957

### (a) Professional preparation

Tufts University	Medford, MA	Environmental Engineering	B.S.	1998
Tufts University	Medford, MA	Environmental Engineering	M.S.	2000
Stanford University	Stanford, CA	Oceanography	Ph.D.	2010

### (b) Appointments

2014–present Scientist I, II; Oceanography Section, NCAR.

2012–2014 Project Scientist I; Oceanography Section, NCAR.

2010–2012 Postdoctoral Fellow; Advanced Study Program, NCAR.

2003–2004 Water Resources Engineer; Camp Dresser & McKee Inc., Cambridge, MA.

2000–2002 High School Physics & Geography Teacher; US Peace Corps, Tanzania.

### (c) Five most closely related publications (\*student led; †postdoc led)

1. **Long, M. C.**, Moore, J. K., Lindsay, K., Levy, M., Doney, S. C., Luo, J. Y., et al. (2021). Simulations with the Marine Biogeochemistry Library (MARBL). *JAMES*, **13**, e2021MS002647.
2. **Long, M. C.**, T. Ito, and C. Deutsch (2019), Oxygen projections for the future, in Ocean deoxygenation: everyone's problem. Causes, impacts, consequences and solutions., edited by D. Laffoley and J. Baxter, doi:10.2305/IUCN.CH.2019.13.en.
3. \*Krumhardt, K. M., N. S. Lovenduski, **M. C. Long**, and K. Lindsay (2017), Avoidable impacts of ocean warming on marine primary production: Insights from the CESM ensembles, *Global Biogeochem. Cycles*, **31**(1), 114–133.
4. **Long, M. C.**, C. A. Deutsch, and T. Ito (2016), Finding forced trends in oceanic oxygen. *Global Biogeochem. Cycles*, **30**, 381–397.
5. **Long, M. C.**, K. Lindsay, S. Peacock, J. K. Moore, S. C. Doney (2013), Twentieth-Century oceanic carbon uptake and storage in CESM1(BGC). *J. Clim.*, **26**(18), 6775–6800.

### (d) Five other significant publications

1. **Long, M. C.**, B. B. Stephens, K. McKain, C. Sweeny, R. Keeling, E. A. Kort, et al. (2021), Strong Southern Ocean carbon uptake evident in airborne observations, *Science*, **374**(6572), 1275–1280.
2. Ito, T., **M. C. Long**, C. Deutsch, S. Minobe, D. Sun (2019), Mechanisms of low-frequency O<sub>2</sub> variability in the North Pacific, *Global Biogeochem. Cycles*, **33**(2), 110–124.
3. Ito, T., S. Minobe, **M. C. Long**, C. Deutsch (2017), Upper Ocean O<sub>2</sub> trends: 1958–2015, *Geophys. Res. Lett.*, **44**(9), 4214–4223.
4. Moore, J. K., W. Fu, F. Primeau, G. L. Britten, K. Lindsay, **M. C. Long**, S. C. Doney, N. Mahowald, F. Hoffman, J. T. Randerson (2018), Sustained climate warming drives declining marine biological productivity, *Science*, **359**(6380), 1139–1143.
5. †Harrison, C., **M. C. Long**, N. Lovenduski, J. K. Moore (2018), Mesoscale effects on carbon export: a global perspective. *Global Biogeochem. Cycles*, **32**(4), 680–703.