

Bermuda Atlantic Time-series Study (BATS): Years 16-20
NSF Award: OCE-0326885

Complete list of refereed publications utilizing BATS program data organized by year of publication as of August 1, 2007. Papers contributed by BATS PI's during the current award period are identified by the "*", and the BATS PI is listed in bold.

2007

- *Takahashi, T., Sutherland, S.C., Wanninkhof R., Sweeney, C., Feely, R.A., Chipman, D.W., Hales, B., Friederich, G., Chavez, F.P., Watson, A.J., Bakker, D.C.E., Schuster, U., Metzl, N., Yoshikawa-Inoue, H., Ishii, M., Midorikawa, T., Sabine, C.L., Hoppema, M., Olafsson, J., Arnarson, T.S., Tilbrook, B., Johannessen, T., Olsen, A., Bellerby, R., de Baar, H.J.W., Nojiri, Y., Wong, C.S., Delille, B., and **Bates, N.R.**, 2007. Climatological mean and decadal change in surface ocean pCO₂ and net sea-air CO₂ flux over the global oceans. *Deep-Sea Research II* (submitted).
- ***BATES, N.R.**, 2007. Interannual variability of the oceanic CO₂ sink in the subtropical gyre of the North Atlantic Ocean over the last two decades. *Journal of Geophysical Research*, doi:10.1029/2006JC003759 (in press)
- ***BATES, N.R.** and A.J. PETERS. 2007. The contribution of acid deposition to ocean acidification in the subtropical North Atlantic Ocean. *Marine Chemistry* (in review)
- *CASEY, J.R., **M.W. LOMAS**, J. MANDECKI, and D.E. WALKER. 2007. Prochlorococcus Contributes to New Production in the Sargasso Sea Deep Chlorophyll Maximum. *Geophysical Research Letters*, VOL. 34, L10604, doi:10.1029/2006GL028725.
- CHOI, D., J. CHO, B. LANOIL, S. GIOVANONNI, and B. CHO. 2007. *Maribius salinus* gen. nov., sp nov., isolated from a solar saltern and *Maribius pelagius* sp nov., cultured from the Sargasso Sea, belonging to the Roseobacter clade. *International Journal of Systematic and Evolutionary Microbiology* **57**: 270-275.
- DEL VALLE, D., D. KIEBER, and R. KIENE. 2007. Depth-dependent fate of biologically-consumed dimethylsulfide in the Sargasso Sea. *Marine Chemistry* **103**: 197-208.
- HEWSON, I., P. MOISANDER, K.M. ACHILLES, C.A. CARLSON, B.D. JENKINS, E. MONDRAGON, A. MORRISON, and J.P. ZEHR. 2007. Characteristics of diazotrophs in surface to abyssopelagic waters of the Sargasso Sea. *Aquatic Microbial Ecology* **46**: 15-30.
- *LeQUERE, C. *et al.* (including **N.R. BATES**) 2007. Chapter 5. Intergovernmental Panel on Climate Change (IPCC) 4th Assessment (anticipated release data, mid 2007).
- *McGILLICUDDY, D.J., L.R. ANDERSON, **N.R. BATES**, T. BIBBY, K.O. BUESSELER, C.A., CARLSON, C.S. DAVIS, C. EWART, P.G. FALKOWSKI, S.A. GOLDTHWAIT, D.A. HANSELL, W.J. JENKINS, **R.J. JOHNSON**, V.K. KOSNYREV, J.R. LEDWELL, Q.P. LI, D.A. SIEGEL, D.K., STEINBERG, 2007. Eddy/wind interactions stimulate extraordinary mid-ocean plankton blooms. *Science* **316**:1021-1025.
- *MULHOLLAND, M.R., **M.L. Lomas**, 2007. Nitrogen uptake and assimilation. In: *Nitrogen in the Marine Environment*, 2nd Ed. (eds.) D.G. Capone, M.R. Mulholland, D.A. Bronk, E.J. Carpenter.
- PHILLIPS, H.E. and JOYCE, T.M. 2007. Bermuda's tale of two time-series: Hydrostation S and BATS. *Journal of Physical Oceanography*, **37**, 554-571.
- *QIAN, J.T., D.J. McGILLICUDDY, D.A. HANSELL, D.A., **N.R. BATES**, and W.J. JENKINS, 2007. Uncertainty in the biogeochemical impact of a cyclonic eddy in the Sargasso Sea. *Journal of Geophysical Research* (submitted)

- *SALIHOGU, B., V. GARCON, A. OSCHLIES, and **M.W. LOMAS**. Influence of nutrient utilization and remineralization stoichiometry on phytoplankton species and carbon export: a modeling study at BATS. (accepted: Deep Sea Research I).
- SANTANA-CASIANO, J.M., M. GONZALEZ-DAVILA, M.J. RUEDA, O. LLINAS, and E. F. GONZALEZ-DAVILA. 2007. The interannual variability of oceanic CO₂ parameters in the northeast Atlantic subtropical gyre at the ESTOC site. *Global Biogeochemical Cycles* **21**: GB1015.

2006

- ANGLY, F.E., B. FELTS, M. BREITBART, P. SALAMON, R. A. EDWARDS, C. CARLSON, A. M. CHAN, M. HAYNES, S. KELLEY, H. LIU, J. M. MAHAFFY, J. E. MUELLER, J. NULTON, R. OLSON, R. PARSONS, S. RAYHAWK, C. A. SUTTLE, and F. ROHWER. 2006. The marine viromes of four oceanic regions. *Plos Biology* **4**: 2121-2131.
- *BRIX, H., N. GRUBER, D. KARL, and **N.R. BATES**. 2006. Interannual variability of the relationship between primary, net community and export production in the subtropical gyres. *Deep-Sea Research II*. **53**:698-717
- *CONNELLY, D., P. STATHAM, and **A.H. KNAP**. 2006. Seasonal changes in speciation of dissolved chromium in the surface Sargasso Sea. *Deep Sea Research I* **53**: 1975-1988.
- DAVIS, C. S., and D. MCGILLICUDDY. 2006. Transatlantic abundance of the N₂-fixing colonial cyanobacterium *Trichodesmium*. *Science* **312**: 1517-1521.
- HAINES, K. and others 2006. Salinity assimilation using S(T): Covariance relationships. *Monthly Weather Review* **134**: 759-771.
- HENRY-EDWARDS, A., and M. TOMCZAK. 2006. Detecting changes in Labrador Sea water through a water mass analysis of BATS data. *Ocean Science* **2**: 19-25.
- HERNES, P.J., and R. BENNER. 2006. Terrigenous organic matter sources and reactivity in the North Atlantic Ocean and a comparison to the Arctic and Pacific oceans. *Marine Chemistry* **100**: 66-79.
- *HOOD, R.R. E.A. LAWS, R.A. ARMSTRONG, **N.R. BATES**, C.W. BROWN, C.A. CARLSON, F. CHAI, S.C. DONEY, P.G., FALKOWSKI, R.A. FEELY, M.A.M. FREIDRICHS, M.R. LANDRY, J.K. MOORE, D.M. NELSON, T.L. RICHARDSON, B. SALIHOGU, M. SCHARTAU, D.A. TOOLE, and J.D. WIGGERT 2006. Functional Group Modeling: progress, challenges and prospects. *Deep-Sea Research II*. **53**: 459-512
- KOEVE W.C., 2006. C:N stoichiometry of the biological pump in the North Atlantic: Constraints from climatological data. *Global Biogeochemical Cycles*, **20** (3): Art. No. GB3018 SEP 7 2006
- ***LOMAS, M. W.**, and F. LIPSCHULTZ. 2006. The primary nitrite maximum: Phytoplankton or nitrifiers? *Limnology and Oceanography:Reviews* **51**.2453-2467.
- MARTIN, A.P., and P. PONDAVEN. 2006. New primary production and nitrification in the western subtropical North Atlantic: A modeling study. **20**: GB4014.
- MOURINO-CARBALLIDO, B., and D.J. MCGILLICUDDY. 2006. Mesoscale variability in the metabolic balance of the Sargasso Sea. *Limnology and Oceanography* **51**: 2675-2689.
- SHOLKOVITZ, E.R., and P.N. SEDWICK. 2006. Open-ocean deployment of a buoy-mounted aerosol sampler on the Bermuda Testbed Mooring: Aerosol iron and sea salt over the Sargasso Sea. *Deep-Sea Research I* **53**: 547-560.
- STANLEY, R., W.J. JENKINS, and S.C. DONEY. 2006. Quantifying seasonal air-sea gas exchange processes using noble gas time-series: A design experiment. *Journal of Marine Research* **64**: 267-295.
- TOOLE, D., D. SLEZAK, R. KIENE, D. KIEBER, and D. SIEGEL. 2006. Effects of solar radiation on dimethylsulfide cycling in the western Atlantic Ocean. *Deep Sea Research I* **53**: 136-153.

- TRESS, M., D. COZZETTO, A. TRAMONTANO, and A. VALENCIA. 2006. An analysis of the Sargasso Sea resource and the consequences for database composition. *BMC Bioinformatics* **7**: Art.213.
- VAN MOOY, B., G. ROCAP, H. FREDRICKS, C. EVANS, and A.H. DEVOL. 2006. Sulfolipids dramatically decrease phosphorus demand by picocyanobacteria in oligotrophic marine environments. *Proceedings of the Academy of Natural Sciences of Philadelphia* **103**: 8607-8612.
- ZINSER, E. and others 2006. *Prochlorococcus* ecotype abundances in the North Atlantic Ocean as revealed by an improved quantitative PCR method. *Applied and Environmental Microbiology* **72**: 723-732.

2005

- ANDERSON, T.R. 2005. Plankton functional type modelling: running before we can walk? *Journal of Plankton Research* **27**: 1073-1081.
- AVERY, G.B., W.J. COOPER, R.J. KIEBER, and J.D. WILLEY. 2005. Hydrogen peroxide at the Bermuda Atlantic Time Series Station: Temporal variability of seawater hydrogen peroxide. *Marine Chemistry* **97**: 236-244.
- BOUSHABA, K., and M. PASCUAL. 2005. Dynamics of the 'echo' effect in a phytoplankton system with nitrogen fixation. *Bulletin of Mathematical Biology* **67**: 487-507.
- COLMAN, A., R. BLAKE, D. KARL, M. FOGEL, and K. TUREKIAN. 2005. Marine phosphate oxygen isotopes and organic matter remineralization in the oceans. *Proceedings of the National Academy of Sciences of the United States of America* **102**: 13023-13028.
- HAYS, G., A. RICHARDSON, and C. ROBINSON. 2005. Climate change and marine plankton. *TRENDS in Ecology and Evolution* **20**: doi:10.1016/j.tree.2005.1003.1004.
- HENRY-EDWARDS, A., and M. TOMCZAK. 2005. Remote detection of water property changes from a time-series of oceanographic data. *Ocean Science Discussions* **2**: 399-415.
- JIAO, N. Z. and others 2005. Dynamics of autotrophic picoplankton and heterotrophic bacteria in the East China Sea. *Continental Shelf Research* **25**: 1265-1279.
- KEIGWIN, L., M. BICE, and N. COPLEY. 2005. Seasonality and stable isotopes in planktonic foraminifera off Cape Cod, Massachusetts. *Paleoceanography* **20**. Art. No. PA4011
- KETTLE, A.J. 2005. Comparison of the nonlocal transport characteristics of a series of one-dimensional oceanic boundary layer models. *Ocean Modelling* **8**: 301-336.
- KETTLE, A.J. 2005. Diurnal cycling of carbon monoxide (CO) in the upper ocean near Bermuda. *Ocean Modelling* **8**: 337-367.
- KNAPP, A. N., D.M. SIGMAN, and F. LIPSCHULTZ. 2005. N isotopic composition of dissolved organic nitrogen and nitrate at the Bermuda Atlantic time-series study site. *Global Biogeochemical Cycles* **19**. Art. No. GB1018
- KUHNERT, H., T. CRUGER, and J. PATZOLD. 2005. NAO signature in a Bermuda coral Sr/Ca record. *Geochemistry Geophysics Geosystems* **6**. Art. No. Q04004
- LEVY, M., Y. LEHAHN, J.M. ANDRE, L. MEMERY, H. LOISEL, and E. HEIFETZ. 2005. Production regimes in the northeast Atlantic: A study based on Sea-viewing Wide Field-of-view Sensor (SeaWiFS) chlorophyll and ocean general circulation model mixed layer depth. *Journal of Geophysical Research-Oceans* **110**. Art. No. C07S10
- LONCARIC, N., G.J. BRUMMER, and D. KROON. 2005. Lunar cycles and seasonal variations in deposition fluxes of planktic foraminiferal shell carbonate to the deep South Atlantic (central Walvis Ridge). *Deep-Sea Research I* **52**: 1178-1188.
- MACKENZIE, T.D.B., J.M. JOHNSON, A.M. COCKSHUTT, R.A. BURNS, and D.A. CAMPBELL. 2005. Large reallocations of carbon, nitrogen, and photosynthetic reductant

- among phycobilisomes, photosystems, and Rubisco during light acclimation in *Synechococcus elongatus* strain PCC7942 are constrained in cells under low environmental inorganic carbon. *Archives of Microbiology* **183**: 190-202.
- MARANON, E. 2005. Phytoplankton growth rates in the Atlantic subtropical gyres. *Limnology and Oceanography* **50**: 299-310.
- MOORE, L.R., M. OSTROWSKI, D. J. SCANLAN, K. FEREN, and T. SWEETSIR. 2005. Ecotypic variation in phosphorus acquisition mechanisms within marine picocyanobacteria. *Aquatic Microbial Ecology* **39**: 257-269.
- MORRIS, R. M., K.L. VERGIN, J.C. CHO, M.S. RAPPE, C.A. CARLSON, and S.J. GIOVANNONI. 2005. Temporal and spatial response of bacterioplankton lineages to annual convective overturn at the Bermuda Atlantic Time-series Study site. *Limnology and Oceanography* **50**: 1687-1696.
- MOURINO, B., E. FERNANDEZ, R. PINGREE, B. SINHA, J. ESCANEZ, and D. DE ARMAS. 2005. Constraining effect of mesoscale features on carbon budget of photic layer in the NE subtropical Atlantic. *Marine Ecology-Progress Series* **287**: 45-52.
- NELSON, C., and C.A. CARLSON. 2005. A nonradioactive assay of bacterial productivity optimized for oligotrophic pelagic environments. *Limnology and Oceanography:Methods* **3**: 211-220.
- PALTER, J., M. LOZIER, and R. BARBER. 2005. The effect of advection on the nutrient reservoir in the North Atlantic subtropical gyre. *Nature* **437**: 687-692.
- QUINN, P., M. CORTES, and J. BOLLMANN. 2005. Morphological variation in the deep ocean-dwelling coccolithophore *Florisphaera profunda* (Haptophyta). *European Journal of Phycology* **40**: 123-133.
- ROSSBY, T., C.N. FLAGG, and K. DONOHUE. 2005. Interannual variations in upper-ocean transport by the Gulf Stream and adjacent waters between New Jersey and Bermuda. *Journal of Marine Research* **63**: 203-226.
- SEDWICK, P.N. and others 2005. Iron in the Sargasso Sea (Bermuda Atlantic Time-series Study region) during summer: Eolian imprint, spatiotemporal variability, and ecological implications. *Global Biogeochemical Cycles* **19**. doi: 10.1029/2004GB002445
- TOLLI, J., and C. TAYLOR. 2005. Biological CO oxidation in the Sargasso Sea and in Vineyard Sound, Massachusetts. *Limnology and Oceanography* **50**: 1205-1212.
- UEYAMA, R., and B.C. MONGER. 2005. Wind-induced modulation of seasonal phytoplankton blooms in the North Atlantic derived from satellite observations. *Limnology and Oceanography* **50**: 1820-1829.
- VELDHUIS, M.J.W., K.R. TIMMERMANS, P. CROOT, and B. VAN DER WAGT. 2005. Picophytoplankton; a comparative study of their biochemical composition and photosynthetic properties. *Journal of Sea Research* **53**: 7-24.
- WEBER, L., C. VOLKER, M. SCHARTAU, and D.A. WOLF-GLADROW. 2005. Modeling the speciation and biogeochemistry of iron at the Bermuda Atlantic Time-series Study site. *Global Biogeochemical Cycles* **19**. Art. No. GB1019

2004

- AGUSTI, S. 2004. Viability and niche segregation of *Prochlorococcus* and *Synechococcus* cells across the Central Atlantic Ocean. *Aquatic Microbial Ecology* **36**: 53-59.
- BABIKER, I.S., M.A.A. MOHAMED, K. KOMAKI, K. OHTA, and K. KATO. 2004. Temporal variations in the dissolved nutrient stocks in the surface water of the western North Atlantic Ocean. *Journal of Oceanography* **60**: 553-562.
- BABIN, S.M., J.A. CARTON, T.D. DICKEY, and J.D. WIGGERT. 2004. Satellite evidence of hurricane-induced phytoplankton blooms in an oceanic desert. *Journal of Geophysical Research-Oceans* **109**. Art. No. C03043

- ***BATES, N.R.**, and D.A. HANSELL. 2004. Temporal variability of excess nitrate in the subtropical mode water of the North Atlantic Ocean. *Marine Chemistry* **84**: 225-241.
- BRIX, H., N. GRUBER, and C.D. KEELING. 2004. Interannual variability of the upper ocean carbon cycle at station ALOHA near Hawaii. *Global Biogeochemical Cycles* **18**. Art. No. GB4019
- CARLSON, C.A., S.J. GIOVANNONI, D.A. HANSELL, S.J. GOLDBERG, R. PARSONS, and K. VERGIN. 2004. Interactions among dissolved organic carbon, microbial processes, and community structure in the mesopelagic zone of the northwestern Sargasso Sea. *Limnology and Oceanography* **49**: 1073-1083.
- CHO, J.C., and S.J. GIOVANNONI. 2004. *Oceanicola granulosus* gen. nov., sp nov and *Oceanicola batsensis* sp nov., poly-beta-hydroxybutyrate-producing marine bacteria in the order 'Rhodobacterales'. *International Journal of Systematic and Evolutionary Microbiology* **54**: 1129-1136.
- CHURCH, M.J., H.W. DUCKLOW, and D.A. KARL. 2004. Light dependence of H-3 leucine incorporation in the oligotrophic North Pacific Ocean. *Applied and Environmental Microbiology* **70**: 4079-4087.
- CROPP, R.A., J. NORBURY, A.J. GABRIC, and R.D. BRADDOCK. 2004. Modeling dimethylsulphide production in the upper ocean. *Global Biogeochemical Cycles* **18**. Art. No. GB3005
- GARCIA-FERNANDEZ, J.M., and J. DIEZ. 2004. Adaptive mechanisms of nitrogen and carbon assimilatory pathways in the marine cyanobacteria *Prochlorococcus*. *Research in Microbiology* **155**: 795-802.
- *HANSELL, D.A., **N.R. BATES**, and D.B. OLSON. 2004. Excess nitrate and nitrogen fixation in the North Atlantic Ocean. *Marine Chemistry* **84**: 243-265.
- HANSELL, D.A., H.W. DUCKLOW, A. MACDONALD, and M. BARINGER. 2004. Metabolic poise in the North Atlantic Ocean diagnosed from organic matter transport. *Limnology and Oceanography* **49**: 1084-1094.
- KEELING, C.D., H. BRIX, and N. GRUBER. 2004. Seasonal and long-term dynamics of the upper ocean carbon cycle at Station ALOHA near Hawaii. *Global Biogeochemical Cycles* **18**. Art. No. GB4006
- KEIGWIN, L.D. 2004. Radiocarbon and stable isotope constraints on Last Glacial Maximum and Younger Dryas ventilation in the western North Atlantic. *Paleoceanography* **19**. Art. No. PA4012
- LE CLAINCHE, Y., M. LEVASSEUR, A. VEZINA, J.W.H. DACEY, and F. SAUCIER. 2004. Behaviour of the ocean DMS(P) pools in the Sargasso Sea viewed in a coupled physical-biogeochemical ocean model. *Canadian Journal of Fisheries and Aquatic Sciences* **61**: 788-803.
- LEFEVRE, N., A. WATSON, A. OLSEN, A. RIOS, F. PEREZ, and T. JOHANNESSEN. 2004. A decrease in the sink for atmospheric CO₂ in the North Atlantic. *Geophysical Research Letters* **31**: doi:10.1029/2003GL018957.
- LEFFANUE, H., and M. TOMCZAK. 2004. Using OMP analysis to observe temporal variability in water mass distribution. *Journal of Marine Systems* **48**: 3-14.
- LIMA, I.D., and S.C. DONEY. 2004. A three-dimensional, multnutrient, and size-structured ecosystem model for the North Atlantic. *Global Biogeochemical Cycles* **18**. Art. No. GB3019
- LIU, H.B., M. DAGG, L. CAMPBELL, and J. URBAN-RICH. 2004. Picophytoplankton and bacterioplankton in the Mississippi River plume and its adjacent waters. *Estuaries* **27**: 147-156.
- ***LOMAS, M.W.**, A. SWAIN, R. SHELTON, and J. W. AMMERMAN. 2004. Taxonomic variability of phosphorus stress in Sargasso Sea phytoplankton. *Limnology and Oceanography* **49**:

2303-2310.

- ***LOMAS, M.W.**, and **N.R. BATES**. 2004. Potential controls on interannual partitioning of organic carbon during the winter/spring phytoplankton bloom at the Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research I* **51**: 1619-1636.
- LOSA, S.N., G.A. KIVMAN, and V.A. RYABCHENKO. 2004. Weak constraint parameter estimation for a simple ocean ecosystem model: what can we learn about the model and data? *Journal of Marine Systems* **45**: 1-20.
- MAZARD, S.L., N.J. FULLER, K.M. ORCUTT, O. BRIDLE, and D.J. SCANLAN. 2004. PCR analysis of the distribution of unicellular cyanobacterial diazotrophs in the Arabian Sea. *Applied and Environmental Microbiology* **70**: 7355-7364.
- MCKINLEY, G., M. FOLLOWS, and J. MARSHALL. 2004. Mechanisms of air-sea CO₂ flux variability in the equatorial Pacific and the North Atlantic. *Global Biogeochemical Cycles* **18**: doi:10.1029/2003GB002179.
- MORRIS, R.M., M.S. RAPPE, E. URBACH, S.A. CONNOR, and S. J. GIOVANNONI. 2004. Prevalence of the Chloroflexi-related SAR202 bacterioplankton cluster throughout the mesopelagic zone and deep ocean. *Applied and Environmental Microbiology* **70**: 2836-2842.
- MORRISON, J.R., and N.B. NELSON. 2004. Seasonal cycle of phytoplankton UV absorption at the Bermuda Atlantic Time-series Study (BATS) site. *Limnology and Oceanography* **49**: 215-224.
- NELSON, N.B., D.A. SIEGEL, and J.A. YODER. 2004. The spring bloom in the northwestern Sargasso Sea: spatial extent and relationship with winter mixing. *Deep-Sea Research Part II-Topical Studies in Oceanography* **51**: 987-1000.
- NELSON, N.B., C.A. CARLSON, and D.K. STEINBERG. 2004. Production of chromophoric dissolved organic matter by Sargasso Sea microbes. *Marine Chemistry* **89**: 273-287.
- SCHOLLAERT, S.E., T. ROSSBY, and J. A. YODER. 2004. Gulf Stream cross-frontal exchange: possible mechanisms to explain interannual variations in phytoplankton chlorophyll in the Slope Sea during the SeaWiFS years. *Deep-Sea Research Part II-Topical Studies in Oceanography* **51**: 173-188.
- STANLEY, R.H.R., K.O. BUESSELER, S.J. MANGANINI, D.K. STEINBERG, and J.R. VALDES. 2004. A comparison of major and minor elemental fluxes collected in neutrally buoyant and surface-tethered sediment traps. *Deep-Sea Research I* **51**: 1387-1395.
- STEINBERG, D.K., N. NELSON, C.A. CARLSON, and A. PRUSAK. 2004. Production of chromophoric dissolved organic matter (CDOM) in the open ocean by zooplankton and the colonial cyanobacterium *Trichodesmium* spp. *Marine Ecology-Progress Series* **267**: 45-56.
- TOOLE, D.A., and D.A. SIEGEL. 2004. Light-driven cycling of dimethylsulfide (DMS) in the Sargasso Sea: Closing the loop. *Geophysical Research Letters* **31**. Art. No. L09308
- TOSITTI, L., S. HUBENER, H.J. KANTER, W. RINGER, S. SANDRINI, and L. TOBLER. 2004. Intercomparison of sampling and measurement of Be-7 in air at four high-altitude locations in Europe. *Applied Radiation and Isotopes* **61**: 1497-1502.
- *VENTER J.C., K. REMINGTON, J.F. HEIDELBERG, A.L. HALPERN, D. RUSCH, J.A. EISEN, D.Y. WU, I. PAULSEN, K.E. NELSON, W. NELSON, D.E. FOUTS, S. LEVY, **A.H. KNAP**, **M.W. LOMAS**, K. NEALSON, O. WHITE, J. PETERSON, J. HOFFMAN, R. PARSONS, H. BADEN-TILLSON, C. PFANNKOCH, Y.H. ROGERS, and H.O. SMITH. 2004. Environmental genome shotgun sequencing of the Sargasso Sea. *Science* **304**: 66-74.
- WILLEY, J.D., R. J. KIEBER, and G. B. AVERY. 2004. Effects of rainwater iron and hydrogen peroxide on iron speciation and phytoplankton growth in seawater near Bermuda. *Journal of Atmospheric Chemistry* **47**: 209-222.

2003

- ANDERSON, T. R., and P. PONDAVEN. 2003. Non-redfield carbon and nitrogen cycling in the Sargasso Sea: pelagic imbalances and export flux. *Deep-Sea Research I* **50**: 573-591.
- ARIMOTO, R., R. A. DUCE, B. J. RAY, and U. TOMZA. 2003. Dry deposition of trace elements to the western North Atlantic. *Global Biogeochemical Cycles* **17**. Art. No. 1010
- BERTILSSON, S., O. BERGLUND, D. M. KARL, and S. W. CHISHOLM. 2003. Elemental composition of marine Prochlorococcus and Synechococcus: Implications for the ecological stoichiometry of the sea. *Limnology and Oceanography* **48**: 1721-1731.
- BIRD, C., and M. WYMAN. 2003. Nitrate/nitrite assimilation system of the marine picoplanktonic cyanobacterium *Synechococcus* sp strain WH 8103: Effect of nitrogen source and availability on gene expression. *Applied and Environmental Microbiology* **69**: 7009-7018.
- BRZEZINSKI, M. A., J. L. JONES, K. D. BIDDLE, and F. AZAM. 2003. The balance between silica production and silica dissolution in the sea: Insights from Monterey Bay, California, applied to the global data set. *Limnology and Oceanography* **48**: 1846-1854.
- CHO, J. C., and S. J. GIOVANNONI. 2003. *Croceibacter atlanticus* gen. nov., sp nov., a novel marine bacterium in the family Flavobacteriaceae. *Systematic and Applied Microbiology* **26**: 76-83.
- CHO, J.C., and S.J. GIOVANNONI. 2003. *Parvularcula bermudensis* gen. nov., sp nov., a marine bacterium that forms a deep branch in the alpha-Proteobacteria. *International Journal of Systematic and Evolutionary Microbiology* **53**: 1031-1036.
- *CONTE, M. H., T.D. DICKEY, J.C. WEBER, R.J. JOHNSON, and A.H. KNAP. 2003. Transient physical forcing of pulsed export of bioreactive material to the deep Sargasso Sea. *Deep-Sea Research I* **50**: 1157-1187.
- DICKSON, R.R., R. CURRY, and I. YASHAYAEV. 2003. Recent changes in the North Atlantic. *Philosophical Transactions of the Royal Society of London Series a-Mathematical Physical and Engineering Sciences* **361**: 1917-1933.
- EL ALAOUI, S., J. DIEZ, F. TORIBIO, G. GOMEZ-BAENA, A. DUFRESNE, and J. M. GARCIA-FERNANDEZ. 2003. Glutamine synthetase from the marine cyanobacteria *Prochlorococcus* spp.: characterization, phylogeny and response to nutrient limitation. *Environmental Microbiology* **5**: 412-423.
- ESHEL, G. 2003. North Atlantic thermal persistence and coherent evolution. *Journal of Geophysical Research-Oceans* **108**. Art. No. 3029
- FASHAM, M.J.R. 2003. JGOFS: a retrospective view. In *Ocean Biogeochemistry: The Role of the ocean Carbon Cycle in Global Climate Change*. (M.R. FASHAM, ed.), Springer, pp. 270-277.
- FRIIS, K., A. KORTZINGER, and D. WALLACE. 2003. The salinity normalization of marine inorganic carbon chemistry data. *Geophysical Research Letters* **30**: doi:10.1029/2002GL015898.
- GOLDMAN, J.C., and D.J. MCGILLICUDDY. 2003. Effect of large marine diatoms growing at low light on episodic new production. *Limnology and Oceanography* **48**: 1176-1182.
- GONZALEZ-DAVILA, M., J.M. SANTANA-CASIANO, M.J. RUEDA, O. LLINAS, and E. F. GONZALEZ-DAVILA. 2003. Seasonal and interannual variability of sea-surface carbon dioxide species at the European Station for Time Series in the Ocean at the Canary Islands (ESTOC) between 1996 and 2000. *Global Biogeochemical Cycles* **17**. Art. No. 3029
- HASTINGS, M.G., D.M. SIGMAN, and F. LIPSCHULTZ. 2003. Isotopic evidence for source changes of nitrate in rain at Bermuda. *Journal of Geophysical Research-Atmospheres* **108**. Art. No. 4790
- HELDAL, M., D. J. SCANLAN, S. NORLAND, F. THINGSTAD, and N. H. MANN. 2003. Elemental composition of single cells of various strains of marine *Prochlorococcus* and

- Synechococcus using X-ray microanalysis. *Limnology and Oceanography* **48**: 1732-1743.
- JENKINS, W.J., and S.C. DONEY. 2003. The subtropical nutrient spiral. *Global Biogeochemical Cycles* **17**. Art. No. 1110
- JURANEK, L.W., A.D. RUSSELL, and H.J. SPERO. 2003. Seasonal oxygen and carbon isotope variability in euthecosomatous pteropods from the Sargasso Sea. *Deep-Sea Research I* **50**: 231-245.
- *KARL, D.M., **N.R. BATES**, S. EMERSON, P.J. HARRISON, C. JEANDAL, K.K. LIU, J.-C. MARTY, A.F. MICHAELS, J.C. MIQUEL, S. NEUER, Y. NOJIRI, and C.S. WONG, 2003. Temporal studies of biogeochemical processes in the world's oceans during the JGOFS era. In *Ocean Biogeochemistry: The Role of the ocean Carbon Cycle in Global Climate Change*. (M.R. FASHAM, ed.), Springer, pp. 239-265.
- KATZ, R.W., M.B. PARLANGE, and C. TEBALDI. 2003. Stochastic modeling of the effects of large-scale circulation on daily weather in the southeastern US. *Climatic Change* **60**: 189-216.
- LATIF, M. 2003. Tropical Pacific influences on the North Atlantic thermohaline circulation. *Annals of Geophysics* **46**: 99-107.
- KIEBER, R.J., J.D. WILLEY, and G.B. AVERY. 2003. Temporal variability of rainwater iron speciation at the Bermuda Atlantic time series station. *Journal of Geophysical Research-Oceans* **108**. Art. No. 3277
- KIM, G., N. HUSSAIN, and T.M. CHURCH. 2003. Tracing the advection of organic carbon into the subsurface Sargasso Sea using a Ra-228/Ra-226 tracer. *Geophysical Research Letters* **30**. Art. No. 1874
- LEFEVRE, N., A.H. TAYLOR, F.J. GILBERT, and R.J. GEIDER. 2003. Modeling carbon to nitrogen and carbon to chlorophyll a ratios in the ocean at low latitudes: Evaluation of the role of physiological plasticity. *Limnology and Oceanography* **48**: 1796-1807.
- LOSA, S.N., G.A. KIVMAN, J. SCHROTER, and M. WENZEL. 2003. Sequential weak constraint parameter estimation in an ecosystem model. *Journal of Marine Systems* **43**: 31-49.
- MARANON, E., M. BEHRENFELD, N. GONZALEZ, B. MOURINO, and M. ZUBKOV. 2003. High variability of primary production in the oligotrophic waters of the Atlantic Ocean: uncoupling from phytoplankton biomass and size structure. *Marine Ecology-Progress Series* **257**: 1-11.
- MARTIN, A.P., and P. PONDAVEN. 2003. On estimates for the vertical nitrate flux due to eddy pumping. *Journal of Geophysical Research-Oceans* **108**. Art. No. 3359
- McGILLICUDDY, D.J., L.A. ANDERSON, S.C. DONEY, and M. MALTRUD. 2003. Eddy-driven sources and sinks of nutrients in the upper ocean: Results from a 0.1o resolution model of the North Atlantic. *Global Biogeochemical Cycles* **17**: doi:10.1029/2002GB001987.
- MISHONOV, A.V., W.D. GARDNER, and M.J. RICHARDSON. 2003. Remote sensing and surface POC concentration in the South Atlantic. *Deep-Sea Research Part II* **50**: 2997-3015.
- MONGIN, M., D.M. NELSON, P. PONDAVEN, M.A. BRZEZINSKI, and P. TREGUER. 2003. Simulation of upper-ocean biogeochemistry with a flexible-composition phytoplankton model: C, N and Si cycling in the western Sargasso Sea. *Deep-Sea Research I* **50**: 1445-1480.
- OBERNOSTERER, I., N. KAWASAKI, and R. BENNER. 2003. P-limitation of respiration in the Sargasso Sea and uncoupling of bacteria from P-regeneration in size-fractionation experiments. *Aquatic Microbial Ecology* **32**: 229-237.
- PAFFENHOFER, G.A., and M.G. MAZZOCCHI. 2003. Vertical distribution of subtropical epiplanktonic copepods. *Journal of Plankton Research* **25**: 1139-1156.
- ROCAP, G. and others 2003. Genome divergence in two *Prochlorococcus* ecotypes reflects

- oceanic niche differentiation. *Nature* **424**: 1042-1047.
- SCHARTAU, M., and A. OSCHLIES. 2003. Simultaneous data-based optimization of a 1D-ecosystem model at three locations in the North Atlantic: Part II - Standing stocks and nitrogen fluxes. *Journal of Marine Research* **61**: 795-821.
- SULLIVAN, M., J. WATERBURY, and S. CHISHOLM. 2003. Cyanophages infecting the oceanic cyanobacterium *Prochlorococcus*. *Nature* **424**: 1047-1050.
- SWEENEY, E.N., D.J. MCGILLICUDDY, and K.O. BUESSELER. 2003. Biogeochemical impacts due to mesoscale eddy activity in the Sargasso Sea as measured at the Bermuda Atlantic Time-series Study (BATS). *Deep-Sea Research Part II* **50**: 3017-3039.
- TANAKA, T., Y. W. WATANABE, S. WATANABE, S. NORIKI, N. TSURUSHIMA, and Y. NOJIRI. 2003. Oceanic Suess effect of delta C-13 in subpolar region: The North Pacific. *Geophysical Research Letters* **30**. Art. No. 2159
- TOOLE, D.A., D. KIEBER, R. KIENE, D.A. SIEGEL, and N.B. NELSON. 2003. Photolysis and the dimethylsulfide (DMS) summer paradox in the Sargasso Sea. *Limnology and Oceanography* **48**: 1088-1100.
- USBECK, R., R. SCHLITZER, G. FISCHER, and G. WEFER. 2003. Particle fluxes in the ocean: comparison of sediment trap data with results from inverse modelling. *Journal of Marine Systems* **39**: 167-183.
- VAILLANCOURT, R.D., J. MARRA, M.P. SEKI, M.L. PARSONS, and R.R. BIDIGARE. 2003. Impact of a cyclonic eddy on phytoplankton community structure and photosynthetic competency in the subtropical North Pacific Ocean. *Deep-Sea Research Part I* **50**: 829-847.
- WESTBERRY, T.K., and D.A. SIEGEL. 2003. Phytoplankton natural fluorescence variability in the Sargasso Sea. *Deep-Sea Research I* **50**: 417-434.
- WORDEN, A.Z., and B.J. BINDER. 2003. Application of dilution experiments for measuring growth and mortality rates among *Prochlorococcus* and *Synechococcus* populations in oligotrophic environments. *Aquatic Microbial Ecology* **30**: 159-174.

2002

- ***BATES, N.R.** 2002. Seasonal variability of the effect of coral reefs on seawater CO₂ and air-sea CO₂ exchange. *Limnology and Oceanography* **47**: 43-52.
- ***BATES, N.R.** 2002. Interannual variability in the global ocean uptake of CO₂. *Geophysical Research Letters*, **29**(5): Art. No. 1059 MAR 1 2002.
- ***BATES, N.R.** A.C. PEQUIGNET, R.J. JOHNSON, and N. GRUBER, 2002. A short-term sink for atmospheric CO₂ in Subtropical Mode Water of the North Atlantic Ocean *Nature* **420**, 389-393.
- CARLSON, C.A. 2002. Production and Removal Processes. In: *Biogeochemistry of Marine Dissolved Organic Matter* (eds. D.A. Hansell, C.A. Carlson). Academic Press, Amsterdam, pp. 91-152.
- CARLSON, C.A. and others 2002. Effect of nutrient amendments on bacterioplankton production, community structure, and DOC utilization in the northwestern Sargasso Sea. *Aquatic Microbial Ecology* **30**: 19-36.
- CHRISTIAN, J.R. and T.R. Anderson. 2002. Modeling DOM biogeochemistry. In: *Biogeochemistry of Marine Dissolved Organic Matter* (eds. D.A. Hansell, C.A. Carlson). Academic Press, Amsterdam, pp. 717-756.
- CONTE, M.H., and J.C. WEBER. 2002. Long-range atmospheric transport of terrestrial biomarkers to the western North Atlantic. *Global Biogeochemical Cycles* **16**. Art. No. 1142
- DIEKMANN, R., and U. PIATKOWSKI. 2002. Early life stages of cephalopods in the Sargasso Sea: distribution and diversity relative to hydrographic conditions. *Marine Biology* **141**:

- 123-130.
- GLOVER, D.M., S.C. DONEY, A.J. MARIANO, R.H. EVANS, and S.J. MCCUE. 2002. Mesoscale variability in time series data: Satellite-based estimates for the US JGOFS Bermuda Atlantic Time-Series Study (BATS) site. *Journal of Geophysical Research-Oceans* **107**.
- *GRUBER, N., C.D. KEELING, and **N.R. BATES**. 2002. Interannual variability in the North Atlantic Ocean carbon sink. *Science* **298**: 2374-2378.
- GRUTZNER, J. and others 2002. Astronomical age models for Pleistocene drift sediments from the western North Atlantic (ODP Sites 1055-1063). *Marine Geology* **189**: 5-23.
- *GUNDERSEN, K., M. HELDAL, S. NORLAND, D. A. PURDIE, and **A.H. KNAP**. 2002. Elemental C, N, and P cell content of individual bacteria collected at the Bermuda Atlantic Time-Series Study (BATS) site. *Limnology and Oceanography* **47**: 1525-1530.
- HANSELL, D.A. 2002. DOC in the global ocean carbon cycle. In: *Biogeochemistry of Marine Dissolved Organic Matter* (eds. D.A. Hansell, C.A. Carlson). Academic Press, Amsterdam, pp. 685-716.
- JIAO, N. Z., Y. H. YANG, H. KOSHIKAWA, and M. WATANABE. 2002. Influence of hydrographic conditions on picoplankton distribution in the East China Sea. *Aquatic Microbial Ecology* **30**: 37-48.
- JIAO, N. Z., Y. H. YANG, H. KOSHIKAWA, S. HARADA, and M. WATANABE. 2002. Responses of picoplankton to nutrient perturbation in the South China Sea, with special reference to the coast-wards distribution of *Prochlorococcus*. *Acta Botanica Sinica* **44**: 731-739.
- KIM, G., and T. M. CHURCH. 2002. Wet deposition of trace elements and radon daughter systematics in the South and equatorial Atlantic atmosphere. *Global Biogeochemical Cycles* **16**. Art. No. 1046
- KOKSHAROVA, O. A., and C. P. WOLK. 2002. Genetic tools for cyanobacteria. *Applied Microbiology and Biotechnology* **58**: 123-137.
- KUHNERT, H., J. PATZOLD, B. SCHNETGER, and G. WEFER. 2002. Sea-surface temperature variability in the 16th century at Bermuda inferred from coral records. *Palaeogeography Palaeoclimatology Palaeoecology* **179**: 159-171.
- LANDRY, M. R. 2002. Integrating classical and microbial food web concepts: evolving views from the open-ocean tropical Pacific. *Hydrobiologia* **480**: 29-39.
- LEE, K., D. M. KARL, R. WANNINKHOF, and J. Z. ZHANG. 2002. Global estimates of net carbon production in the nitrate-depleted tropical and subtropical oceans. *Geophysical Research Letters* **29**. Art. No. 1907
- LEFEVRE, M., A. VEZINA, M. LEVASSEUR, and J. W. H. DACEY. 2002. A model of dimethylsulfide dynamics for the subtropical North Atlantic. *Deep-Sea Research Part I-Oceanographic Research Papers* **49**: 2221-2239.
- LINDELL, D. and others 2002. Nitrogen stress response of *Prochlorococcus* strain PCC 9511 (Oxyphotobacteria) involves contrasting regulation of *ntca* and *amt1*. *Journal of Phycology* **38**: 1113-1124.
- *LIPSCHULTZ, F.J., **N.R. BATES**, C.A. CARLSON, and D.A. HANSELL. 2002. New production in the Sargasso Sea: history and current status. *Global Biogeochemical Cycles* **15**:1-16.
- ***LOMAS, M.W., N.R. BATES, A.H. KNAP**, D.M. KARL, R. LUKAS, R.R. BIDIGARE, M. LANDRY, D.K. STEINBERG, and C.A. CARLSON, 2002. Towards a revised understanding of oceanic biogeochemical and ecosystem functioning. *EOS*, **83**:559-561.
- LOPEZ-LOZANO, A., J. DIEZ, S. EL ALAOU, C. MORENO-VIVIAN, and J. M. GARCIA-FERNANDEZ. 2002. Nitrate is reduced by heterotrophic bacteria but not transferred to *Prochlorococcus* in non-axenic cultures. *Fems Microbiology Ecology* **41**: 151-160.
- LUTZ, M., R. DUNBAR, and K. CALDEIRA. 2002. Regional variability in the vertical flux of particulate organic carbon in the ocean interior. *Global Biogeochemical Cycles* **16**. Art.

No. 1037

- MEMERY, L., M. LEVY, S. VERANT, and L. MERLIVAT. 2002. The relevant time scales in estimating the air-sea CO₂ exchange in a mid-latitude region. *Deep-Sea Research Part II-Topical Studies in Oceanography* **49**: 2067-2092.
- NELSON, N.B. and D.A. SIEGEL. 2002. Chromophoric DOM in the open ocean. In: *Biogeochemistry of Marine Dissolved Organic Matter* (eds. D.A. Hansell, C.A. Carlson). Academic Press, Amsterdam, pp. 547-578.
- ORCUTT, K. M., U. RASMUSSEN, E. A. WEBB, J. B. WATERBURY, K. GUNDERSEN, and B. BERGMAN. 2002. Characterization of *Trichodesmium* spp. by genetic techniques. *Applied and Environmental Microbiology* **68**: 2236-2245.
- OSCHLIES, A. 2002. Can eddies make ocean deserts bloom? *Global Biogeochemical Cycles* **16**. Art. No. 1106
- PAFFENHOFER, G. A., and M.G. MAZZOCCHI. 2002. On some aspects of the behaviour of *Oithona plumifera* (Copepoda : Cyclopoida). *Journal of Plankton Research* **24**: 129-135.
- PALINSKA, K.A. and others 2002. The signal transducer P-II and bicarbonate acquisition in *Prochlorococcus marinus* PCC 9511, a marine cyanobacterium naturally deficient in nitrate and nitrite assimilation. *Microbiology* **148**: 2405-2412.
- RAGUENEAU, O., N. DITTERT, P. PONDAVEN, P. TREGUER, and L. CORRIN. 2002. Si/C decoupling in the world ocean: is the Southern Ocean different? *Deep-Sea Research Part II* **49**: 3127-3154.
- ROMAN, M.R., H.A. ADOLF, M.R. LANDRY, L.P. MADIN, D.K. STEINBERG, and X. ZHANG. 2002. Estimates of oceanic mesozooplankton production: a comparison using the Bermuda and Hawaii time-series data. *Deep-Sea Research Part II* **49**: 175-192.
- SAITO, M. A., and J.W. MOFFETT. 2002. Temporal and spatial variability of cobalt in the Atlantic Ocean. *Geochimica Et Cosmochimica Acta* **66**: 1943-1953.
- SCHNETZER, A., and D.K. STEINBERG. 2002. Active transport of particulate organic carbon and nitrogen by vertically migrating zooplankton in the Sargasso Sea. *Marine Ecology-Progress Series* **234**: 71-84.
- SCHNETZER, A., and D.K. STEINBERG. 2002. Natural diets of vertically migrating zooplankton in the Sargasso Sea. *Marine Biology* **141**: 89-99.
- SHERIDAN, C.C., D.K. STEINBERG, and G.W. KLING. 2002. The microbial and metazoan community associated with colonies of *Trichodesmium* spp.,: a quantitative survey. *Journal of Plankton Research* **24**: 913-922.
- STEINBERG, D.K., S.A. GOLDTHWAIT, and D A. HANSELL. 2002. Zooplankton vertical migration and the active transport of dissolved organic and inorganic nitrogen in the Sargasso Sea. *Deep-Sea Research I* **49**: 1445-1461.
- *TAKAHASHI, T., S.G. SUTHERLAND, C. SWEENEY, A.P. POISSON, N. METZL, B. TILBROOK, **N.R. BATES**, R.H. WANNINKHOF, R.A. FEELY, C.L. SABINE, and J. OLAFSSON, 2002. Biological and temperature effects on seasonal changes of pCO₂ in global ocean surface waters. *Deep-Sea Research II*, **49**, 1601-1622.
- WITTER, A.E., and G.W. LUTHER. 2002. Spectrophotometric measurement of seawater carbohydrate concentrations in neritic and oceanic waters from the US Middle Atlantic Bight and the Delaware Estuary. *Marine Chemistry* **77**: 143-156.
- ZEDLER, S.E., T.D. DICKEY, S.C. DONEY, J.F. PRICE, X. YU, and G.L. MELLOR. 2002. Analyses and simulations of the upper ocean's response to Hurricane Felix at the Bermuda Testbed Mooring site: 13-23 August 1995. *Journal of Geophysical Research-Oceans* **107**.
- ZHENG, X.B., T. DICKEY, and G. CHANG. 2002. Variability of the downwelling diffuse attenuation coefficient with consideration of inelastic scattering. *Applied Optics* **41**: 6477-6488.

2001

- ***BATES, N.R.** 2001. Interannual variability of oceanic CO₂ and biogeochemical properties in the Western North Atlantic subtropical gyre. *Deep-Sea Research II* **48**: 1507-1528.
- ***BATES, N.R.** 2001. Regional testbeds: Interannual variability of the oceanic carbon cycle at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) site. *In WOCE International Project Office, Report of the WOCE/JGOFS Ocean Transport Workshop, WOCE Report No. 174/2001*, pp. 43-46.
- ***BATES, N.R.**, L. SAMUELS, and L. MERLIVAT. 2001. The influence of short-term wind variability on air-sea CO₂ exchange. *Geophysical Research Letters*, **28**(17), 3281-3284.
- ***BATES, N.R.**, L. SAMUELS, and L. MERLIVAT. 2001. Biogeochemical and physical factors influencing seawater fCO₂, and air-sea CO₂ exchange on the Bermuda coral reef. *Limnology and Oceanography* **46**: 833-846.
- ***CARLSON, C.A.**, **N.R. BATES**, and D.A. HANSELL, 2001. *Ocean Carbon Cycling*. In *Encyclopedia of Marine Science*.
- CAVENDER-BARES, K.K., D.M. KARL, and S.W. CHISHOLM. 2001. Nutrient gradients in the western North Atlantic Ocean: Relationship to microbial community structure and comparison to patterns in the Pacific Ocean. *Deep-Sea Research I* **48**: 2373-2395.
- CHANG, F.C., and E.A. SMITH. 2001. Hydrological and dynamical characteristics of summertime droughts over US Great Plains. *Journal of Climate* **14**: 2296-2316.
- CONTE, M.H., N. RALPH, and E.H. ROSS. 2001. Seasonal and interannual variability in deep ocean particle fluxes at the Oceanic Flux Program (OFP)/Bermuda Atlantic Time Series (BATS) site in the western Sargasso Sea near Bermuda. *Deep-Sea Research I* **48**: 1471-1505.
- CONTE, M.H., J.C. WEBER, L.L. KING, and S. G. WAKEHAM. 2001. The alkenone temperature signal in western North Atlantic surface waters. *Geochimica Et Cosmochimica Acta* **65**: 4275-4287.
- CROSBIE, N.D., and M.J. FURNAS. 2001. Net growth rates of picocyanobacteria and nano-/microphytoplankton inhabiting shelf waters of the central (17 degrees S) and southern (20 degrees S) Great Barrier Reef. *Aquatic Microbial Ecology* **24**: 209-224.
- CURRY, R.G., and M.S. McCARTNEY. 2001. Ocean gyre circulation changes associated with the North Atlantic Oscillation. *Journal of Physical Oceanography* **31**: 3374-3400.
- DICKEY, T.D. and others 2001. Physical and biogeochemical variability from hours to years at the Bermuda Testbed Mooring site: June 1994-March 1998. *Deep-Sea Research II* **48**: 2105-2140.
- DURAND, M.D., R.J. OLSON, and S.W. CHISHOLM. 2001. Phytoplankton population dynamics at the Bermuda Atlantic Time-series station in the Sargasso Sea. *Deep-Sea Research Part II-Topical Studies in Oceanography* **48**: 1983-2003.
- DUTKIEWICZ, S., M. FOLLOWS, J. MARSHALL, and W.W. GREGG. 2001. Interannual variability of phytoplankton abundances in the North Atlantic. *Deep-Sea Research Part II-Topical Studies in Oceanography* **48**: 2323-2344.
- EL ALAOU, S., J. DIEZ, L. HUMANES, F. TORIBIO, F. PARTENSKY, and J. M. GARCIA-FERNANDEZ. 2001. In vivo regulation of glutamine synthetase activity in the marine chlorophyll b-containing cyanobacterium *Prochlorococcus* sp strain PCC 9511 (oxyphotobacteria). *Applied and Environmental Microbiology* **67**: 2202-2207.
- FENNEL, K., M. LOSCH, J. SCHROTER, and M. WENZEL. 2001. Testing a marine ecosystem model: sensitivity analysis and parameter optimization. *Journal of Marine Systems* **28**: 45-63.
- GREGORI, G., A. COLOSIMO, and M. DENIS. 2001. Phytoplankton group dynamics in the Bay of Marseilles during a 2-year survey based on analytical flow cytometry. *Cytometry* **44**: 247-256.

- *GUNDERSEN, K., K.M. ORCUTT, D.A. PURDIE, A.F. MICHAELS, and **A.H. KNAP**. 2001. Particulate organic carbon mass distribution at the Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research II* **48**: 1697-1718.
- HANSELL, D.A., and C.A. CARLSON. 2001. Biogeochemistry of total organic carbon and nitrogen in the Sargasso Sea: control by convective overturn. *Deep-Sea Research Part II-Topical Studies in Oceanography* **48**: 1649-1667.
- Haidar, A.T., and H. R. THIERSTEIN. 2001. Coccolithophore dynamics off Bermuda (N. Atlantic). *Deep-Sea Research II* **48**: 1925-1956.
- *HOOD, R.R., **N.R. BATES**, D.G. CAPONE, and D.B. OLSON. 2001. Modeling the effect of nitrogen fixation on carbon and nitrogen fluxes at BATS. *Deep-Sea Research II* **48**: 1609-1648.
- *KARL, D.M., J.E. DORE, A.F. MICHAELS, and **N.R. BATES**, 2001. The U.S. JGOFS Time-series Observation Programs. *Oceanography* **14**:6-17.
- KIEBER, R.J., W.J. COOPER, J.D. WILLEY, and G.B. AVERY. 2001. Hydrogen peroxide at the Bermuda Atlantic Time Series Station. Part 1: Temporal variability of atmospheric hydrogen peroxide and its influence on seawater concentrations. *Journal of Atmospheric Chemistry* **39**: 1-13.
- KIM, G., and T.M. CHURCH. 2001. Seasonal biogeochemical fluxes of Th-234 and Po-210 in the upper Sargasso Sea: Influence from atmospheric iron deposition. *Global Biogeochemical Cycles* **15**: 651-661.
- LIPSCHULTZ, F. 2001. A time-series assessment of the nitrogen cycle at BATS. *Deep-Sea Research Part II-Topical Studies in Oceanography* **48**: 1897-1924.
- MADIN, L.P., E.F. HORGAN, and D.K. STEINBERG. 2001. Zooplankton at the Bermuda Atlantic Time-series Study (BATS) station: diel, seasonal and interannual variation in biomass, 1994-1998. *Deep-Sea Research II* **48**: 2063-2082.
- McGILLICUDDY, D. J., V. K. KOSNYREV, J. P. RYAN, and J. A. YODER. 2001. Covariation of mesoscale ocean color and sea-surface temperature patterns in the Sargasso Sea. *Deep-Sea Research II* **48**: 1823-1836.
- McGILLICUDDY, D.J., and V.K. KOSNYREV. 2001. Dynamical interpolation of mesoscale flows in the TOPEX/poseidon diamond surrounding the US Joint Global Ocean Flux Study Bermuda Atlantic Time-Series Study site. *Journal of Geophysical Research-Oceans* **106**: 16641-16656.
- *NELSON, N.B., **N.R. BATES**, D.A. SIEGEL, and A.F. MICHAELS. 2001. Spatial variability of the CO₂ sink in the Sargasso Sea. *Deep-Sea Research II* **48**: 1801-1821.
- *ONO, S., A. ENNYU, R.G. NAJJAR, and **N.R. BATES**. 2001. Shallow remineralization in the Sargasso Sea estimated from seasonal variations in oxygen, dissolved inorganic carbon and nitrate. *Deep-Sea Research II* **48**: 1567-1582.
- *ORCUTT, K.M. F. LIPSCHULTZ, K. GUNDERSEN, R. ARIMOTO, A.F. MICHAELS, **A.H. KNAP** AH, and J.R. GALLON. 2001. A seasonal study of the significance of N-2 fixation by *Trichodesmium* spp. at the Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research II* **48**: 1583-1608.
- RENAUD, S., and C. KLAAS. 2001. Seasonal variations in the morphology of the coccolithophore *Calcidiscus leptoporus* off Bermuda (N. Atlantic). *Journal of Plankton Research* **23**: 779-795.
- ROSSBY, T., and H.M. ZHANG. 2001. The near-surface velocity and potential vorticity structure of the Gulf Stream. *Journal of Marine Research* **59**: 949-975.
- SAITO, M.A., and J.W. MOFFETT. 2001. Complexation of cobalt by natural organic ligands in the Sargasso Sea as determined by a new high-sensitivity electrochemical cobalt speciation method suitable for open ocean work. *Marine Chemistry* **75**: 49-68.
- SCHARTAU, M., A. OSCHLIES, and J. WILLEBRAND. 2001. Parameter estimates of a zero-dimensional ecosystem model applying the adjoint method. *Deep-Sea Research II* **48**:

1769-1800.

- SIEGEL, D.A., D.M. KARL, and A.F. MICHAELS. 2001. Interpretations of biogeochemical processes from the US JGOFS Bermuda and Hawaii time-series sites. *Deep-Sea Research II* **48**: 1403-1404.
- SIEGEL, D.A. and others 2001. Bio-optical modeling of primary production on regional scales: the Bermuda BioOptics project. *Deep-Sea Research II* **48**: 1865-1896.
- SPITZ, Y.H., J.R. MOISAN, and M.R. ABBOTT. 2001. Configuring an ecosystem model using data from the Bermuda Atlantic Time Series (BATS). *Deep-Sea Research II* **48**: 1733-1768.
- STEGLICH, C. and others 2001. Nitrogen deprivation strongly affects Photosystem II but not phycoerythrin level in the divinyl-chlorophyll b-containing cyanobacterium *Prochlorococcus marinus*. *Biochimica Et Biophysica Acta-Bioenergetics* **1503**: 341-349.
- *STEINBERG, D.K., C.A. CARLSON, **N.R. BATES**, **R.J. JOHNSON**, A.F. MICHAELS, and **A.H. KNAP**. 2001. Overview of the US JGOFS Bermuda Atlantic Time-series Study (BATS): a decade-scale look at ocean biology and biogeochemistry. *Deep-Sea Research II* **48**: 1405-1447.

2000

- ***BATES, N.R.**, L. MERLIVAT, L. BEAUMONT, and A.C. PEQUIGNET. 2000. Intercomparison of shipboard and moored CARIOCA buoy seawater fCO₂ measurements in the Sargasso Sea. *Marine Chemistry* **72**: 239-255.
- ***BATES, N.R.**, and C.A. CARLSON. 2000. Linkages between ocean biogeochemistry at BATS and modes of climate variability (i.e., NAO, ENSO). *U.S. JGOFS Newsletter*, **10** (3), 5-6.
- BINDER, B. 2000. Cell cycle regulation and the timing of chromosome replication in a marine *Synechococcus* (cyanobacteria) during light- and nitrogen-limited growth. *Journal of Phycology* **36**: 120-126.
- BUESSELER, K. O. and others 2000. A comparison of the quantity and composition of material caught in a neutrally buoyant versus surface-tethered sediment trap. *Deep-Sea Research I* **47**: 277-294.
- DRASCHBA, S., J. PATZOLD, and G. WEFER. 2000. North Atlantic climate variability since AD 1350 recorded in delta O-18 and skeletal density of Bermuda corals. *International Journal of Earth Sciences* **88**: 733-741.
- ESAIAS, W.E., R. L. IVERSON, and K. TURPIE. 2000. Ocean province classification using ocean colour data: observing biological signatures of variations in physical dynamics. *Global Change Biology* **6**: 39-55.
- GILBOY, T.P., T.D. DICKEY, D.E. SIGURDSON, X. YU, and D. MANOV. 2000. An intercomparison of current measurements using a vector measuring current meter, an acoustic Doppler current profiler, and a recently developed acoustic current meter. *Journal of Atmospheric and Oceanic Technology* **17**: 561-574.
- H Aidar, A.T., H.R. THIERSTEIN, and W.G. DEUSER. 2000. Calcareous phytoplankton standing stocks, fluxes and accumulation in Holocene sediments off Bermuda (N. Atlantic). *Deep-Sea Research II* **47**: 1907-1938.
- JOHNSON, Z., and P. HOWD. 2000. Marine photosynthetic performance forcing and periodicity for the Bermuda Atlantic Time Series, 1989-1995. *Deep-Sea Research I* **47**: 1485-1512.
- JOYCE, T.M., C. DESER, and M. A. SPALL. 2000. The relation between decadal variability of subtropical mode water and the North Atlantic Oscillation. *Journal of Climate* **13**: 2550-2569.
- MAHADEVAN, A., and D. ARCHER. 2000. Modeling the impact of fronts and mesoscale circulation on the nutrient supply and biogeochemistry of the upper ocean. *Journal of Geophysical Research-Oceans* **105**: 1209-1225.
- OSCHLIES, A., W. KOEVE, and V. GARCON. 2000. An eddy-permitting coupled physical-

- biological model of the North Atlantic 2. Ecosystem dynamics and comparison with satellite and JGOFS local studies data. *Global Biogeochemical Cycles* **14**: 499-523.
- PALINSKA, K.A., T. JAHNS, R. RIPPKA, and N.T. DE MARSAC. 2000. Prochlorococcus marinus strain PCC 9511, a picoplanktonic cyanobacterium, synthesizes the smallest urease. *Microbiology* **146**: 3099-3107.
- POLITO, P.S., O.T. SATO, and W.T. LIU. 2000. Characterization and validation of the heat storage variability from TOPEX/Poseidon at four oceanographic sites. *Journal of Geophysical Research-Oceans* **105**: 16911-16921.
- RIPPKA, R. and others 2000. Prochlorococcus marinus Chisholm et al. 1992 subsp pastoris subsp nov strain PCC 9511, the first axenic chlorophyll a(2)/b(2)-containing cyanobacterium (Oxyphotobacteria). *International Journal of Systematic and Evolutionary Microbiology* **50**: 1833-1847.
- SATO, O.T., P.S. POLITO, and W.T. LIU. 2000. Importance of salinity measurements in the heat storage estimation from TOPEX/POSEIDON. *Geophysical Research Letters* **27**: 549-551.
- *STEINBERG, D.K., C.A. CARLSON, **N.R. BATES**, S.A. GOLDTHWAIT, L.P. MADIN, and A.F. MICHAELS. 2000. Zooplankton vertical migration and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea. *Deep-Sea Research Part I-Oceanographic Research Papers* **47**: 137-158.
- VALDES, J. R., and J. F. PRICE. 2000. A neutrally buoyant, upper ocean sediment trap. *Journal of Atmospheric and Oceanic Technology* **17**: 62-68.
- WILLIAMS, R. G., A. J. MCLAREN, and M. J. FOLLOWS. 2000. Estimating the convective supply of nitrate and implied variability in export production over the North Atlantic. *Global Biogeochemical Cycles* **14**: 1299-1313.

1999

- ***BATES, N.R.**, and D.A. HANSELL. 1999. A high resolution study of surface layer hydrographic and biogeochemical properties between Chesapeake Bay and Bermuda. *Marine Chemistry* **67**: 1-16.
- BISSETT, W. P., J. J. WALSH, D. A. DIETERLE, and K. L. CARDER. 1999. Carbon cycling in the upper waters of the Sargasso Sea: I. Numerical simulation of differential carbon and nitrogen fluxes. *Deep-Sea Research I* **46**: 205-269.
- *CARLSON, C.A., **N.R. BATES**, and D.K. STEINBERG, 1999. Ten years of BATS data. *Earth System Monitor*, June 1999, p. 9-10.
- CARON, D. A., E. R. PEELE, E. L. LIM, and M. R. DENNETT. 1999. Picoplankton and nanoplankton and their trophic coupling in surface waters of the Sargasso Sea south of Bermuda. *Limnology and Oceanography* **44**: 259-272.
- DOHERTY, K. W., D. E. FRYE, S. P. LIBERATORE, and J. M. TOOLE. 1999. A moored profiling instrument. *Journal of Atmospheric and Oceanic Technology* **16**: 1816-1829.
- GIN, K. Y. H., S. W. CHISHOLM, and R. J. OLSON. 1999. Seasonal and depth variation in microbial size spectra at the Bermuda Atlantic time series station. *Deep-Sea Research I* **46**: 1221-1245.
- HOFFMANN, L. 1999. Marine cyanobacteria in tropical regions: diversity and ecology. *European Journal of Phycology* **34**: 371-379
- HURTT, G.C., and R. A. ARMSTRONG. 1999. A pelagic ecosystem model calibrated with BATS and OWSI data. *Deep-Sea Research I* **46**: 27-61.
- KEIGWIN, L.D., and E.A. BOYLE. 1999. Surface and deep ocean variability in the northern Sargasso Sea during marine isotope stage 3. *Paleoceanography* **14**: 164-170.
- KIM, G., L.Y. ALLEMAN, and T.M. CHURCH. 1999. Atmospheric depositional fluxes of trace elements, Pb-210, and Be-7 to the Sargasso Sea. *Global Biogeochemical Cycles* **13**: 1183-1192.

- LIU, H.B., R.R. BIDIGARE, E. LAWS, M.R. LANDRY, and L. CAMPBELL. 1999. Cell cycle and physiological characteristics of *Synechococcus* (WH7803) in chemostat culture. *Marine Ecology-Progress Series* **189**: 17-25.
- *MCGILLICUDDY, D.J., **R.J. JOHNSON**, D.A. SIEGEL, A.F. MICHAELS, **N.R. BATES**, and **A.H. KNAP**. 1999. Mesoscale variations of biogeochemical properties in the Sargasso Sea. *Journal of Geophysical Research-Oceans* **104**: 13381-13394.
- MCNEIL, J.D., H.W. JANNASCH, T.D. DICKEY, D.J. MCGILLICUDDY, M. BRZEZINSKI, and C. M. SAKAMOTO. 1999. New chemical, bio-optical and physical observations of upper ocean response to the passage of a mesoscale eddy off Bermuda. *Journal of Geophysical Research-Oceans* **104**: 15537-15548.
- SACHS, J.P., and S.J. LEHMAN. 1999. Subtropical North Atlantic temperatures 60,000 to 30,000 years ago. *Science* **286**: 756-759.
- SHIPE, R.F., M.A. BRZEZINSKI, C. PILSKALN, and T.A. VILLAREAL. 1999. Rhizosolenia mats: An overlooked source of silica production in the open sea. *Limnology and Oceanography* **44**: 1282-1292.
- SIEGEL, D.A., D.J. MCGILLICUDDY, and E.A. FIELDS. 1999. Mesoscale eddies, satellite altimetry, and new production in the Sargasso Sea. *Journal of Geophysical Research-Oceans* **104**: 13359-13379.

1998

- ***BATES, N.R., A.H. KNAP**, and A.F. MICHAELS. 1998. The effect of hurricanes on the local to global air-sea exchange of CO₂. *Nature*, **395**, 58-61.
- ***BATES, N.R., T. TAKAHASHI, D.W. CHIPMAN, and A.H. KNAP**. 1998. Variability of pCO₂ on diel to seasonal timescales in the Sargasso Sea near Bermuda. *Journal of Geophysical Research-Oceans* **103**: 15567-15585.
- *CARLSON, C.A., **N.R. BATES**, and D.K. STEINBERG, 1998. BATS time-series celebrates a decade of ocean research. *U.S. JGOFs Newsletter*, November 1998.
- CARLSON, C.A., H.W. DUCKLOW, D.A. HANSELL, and W.O. SMITH. 1998. Organic carbon partitioning during spring phytoplankton blooms in the Ross Sea polynya and the Sargasso Sea. *Limnology and Oceanography* **43**: 375-386.
- CURRY, R.G., M.S. MCCARTNEY, and T.M. JOYCE. 1998. Oceanic transport of subpolar climate signals to mid-depth subtropical waters. *Nature* **391**: 575-577.
- DACEY J.W.H., F.A. HOWSE, A.F. MICHAELS, and S.G. WAKEHAM. 1998 Temporal variability of dimethylsulfide and dimethylsulfoniopropionate in the Sargasso Sea. *Deep-Sea Research I*, 45 (12): 2085-2093.
- DICKEY, T.D. and others 1998. Initial results from the Bermuda Testbed Mooring program. *Deep-Sea Research Part I-Oceanographic Research Papers* **45**: 771-794.
- FLAGG, C.N., G. SCHWARTZE, E. GOTTLIEB, and T. ROSSBY. 1998. Operating an acoustic Doppler current profiler aboard a container vessel. *Journal of Atmospheric and Oceanic Technology* **15**: 257-271.
- GIN, K.Y. H., J.H. GUO, and H.F. CHEONG. 1998. A size-based ecosystem model for pelagic waters. *Ecological Modelling* **112**: 53-72.
- GOERICKE, R. 1998. Response of phytoplankton community structure and taxon-specific growth rates to seasonally varying physical forcing in the Sargasso Sea off Bermuda. *Limnology and Oceanography* **43**: 921-935.
- GOERICKE, R., and N.A. WELSCHMEYER. 1998. Response of Sargasso Sea phytoplankton biomass, growth rates and primary production to seasonally varying physical forcing. *Journal of Plankton Research* **20**: 2223-2249.
- GRUBER, N., C.D. KEELING, and T.F. STOCKER. 1998. Carbon-13 constraints on the seasonal inorganic carbon budget at the BATS site in the northwestern Sargasso Sea.

- Deep-Sea Research **145**: 673-717.
- JENKINS, W.J. 1998. Studying subtropical thermocline ventilation and circulation using tritium and He-3. *Journal of Geophysical Research-Oceans* **103**: 15817-15831.
- JICKELLS, T.D., S. DORLING, W.G. DEUSER, T.M. CHURCH, R. ARIMOTO, and J.M. PROSPERO. 1998. Air-borne dust fluxes to a deep water sediment trap in the Sargasso Sea. *Global Biogeochemical Cycles* **12**: 311-320.
- LESSARD, E.J., and M.C. MURRELL. 1998. Microzooplankton herbivory and phytoplankton growth in the northwestern Sargasso Sea. *Aquatic Microbial Ecology* **16**: 173-188.
- *MCGILLICUDDY, D.J. A.R. ROBINSON, D.A. SIEGEL, H.W. JANNASCH, **R.J. JOHNSON**, T.D. Dickey, J. McNEIL, A.F. MICHAELS, and **A.H. KNAP**, 1998. Influence of mesoscale eddies on new production in the Sargasso Sea. *Nature* **394**: 263-266.
- *MCGILLICUDDY, D.J. **R.J. JOHNSON**, D.A. SIEGEL, and **N.R. BATES**. 1998. BATS validation activities document mesoscale biogeochemical variations in the vicinity of the time series. *U.S. JGOFS Newsletter*, April 1998.
- NELSON, N.B., D.A. SIEGEL, and A.F. MICHAELS. 1998. Seasonal dynamics of colored dissolved material in the Sargasso Sea. *Deep-Sea Research I* **45**: 931-957.
- NELSON, N.B. 1998. Spatial and temporal extent of sea surface temperature modifications by hurricanes in the Sargasso Sea during the 1995 season. *Monthly Weather Review* **126**: 1364-1368.
- ROBBINS, P.E., and W.J. JENKINS. 1998. Observations of temporal changes of tritium-He-3 age in the eastern North Atlantic thermocline: Evidence for changes in ventilation? *Journal of Marine Research* **56**: 1125-1161.
- ROSSBY, T., and E. GOTTLIEB. 1998. The Oleander project: Monitoring the variability of the Gulf Stream and adjacent waters between New Jersey and Bermuda. *Bulletin of the American Meteorological Society* **79**: 5-18.
- ROTHSCHILD, B.J. 1998. Year class strengths of zooplankton in the North Sea and their relation to cod and herring abundance. *Journal of Plankton Research* **20**: 1721-1741.
- SPITZ, Y.H., J.R. MOISAN, M.R. ABBOTT, and J.G. RICHMAN. 1998. Data assimilation and a pelagic ecosystem model: parameterization using time series observations. *Journal of Marine Systems* **16**: 51-68.
- STRAMSKA, M., and T.D. DICKEY. 1998. Short-term variability of the underwater light field in the oligotrophic ocean in response to surface waves and clouds. *Deep-Sea Research I* **45**: 1393-1410.
- VERON, A. J., T.M. CHURCH, and A.R. FLEGAL. 1998. Lead isotopes in the western North Atlantic: Transient tracers of pollutant lead inputs. *Environmental Research* **78**: 104-111.
- WU, J.F., and E.A. BOYLE. 1998. Determination of iron in seawater by high-resolution isotope dilution inductively coupled plasma mass spectrometry after Mg(OH)(2) coprecipitation. *Analytica Chimica Acta* **367**: 183-191.

1997

- ***BATES, N.R.**, 1997. Seasonal variability of the oceanic CO₂ system and the air-sea flux of CO₂ at the BATS site in the Sargasso Sea. in *2nd JGOFS North Atlantic Planning Report* (Ducklow, H., Marra, J., and Goyet, C. eds.), JGOFS Report Number **20**, JGOFS Planning Office, Woods Hole, MA, pp. 7-10.
- BOYLE, E. A. 1997. Characteristics of the deep ocean carbon system during the past 150,000 years: Sigma CO₂ distributions, deep water flow patterns, and abrupt climate change. *Proceedings of the National Academy of Sciences of the United States of America* **94**: 8300-8307.
- *CARLSON, C.A., **N.R. BATES**, and D.K. STEINBERG. 1997. Time-series data sets: a valuable resource for synthesis and modeling phase of U.S. JGOFS. *U.S. JGOFS Newsletter*,

July 1997.

- GARVER, S.A., and D.A. SIEGEL. 1997. Inherent optical property inversion of ocean color spectra and its biogeochemical interpretation. 1. Time series from the Sargasso Sea. *Journal of Geophysical Research-Oceans* **102**: 18607-18625.
- GRUBER, N., and J.L. SARMIENTO. 1997. Global patterns of marine nitrogen fixation and denitrification. *Global Biogeochemical Cycles* **11**: 235-266.
- HALL, A., and S. MANABE. 1997. Can local linear stochastic theory explain sea surface temperature and salinity variability? *Climate Dynamics* **13**: 167-180.
- KEIM, B.D. 1997. Preliminary analysis of the temporal patterns of heavy rainfall across the southeastern United States. *Professional Geographer* **49**: 94-104.
- MOFFETT, J. W. 1997. The importance of microbial Mn oxidation in the upper ocean: a comparison of the Sargasso Sea and equatorial Pacific. *Deep-Sea Research I* **44**: 1277-1291.
- NELSON, D.M., and M.A. BRZEZINSKI. 1997. Diatom growth and productivity in an oligotrophic midocean gyre: A 3-yr record from the Sargasso Sea near Bermuda. *Limnology and Oceanography* **42**: 473-486.
- VELDHUIS, M.J.W., T.L. CUCCI, and M.E. SIERACKI. 1997. Cellular DNA content of marine phytoplankton using two new fluorochromes: Taxonomic and ecological implications. *Journal of Phycology* **33**: 527-541.

1996

- ANDERSEN, R.A., R.R. BIDIGARE, M.D. KELLER, and M. LATASA. 1996. A comparison of HPLC pigment signatures and electron microscopic observations for oligotrophic waters of the North Atlantic and Pacific Oceans. *Deep-Sea Research II* **43**: 517-537.
- *BATES, N.R., A.F. MICHAELS, and A.H. KNAP. 1996. Alkalinity changes in the Sargasso Sea: Geochemical evidence of calcification? *Marine Chemistry* **51**: 347-358.
- *BATES, N.R., A.F. MICHAELS, and A.H. KNAP. 1996. Seasonal and interannual variability of oceanic carbon dioxide species at the US JGOFS Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research II* **43**: 347-383.
- BRZEZINSKI, M.A., and C.A. KOSMAN. 1996. Silica production in the Sargasso Sea during spring 1989. *Marine Ecology-Progress Series* **142**: 39-45.
- BRZEZINSKI, M.A., and D.M. NELSON. 1996. Chronic substrate limitation of silicic acid uptake rates in the western Sargasso Sea. *Deep-Sea Research II* **43**: 437-453.
- CALAIS, E., and J.B. MINSTER. 1996. GPS detection of ionospheric perturbations following a Space Shuttle ascent. *Geophysical Research Letters* **23**: 1897-1900.
- CAMPOS, M., A.M. FARRENKOPF, T.D. JICKELLS, and G.W. LUTHER. 1996. A comparison of dissolved iodine cycling at the Bermuda Atlantic Time-Series station and Hawaii Ocean Time-Series Station. *Deep-Sea Research II* **43**: 455-466.
- CARLSON, C.A., and H.W. DUCKLOW. 1996. Growth of bacterioplankton and consumption of dissolved organic carbon in the Sargasso Sea. *Aquatic Microbial Ecology* **10**: 69-85.
- CARLSON, C.A., H.W. DUCKLOW, and T.D. SLEETER. 1996. Stocks and dynamics of bacterioplankton in the northwestern Sargasso Sea. *Deep-Sea Research II* **43**: 491-515.
- DONEY, S.C. 1996. A synoptic atmospheric surface forcing data set and physical upper ocean model for the US JGOFS Bermuda Atlantic Time-Series Study site. *Journal of Geophysical Research-Oceans* **101**: 25615-25634.
- DONEY, S.C., D.M. GLOVER, and R.G. NAJJAR. 1996. A new coupled, one-dimensional biological-physical model for the upper ocean: Applications to the JGOFS Bermuda Atlantic time-series study (BATS) site. *Deep-Sea Research II* **43**: 591-624.
- FOLLOWS, M.J., R.G. WILLIAMS, and J.C. MARSHALL. 1996. The solubility pump of carbon in the subtropical gyre of the North Atlantic. *Journal of Marine Research* **54**: 605-630.

- GUNDERSEN K, G. BRATBAK, and M HELDAL. 1996. Factors influencing the loss of bacteria in preserved seawater samples. *Marine Ecology Progress Series*, 137 (1-3): 305-310.
- HESS, W.R., F. PARTENSKY, G.W.M. VANDERSTAAY, J.M. GARCIA-FERNANDEZ, T. BORNER, and D. VAULOT. 1996. Coexistence of phycoerythrin and a chlorophyll a/b antenna in a marine prokaryote. *Proceedings of the National Academy of Sciences of the United States of America* **93**: 11126-11130.
- HURTT, G.C., and R.A. ARMSTRONG. 1996. A pelagic ecosystem model calibrated with BATS data. *Deep-Sea Research II* **43**: 653-683.
- JOYCE, T.M., and P. ROBBINS. 1996. The long-term hydrographic record at Bermuda. *Journal of Climate* **9**: 3121-3131.
- KARL, D.M., and A.F. MICHAELS. 1996. The Hawaiian ocean time-series (HOT) and Bermuda Atlantic time-series study (BATS) - Preface. *Deep-Sea Research II* **43**: 127-128.
- KEIGWIN, L.D. 1996. The Little Ice Age and Medieval warm period in the Sargasso Sea. *Science* **274**: 1504-1508.
- LAWSON, L.M., E.E. HOFMANN, and Y.H. SPITZ. 1996. Time series sampling and data assimilation in a simple marine ecosystem model. *Deep-Sea Research II* **43**: 625-651.
- LESSARD, E.J., and M.C. MURRELL. 1996. Distribution, abundance and size composition of heterotrophic dinoflagellates and ciliates in the Sargasso Sea near Bermuda. *Deep-Sea Research I* **43**: 1045-1065.
- LIPSCHULTZ, F., O.C. ZAFIRIOU, and L.A. BALL. 1996. Seasonal fluctuations of nitrite concentrations in the deep oligotrophic ocean. *Deep-Sea Research II* **43**: 403-419.
- LO, W.T., and D.C. BIGGS. 1996. Temporal variability in the night-time distribution of epipelagic siphonophores in the North Atlantic Ocean at Bermuda. *Journal of Plankton Research* **18**: 923-939.
- *MARCHAL, O., P. MONFRAY, and **N.R. BATES**. 1996. Spring summer imbalance of dissolved inorganic carbon in the mixed layer of the northwestern Sargasso Sea. *Tellus Series B-Chemical and Physical Meteorology* **48**: 115-134.
- *MICHAELS, A.F., and **A.H. KNAP**. 1996. Overview of the US JGOFS Bermuda Atlantic Time-series Study and the Hydrostation S program. *Deep-Sea Research II* **43**: 157-198.
- *MICHAELS, A.F., D. OLSON, J.L. SARMIENTO, J.W. AMMERMAN, K. FANNING, R. JAHNKE, **A.H. KNAP**, F. LIPSCHULTZ, and J.M. PROSPERO, 1996. JM Inputs, losses and transformations of nitrogen and phosphorus in the pelagic North Atlantic Ocean. *Biogeochemistry*, 35 (1): 181-226
- SAYLES, F.L., W.G. DEUSER, J.E. GOUDREAU, W.H. DICKINSON, T.D. JICKELLS, and P. KING. 1996. The benthic cycle of biogenic opal at the Bermuda Atlantic Time Series site. *Deep-Sea Research I* **43**: 383-409.
- SIEGEL, D.A., and A.F. MICHAELS. 1996. Quantification of non-algal light attenuation in the Sargasso Sea: Implications for biogeochemistry and remote sensing. *Deep-Sea Research II* **43**: 321-345.
- TALLEY, L.D. 1996. North Atlantic circulation and variability, reviewed for the CNLS conference. *Physica D* **98**: 625-646.
- WASER, N.A.D., M.P. BACON, and A.F. MICHAELS. 1996. Natural activities of P-32 and P-33 and the P-33/P-32 ratio in suspended particulate matter and plankton in the Sargasso Sea. *Deep-Sea Research II* **43**: 421-436.

1995

- ARENOVSKI, A.L., E.L. LIM, and D.A. CARON. 1995. Mixotrophic nanoplankton in oligotrophic surface waters of the Sargasso Sea may employ phagotrophy to obtain major nutrients. *Journal of Plankton Research* **17**: 801-820.
- BRZEZINSKI, M.A., and D.M. NELSON. 1995. The annual Silica cycle in the Sargasso Sea near Bermuda. *Deep-Sea Research I* **42**: 1215-1237.

- CALDER, D.R. 1995. Hydroid assemblages on Holopelagic Sargassum from the Sargasso Sea at Bermuda. *Bulletin of Marine Science* **56**: 537-546.
- CARON, D.A., A.F. MICHAELS, N.R. SWANBERG, and F.A. HOWSE. 1995. Primary Productivity by symbiont-bearing planktonic Sarcodines (Acantharia, Radiolaria, Foraminifera) in surface waters near Bermuda. *Journal of Plankton Research* **17**: 103-129.
- CARON, D.A. and others 1995. The contribution of microorganisms to particulate carbon and nitrogen in surface waters of the Sargasso Sea near Bermuda. *Deep-Sea Research I* **42**: 943-972.
- DAM, H.G., M.R. ROMAN, and M.J. YOUNGBLUTH. 1995. Downward Export of Respiratory Carbon and Dissolved Inorganic Nitrogen by Diel-Migrant Mesozooplankton at the Jgofs Bermuda Time-Series Station. *Deep-Sea Research I* **42**: 1187-1197.
- *DUCKLOW, H. W., C.A. CARLSON, **N.R. BATES, A.H. KNAP**, and A.F. MICHAELS. 1995. Dissolved Organic-Carbon as a Component of the Biological Pump in the North-Atlantic Ocean. *Philosophical Transactions of the Royal Society of London Series B-Biological Sciences* **348**: 161-167.
- *HANSELL, D.A., **N.R. BATES** and K. GUNDERSEN, 1995. Bacterial mineralization of DOC in the Sargasso Sea. *Marine Chemistry*, **51**, 201-212.
- JEWELL, P.W. 1995. A Simple Surface-Water Biogeochemical Model .2. Simulation of Selected Lacustrine and Marine Settings. *Water Resources Research* **31**: 2059-2070.
- LOHMANN, G.P. 1995. A Model for Variation in the Chemistry of Planktonic-Foraminifera Due to Secondary Calcification and Selective Dissolution. *Paleoceanography* **10**: 445-457.
- MICHAELS, A.F. 1995. Ocean time-series research near Bermuda: The hydrostation S time-series and the Bermuda Atlantic Time-series Study (BATS) program. In: *Ecological Time Series* (T.M. Powell, J.H. Steele), Chapman & Hall Publishing, New York. Pp. 181-208.
- MICHAELS, A.F., D.A. CARON, N.R. SWANBERG, F.A. HOWSE, and C.M. MICHAELS. 1995. Planktonic sarcodines (Acantharia, Radiolaria, Foraminifera) in surface waters near Bermuda - abundance, biomass and vertical Flux. *Journal of Plankton Research* **17**: 131-163.
- MOFFETT, J.W. 1995. Temporal and Spatial Variability of Copper Complexation by Strong Chelators in the Sargasso-Sea. *Deep-Sea Research I* **42**: 1273-1295.
- MULLINS, T.D., T.B. BRITSCHGI, R.L. KREST, and S.J. GIOVANNONI. 1995. Genetic Comparisons Reveal the Same Unknown Bacterial Lineages in Atlantic and Pacific Bacterioplankton Communities. *Limnology and Oceanography* **40**: 148-158.
- ROMAN, M. R. and others 1995. Spatial and Temporal Changes in the Partitioning of Organic-Carbon in the Plankton Community of the Sargasso Sea Off Bermuda. *Deep-Sea Research I* **42**: 973-992.
- SAYLES, F.L., and W.R. MARTIN. 1995. In-Situ Tracer Studies of Solute Transport across the Sediment-Water Interface at the Bermuda Time-Series Site. *Deep-Sea I* **42**: 31-52.
- SIEGEL, D.A., A.F. MICHAELS, J.C. SORENSEN, M.C. OBRIEN, and M.A. HAMMER. 1995. Seasonal Variability of Light Availability and Utilization in the Sargasso Sea. *Journal of Geophysical Research-Oceans* **100**: 8695-8713.

1994

- BISSETT, W.P., M.B. MEYERS, J.J. WALSH, and F. E. MULLER-KARGER. 1994. The Effects of Temporal Variability of Mixed-Layer Depth on Primary Productivity around Bermuda. *Journal of Geophysical Research-Oceans* **99**: 7539-7553.
- *BUESSELER, K.O., A.F. MICHAELS, D.A. SIEGEL, and **A.H. KNAP**. 1994. A 3-Dimensional Time-Dependent Approach to Calibrating Sediment Trap Fluxes. *Global Biogeochemical Cycles* **8**: 179-193.

- CARLSON, C.A., H.W. DUCKLOW, and A.F. MICHAELS. 1994. Annual Flux of Dissolved Organic-Carbon from the Euphotic Zone in the Northwestern Sargasso Sea. *Nature* **371**: 405-408.
- GUST G., A.F. MICHAELS, R. JOHNSON, W.G. DEUSER and W. BOWLES, 1994. Mooring line motions and sediment trap hydromechanics - in situ intercomparison of 3 common deployment designs. *Deep-Sea Research I* **41** (5-6): 831-857 MAY-JUN 1994.
- HOWDEN, S.D., D.R. WATTS, K.L. TRACEY, and H.T. ROSSBY. 1994. An Acoustic Telemetry System Implemented for Real-Time Monitoring of the Gulf-Stream with Inverted Echo Sounders. *Journal of Atmospheric and Oceanic Technology* **11**: 567-571.
- JICKELLS, T., T. CHURCH, A. VERON, and R. ARIMOTO. 1994. Atmospheric Inputs of Manganese and Aluminum to the Sargasso Sea and Their Relation to Surface-Water Concentrations. *Marine Chemistry* **46**: 283-292.
- LAINE, E.P., W.D. GARDNER, M.J. RICHARDSON, and M. KOMINZ. 1994. Abyssal Currents and Advection of Resuspended Sediment Along the Northeastern Bermuda Rise. *Marine Geology* **119**: 159-171.
- *MICHAELS, A.F., **A.H. KNAP**, R.L. DOW, K. GUNDERSEN, R.J. JOHNSON, J. SORENSEN, A. CLOSE, G.A. KNAUER, S.E. LOHRENZ, V.A. ASPER, M. TUEL, and BIDIGARE R. 1994. Seasonal Patterns of Ocean Biogeochemistry at the United-States JGOFS Bermuda Atlantic Time-Series Study Site. *Deep-Sea Research Part I-Oceanographic Research Papers* **41**: 1013-1038.
- *MICHAELS, A.F., **N.R. BATES**, K.O. BUESSELER, C.A. CARLSON, and **A.H. KNAP**. 1994. Carbon-Cycle Imbalances in the Sargasso Sea. *Nature* **372**: 537-540.
- SAYLES, F.L., W.R. MARTIN, and W. G. DEUSER. 1994. Response of Benthic Oxygen-Demand to Particulate Organic-Carbon Supply in the Deep-Sea near Bermuda. *Nature* **371**: 686-689.
- SCHULTZ, E.T., and R.K. COWEN. 1994. Recruitment of Coral-Reef Fishes to Bermuda - Local Retention or Long-Distance Transport. *Marine Ecology-Progress Series* **109**: 15-28.

1993

- FASHAM, M.J.R., J.L. SARMIENTO, R.D. SLATER, H.W. DUCKLOW, and R. WILLIAMS. 1993. Ecosystem behavior at Bermuda Station-S and Ocean Weather Station India - a general-circulation model and observational analysis. *Global Biogeochemical Cycles* **7**: 379-415.
- FUHRMAN, J.A., K. MCCALLUM, and A.A. DAVIS. 1993. Phylogenetic diversity of subsurface marine microbial communities from the Atlantic and Pacific Oceans. *Applied and Environmental Microbiology* **59**: 1294-1302.
- HINRICHSEN, H.H., and M. TOMCZAK. 1993. Optimum Multiparameter Analysis of the Water Mass Structure in the Western North-Atlantic Ocean. *Journal of Geophysical Research-Oceans* **98**: 10155-10169.
- MALONE, T.C., S.E. PIKE, and D.J. CONLEY. 1993. Transient Variations in Phytoplankton Productivity at the Jgofs Bermuda Time-Series Station. *Deep-Sea Research I* **40**: 903-924.
- *MICHAELS, A.F., D.A. SIEGEL, **R.J. JOHNSON**, **A.H. KNAP**, and J.N. GALLOWAY. 1993. Episodic inputs of atmospheric nitrogen to the Sargasso Sea - Contributions to new production and phytoplankton blooms. *Global Biogeochemical Cycles* **7**: 339-351.
- ROMAN, M.R., H.G. DAM, A.L. GAUZENS, and J.M. NAPP. 1993. Zooplankton Biomass and Grazing at the Jgofs Sargasso Sea Time-Series Station. *Deep-Sea Research I* **40**: 883-901.
- SHARP, J.H., R. BENNER, L. BENNETT, C.A. CARLSON, R. DOW, and S.E. FITZWATER. 1993. Reevaluation of High-Temperature Combustion and Chemical Oxidation Measurements of Dissolved Organic-Carbon in Seawater. *Limnology and Oceanography*

38: 1774-1782.

- SHOLKOVITZ, E.R., T.M. CHURCH, and R. ARIMOTO. 1993. Rare-Earth Element Composition of Precipitation, Precipitation Particles, and Aerosols. *Journal of Geophysical Research-Atmospheres* **98**: 20587-20599.
- VELDHUIS, M.J.W., and G.W. KRAAY. 1993. Cell abundance and fluorescence of picoplankton in relation to growth irradiance and nitrogen availability in the Red-Sea. *Netherlands Journal of Sea Research* **31**: 135-145.
- VERON, A.J., T.M. CHURCH, A.R. FLEGAL, C.C. PATTERSON, and Y. EREL. 1993. Response of Lead Cycling in the Surface Sargasso Sea to Changes in Tropospheric Input. *Journal of Geophysical Research-Oceans* **98**: 18269-18276.
- WILSON, W.H., I.R. JOINT, N.G. CARR, and N.H. MANN. 1993. Isolation and Molecular Characterization of 5 Marine Cyanophages Propagated on *Synechococcus* Sp Strain Wh7803. *Applied and Environmental Microbiology* **59**: 3736-3743.

1992

- ALTABET, M.A., J.K.B. BISHOP, and J.J. MCCARTHY. 1992. Differences in Particulate Nitrogen Concentration and Isotopic Composition for Samples Collected by Bottles and Large-Volume Pumps in Gulf-Stream Warm-Core Rings and the Sargasso Sea. *Deep-Sea Research* **39**: S405-S417.
- BENDER, M., H.W. DUCKLOW, J. KIDDON, J. MARRA, and J. MARTIN. 1992. The Carbon Balance During the 1989 Spring Bloom in the North-Atlantic Ocean, 47-Degrees-N, 20-Degrees-W. *Deep-Sea Research* **39**: 1707-1725.
- *LOHRENZ, S.E., G.A. KNAUER, V.L. ASPER, M. TUEL, A. F. MICHAELS, and **A.H. KNAP**. 1992. Seasonal Variability in Primary Production and Particle-Flux in the Northwestern Sargasso Sea - United-States JGOFS Bermuda Atlantic Time-Series Study. *Deep-Sea Research* **39**: 1373-1391.
- SHERRELL, R.M., and E.A. BOYLE. 1992. The Trace-Metal Composition of Suspended Particles in the Oceanic Water Column near Bermuda. *Earth and Planetary Science Letters* **111**: 155-174.
- SHERRELL, R.M., and E.A. BOYLE. 1992. Isotopic Equilibration between Dissolved and Suspended Particulate Lead in the Atlantic-Ocean - Evidence from Pb-210 and Stable Pb Isotopes. *Journal of Geophysical Research-Oceans* **97**: 11257-11268.
- WEI, K.Y., Z.W. ZHANG, and C. WRAY. 1992. Shell Ontogeny of *Globorotalia-Inflata* .1. Growth Dynamics and Ontogenic Stages. *Journal of Foraminiferal Research* **22**: 318-327.

1991

- BROOKS, A.L., and R.A. SAENGER. 1991. Vertical Size-Depth Distribution Properties of Midwater Fish Off Bermuda, with Comparative Reviews for Other Open Ocean Areas. *Canadian Journal of Fisheries and Aquatic Sciences* **48**: 694-721.
- DICARLO, B.S., A. IANORA, M.G. MAZZOCCHI, and M. SCARDI. 1991. Atlantis-Ii Cruise - Uniformity of Deep Copepod Assemblages in the Mediterranean-Sea. *Journal of Plankton Research* **13**: 263-277.
- SCHWEITZER, P.N., and G.P. LOHMANN. 1991. Ontogeny and Habitat of Modern Menardiiform Planktonic-Foraminifera. *Journal of Foraminiferal Research* **21**: 332-346.
- SUTTLE, C.A., A.M. CHAN, and J.A. FUHRMAN. 1991. Dissolved Free Amino-Acids in the Sargasso Sea - Uptake and Respiration Rates, Turnover Times, and Concentrations. *Marine Ecology-Progress Series* **70**: 189-199.

1990

- TESCH, F.W., and G. WEGNER. 1990. The Distribution of Small Larvae of *Anguilla*-Sp Related

to Hydrographic Conditions 1981 between Bermuda and Puerto-Rico. Internationale Revue Der Gesamten Hydrobiologie **75**: 845-858.

1989

FUHRMAN, J.A., T.D. SLEETER, C.A. CARLSON, and L.M. PROCTOR. 1989. Dominance of bacterial biomass in the Sargasso Sea and its ecological implications. Marine Ecology Progress Series. 57 (3): 207-217.

1988

*JICKELLS, T.D., S.S. BOYD, and **A.H. KNAP**. 1988. Iodine Cycling in the Sargasso Sea and the Bermuda Inshore Waters. Marine Chemistry **24**: 61-82.