JORGE LOUIS SARMIENTO Updated - November 11, 2015

EDUCATION

B.A. in Chemistry, Swarthmore College, 1968
M.A. in Geology, Columbia University, 1974
M.Ph. in Geology, Columbia University, 1976
Ph.D. in Geology, Columbia University, 1978

CAREER HISTORY

1973-1978	Graduate Research Assistant, Columbia University
1978-1980	Research Associate in Atmospheric and Oceanic Sciences Program, Princeton University
1980-1986	Assistant Professor in Department of Geosciences, Atmospheric and Oceanic Sciences Program, Princeton University
1986-1991	Associate Professor in Department of Geosciences, Atmospheric and Oceanic Sciences Program, Princeton University
1991-present	Professor in Department of Geosciences, Atmospheric and Oceanic Sciences Program, Princeton University
1995-present	Associated Faculty in Department of Civil and Environmental Engineering, Princeton University
1996-present	Associated Faculty in Princeton Environmental Institute, Princeton University
2012-present	Associated Faculty in Andlinger Center for Energy and The Environment, Princeton University

SOCIETIES

American Association for the Advancement of Science
American Geophysical Union
American Meteorological Society
American Society of Limnology and Oceanography
Oceanography Society
Sigma Xi

HONORS

Summer 1993	H. Burr Steinbach Visiting Scholar, Woods Hole Oceanographic Institution
1994-1995	Visiting Professor, Physikalisches Institut, Universität Bern, Bern, Switzerland
1998-1999	Bourse a haut-Niveau from the French Minister of Science
2003	Fellow of the American Geophysical Union
2004	Fellow of the American Association for the Advancement of Science
2009	Roger Revelle Medal of the American Geophysical Union
2009	named George J. Magee Professor of Geoscience and Geological Engineering, Professor of Geosciences

PROFESSIONAL ACTIVITIES

1979-1984	Member - Transient Tracers in the Oceans (TTO) North Atlantic Study Scientific Advisory Committee
1981-1986	Member - SCOR Working Group 68 on North Atlantic Circulation
1981-1984	Member - TTO Steering Committee
1981-1985	Coordinator - TTO Tropical Atlantic Study
1981-1990	Member representative for Princeton University, University Corporation for Atmospheric Research
1983-1996	Member - World Ocean Circulation Experiment, (WOCE) Numerical Experimentation Group

1985-1988 Member - Global Ocean Flux Study (GOFS) Scientific Advisory Committee
1985-1990 Editorial Board - Journal of Marine Research
1986-1994 Editorial Board - Climate Dynamics
1986-1988 Chairman - GOFS, Modeling Working Group
1986-1989 Chairman - WOCE, Working Group for Geochemistry
1987-1991 Member - NSF Advisory Committee for Ocean Sciences
1987-1990 Member - NRC Climate Research Committee
1987-1989 Member - WOCE, International Steering Group.
1992-1998 Member - Global Analysis, Interpretation, and Modelling Core Project Planning Committee, IGBP.
1992-1995 Member - NRC Committee on Oceanic Carbon
1992-1995 Member - International JGOFS, Global Synthesis and Modelling Task Team
1992-1995 Member - U.S. JGOFS Executive and Steering Committees
1993-1998 Member - Visiting Committee, Department of Earth and Planetary Sciences, Harvard College
1993-1995 Editorial Board - Global Biogeochemical Cycles
1995-1998 Editor-Global Biogeochemical Cycles
1995-2003 Member U.S. JGOFS ExecPlus Committee
1995-2004 Co-Chairman U.S. JGOFS Synthesis and Modeling Project
1998-1999 Co-Chairman U.S. Carbon and Climate Planning Group
2000-2007 Ex-officio Member-Carbon Scientific Steering Group
2006-2008 Member, Modeling and Analysis Steering Team, Integrated Ocean Observing System
2009-2011 Member, NRC ad hoc committee to assess requirements for sustained ocean color research and operations

UNIVERSITY ACTIVITIES

1980-1990 Director, Atmospheric and Oceanic Sciences Program
1980-1990 Member - Faculty Committee of the Graduate School
1982-1984 Chairman - University Resources Committee
1983-1986 Member - Faculty Equal Employment Opportunity Committee
1987-1992 Member - Council on Energy and Environmental Studies
1993-1994 Member - Council of the Princeton University Community
1995-1998 Departmental Representative
2003- Director, NOAA/Princeton Cooperative Institute on Climate Science
2006- Director, Atmospheric and Oceanic Sciences Program
2010-2013 Member, Executive Committee, Andlinger Center for Energy & the Environment

FIELD WORK

R/V OCEANUS cruise 31, August 1977, radon-222 measurements in the Hatteras Abyssal Plain and Blake-Bahama Outer Ridge.
R/V KNORR cruise 89, April-May, 1981, trace chemistry and hydrography of Bermuda Triangle, Kingston to Bermuda (Chief Scientist).
R/V KNORR cruise 99, December, 1982, trace chemistry and hydrography of tropical Atlantic and Amazon River, San Juan to Belem (Chief Scientist).

GRADUATE STUDENTS

Name	Date Arrived	Date Departed	Degree	Current Affiliation
1. Frank Bryan	Sept. 1981	Jan. 1986	Ph.D.	NCAR
2. Mitsuhiro Kawase	Sept. 1981	Jan. 1986	Ph.D.	U. Washington
3. D. Papademetriou	Sept. 1983	June 1986	Masters	
4. Raymond Najjar	Sept. 1985	Jan. 1990	Ph.D.	Penn. State
5. Tracey K. Tromp	Sept. 1987	June 1992	Ph.D.	
6. Larry Anderson	Sept. 1988	June 1993	Ph.D.	
7. P. Suntharalingam	Sept. 1991	Jan. 1997	Ph.D.	U. East Anglia
8. David Baker	Sept. 1994	Jan. 2001	Ph.D.	NCAR
9. Curtis Deutsch	Sept. 1997	Sept. 2003	Ph.D.	University of Washington
10. Irina Marinov	Sept. 1998	Jan. 2005	Ph.D.	University of Pennsylvania
11. Bryan Mignone	Sept. 2000	June 2006	Ph.D.	Department of Energy
12. Patrick Schultz	Sept. 2003	Jan. 2009	Ph.D.	Veolia Water
13. Yves Plancherel	July 2005	Dec. 2011	Ph.D.	Oxford University
14. Daniele Bianchi	Aug. 2005	Oct. 2011	Ph.D.	UCLA
15. Kelly Kearney	Aug. 2006	Oct. 2013	Ph.D.	University of Washington/JISAO
16. Joe Majkut	Aug. 2009	Sep. 2014	Ph.D.	AAAS/AGI Congressional Science Fellow
17. Hannah Zanowski	Aug. 2011			
18. Sarah Schlunegger	Jun. 2014			

POST-DOCS AND RESEARCH STAFF

Name	Date Arrived	Date Departed	Current Affiliation
1. R.M. Key	Sept. 1980		Princeton Univ.
2. J.R. Toggweiler	Oct. 1982	May. 1987	Geophysical Fluid Dynamics Lab/NOAA
3. G. Thiele	Jan. 1986	Oct. 1987	German Astronaut Program
4. S. Clegg	July 1986	July 1987	Univ. of East Anglia
5. R. Murnane	Nov. 1987	July 1993	Bermuda Institute of Ocean Sciences
6. T. Herbert	Jan. 1988	July 1988	Brown University
7. S. Rintoul	Nov. 1988	May 1990	CSIRO Marine Research, Tasmania
8. J. Orr	July 1990	Sept. 1992	LSCE, France
9. H. Figueroa	Sept. 1991	May 1995	Private industry, Argentina
10. C. Sabine	May 1992	July 1999	PMEL/NOAA
11. P. Rayner	July 1992	June 1994	University of Melbourne, Australia
12. R. Armstrong	May 1994	Jan. 2000	SUNY Stonybrook
13. S.-M. Fan	July 1995	Aug. 2002	Geophysical Fluid Dynamics Lab/NOAA
14. M. Gloor	Dec. 1995	Sept. 1999	Max-Planck Institute, Jena
	Sept. 2003	Sept. 2006	University of Leeds
15. T.M.C. Hughes	Jan. 1996	Nov. 1998	Deceased
16. N. Gruber	Aug. 1997	Aug. 1999	ETH Zürich
17. A. Gnanadesikan	Sept. 1997	Jan. 2002	Johns Hopkins University
18. M. Staid	Feb. 1999	July 2000	Vine View Imaging, LLC.
19. Y. Gao	June 2000	Aug. 2003	Rutgers Univ., Newark
20. K. Matsumoto	July 2000	March 2003	University of Minnesota
21. B. McNeil	May 2001	Nov. 2003	Univ. of New South Wales, Australia

22. J. Dunne	June 2001	Dec. 2002	Geophysical Fluid Dynamics Lab/NOAA
23. A. Jacobson	June 2001	Jan. 2006	Environmental Sciences Research Lab/NOAA
24. J. Greenblatt	July 2001	Feb. 2004	Lawrence Berkeley National Laboratory
25. C. Sweeney	April 2002	Mar. 2005	Environmental Sciences Research Lab/NOAA
26. B. Arbic	Mar. 2003	Sept. 2005	University of Michigan
27. G. McKinley	Sept. 2003	Aug. 2004	University of Wisconsin
28. M. Hiscock	Sept. 2004	Dec. 2009	Environmental Protection Agency
29. C. Crevoisier	Nov. 2004	Sept. 2007	Ecole Polytechnique, Paliseau, France
30. K. Rodgers	June 2005		Princeton University
31. S. Mikaloff-Fletcher	Feb. 2006	Jan. 2009	National Institute for Water & Air Research, New Zealand
32. E. Galbraith	Mar. 2006	Jun. 2009	McGill University, Montreal
33. S. Henson	Jan. 2008	Oct. 2009	National Oceanography Centre, Southampton
34. E. Y. Kwon	Apr. 2008	Oct. 2011	National University , Seoul, South Korea
35. J. Palter	Sep. 2008	Dec. 2010	McGill University, Montreal
36. C. Beaulieu	Mar. 2009	Apr. 2013	National Oceanography Centre, Southampton
37. S. Downes	Mar. 2009	Oct. 2011	The Australian National University, Canberra
38. A. Smith	Jul. 2010	Jul. 2014	University of Washington
39. T. Frölicher	Sep. 2010	Apr. 2013	ETH Zurich
40. B. Carter	July 2011	Aug. 2014	University of Washington/JISAO
41. J. Watson	Sep. 2011	Dec. 2013	Stockholm University
42. R. Rykaczewski	Nov. 2011	Aug. 2012	University of South Carolina
43. G. de Souza	Apr. 2012	Jan. 2015	ETH Zurich
44. I. Frenger	Jan. 2014	Aug. 2015	
45. C. Dufour	Oct. 2012		
46. R. Asch	Sep. 2013		
47. A. Morrison	Oct. 2013		
48. A. Gray	Nov. 2014		
49. N. Henschke	Jun. 2015		
50. H. Chen	Aug. 2015		
51. C. Petrik	Aug. 2015		

VISITING LECTURER APPOINTMENTS

Taught classes as a visiting lecturer at the University of Washington, Cornell University, as the H. Burr Steinbach Visiting Scholar at Woods Hole Oceanographic Institution, at the University of Bern, University of Gothenburg, and the Universidad de Concepción in Chile.

PUBLICATIONS
JORGE L. SARMIENTO

Books

Sarmiento, J. L., and N. Gruber, 2006. Ocean Biogeochemical Dynamics, Princeton University Press, Princeton. 503 pp.

Refereed Articles

1. Broecker, W.S., J. Goddard, and J.L. Sarmiento, 1976. The distribution of ^{226}Ra in the Atlantic Ocean. Earth Planet. Sci. Lett., 32, 220-235.
2. Sarmiento, J.L., H.W. Feely, W.S. Moore, A.E. Bainbridge, and W.S. Broecker, 1976. The relationship between vertical eddy diffusion and buoyancy gradient in the deep sea. Earth Planet. Sci. Lett., 32, 357-370.
3. Sarmiento, J.L., D.E. Hammond, and W.S. Broecker, 1976. The calculation of the statistical counting error for radon-222 scintillation counting. Earth Planet. Sci. Lett., 32, 351-356.
4. Sarmiento, J.L., W.S. Broecker, and P.E. Biscaye, 1978. Excess bottom radon-222 distribution in deep ocean passages. J. Geophys. Res., 83, 5068-5076.
5. Sarmiento, J.L., and W.S. Broecker, 1980. Ocean Floor radon-222 standing crop in the Atlantic and Pacific Oceans. Earth Planet. Sci. Lett., 49 (2), 341-350.
6. Sarmiento, J.L., and C.G. Rooth, 1980. A comparison of vertical and isopycnal mixing models in the deep sea based on radon-222 measurements. J. Geophys. Res., 85, 1515-1518.
7. Roether, W., K.-O, Munnich, B. Rabbat, and J.L. Sarmiento, 1980. A trans Atlantic ^{14}C-Section near 40˚N. "Meteor" Forsch.-Ergebn., Reihe A, No. 21, 57-69.
8. Sarmiento, J.L., and K. Bryan, 1982. An ocean transport model for the North Atlantic. J. Geophys. Res., 87, 394-408.
9. Sarmiento, J.L., C.G.H. Rooth, and W. Roether, 1982. The North Atlantic tritium distribution in 1972. J. Geophys. Res., 87, 8047-8056.
10. Sarmiento, J.L., C.G.H. Rooth, and W.S. Broecker, 1982. Radium-228 as a tracer of basin wide processes in the abyssal ocean. J. Geophys. Res., 87, 9694-9698.
11. Sarmiento, J.L., 1983. A tritium box model of the North Atlantic thermocline. J. Phys. Oceanogr., 13, 1269-1274.
12. Sarmiento, J.L., 1983. A simulation of bomb tritium entry into the Atlantic Ocean. J. Phys. Oceanogr., 13, 1924-1939.
13. Sarmiento, J.L., and J.R. Toggweiler, 1984. A new model for the role of the oceans in determining atmospheric pCO_2. Nature, 308, 621-624.
14. Bryan, K., and J.L. Sarmiento, 1985. Modeling Ocean Circulation, In: Advances in Geophysics, 28A, Climate Dynamics, B. Saltzman (ed.), Academic Press, New York, pp. 433-459.
15. Moore, W.S., R.M. Key, and J.L. Sarmiento, 1985. Techniques for precise mapping of ^{226}Ra and ^{228}Ra in the ocean. J. Geophys. Res., 90, 6983-6994.
16. Key, R.M., R. Stallard, W.S. Moore, J.L. Sarmiento, 1985. Distribution and flux of radium-226 and radium-228 in the Amazon River Estuary. J. Geophys. Res., 90, 6995-7004.
17. Brewer, P.G., J.L. Sarmiento, W.M. Smethie, 1985. The Transient Tracers in the Ocean (TTO) Program. The North Atlantic Study: 1981, the Tropical Atlantic Study: 1983. J. Geophys. Res., 90, 6903-6906.
18. Kawase, M., and J. L. Sarmiento, 1985. Nutrients in the Atlantic Thermocline. J. Geophys. Res., 90, 8961-8979.
19. Toggweiler, J.R., and J.L. Sarmiento, 1985. Glacial to interglacial changes in atmospheric carbon dioxide: the critical role of ocean surface water in high latitudes, In: The Carbon Cycle and

Atmospheric CO_2: Natural Variations Archean to Present, edited by E. Sundquist and W. Broecker, Geophys. Monograph 32, AGU, Washington, D.C., pp. 163-184.
20. Moore, W.S., J.L. Sarmiento, and R.M. Key, l986. Tracing the Amazon component of surface Atlantic water using Ra-228, salinity, and silica. J. Geophys. Res., Vol. 91, C2, 2574-2580.
21. Sarmiento, J.L., and P.E. Biscaye, 1986. Radon-222 in the benthic boundary layer. J. Geophys. Res., 91, 833-844.
22. Olson, D.B., G.H. Ostlund, and J.L. Sarmiento, 1986. The Western Boundary Undercurrent off the Bahamas. J. Phys. Oceanogr., 16, 233-240.
23. Sarmiento, J.L., and E. Gwinn, 1986. Sr-90 fallout prediction. J. Geophys. Res., 91, 7631-7646.
24. Kawase, M., and J.L. Sarmiento, 1986. Nutrients in mid-depth Atlantic waters. J. Geophys. Res., 91, 9749-9770.
25. Sarmiento, J.L., 1986. On the North and Tropical Atlantic heat balance. J. Geophys. Res., 91, 11677-11689.
26. Sarmiento, J.L., 1986. Three-dimensional ocean models for predicting the distribution of CO_2 between the ocean and atmosphere. In: The Changing Carbon Cycle: A Global Analysis, J.R. Trabalka and D. Reichle, eds., Springer-Verlag Publishers, New York, pp. 279-294.
27. Sarmiento, J.L., 1986. Modeling oceanic transport of dissolved constituents. In: The Role of Air-Sea Exchange in Geochemical Cycling, P. Buat-Menard, editor. D. Reidel Publishing, pp. 65-82.
28. Sarmiento, J.L., and J.R. Toggweiler, 1986. A preliminary model of the role of upper ocean chemical dynamics in determining oceanic O_2 and atmospheric CO_2 levels. In: Dynamic Processes in the Chemistry of the Upper Ocean, J.D. Burton, P.G. Brewer, and R. Chesselet editors. NATO Conference Series, Series IV, Volume 17, Plenum Press, New York, pp. 233-240.
29. Sarmiento, J.L., 1987. Tracers and Modeling. Rev. Geophys. Phys., 25, 1417-1420.
30. Sarmiento, J.L., J.R. Toggweiler, R. Najjar, 1988. Ocean carbon cycle dynamics and atmospheric pCO_2. Phil. Trans. R. Soc., A 325, 3-21.
31. Sarmiento, J.L., T. Herbert, and J.R. Toggweiler, 1988. Causes of anoxia in the World Ocean. Global Biogeochem. Cycles, 2: 115-128.
32. Wroblewski, J.S., J.L. Sarmiento, and G.R. Flierl, 1988. An ocean basin scale model of plankton dynamics in the North Atlantic, 1, Solutions for the climatological oceanographic conditions in May. Global Biogeochem. Cycles, 2: 199-218.
33. Sarmiento, J.L., T. Herbert, and J.R. Toggweiler, 1988. Mediterranean nutrient balance and episodes of anoxia. Global Biogeochem. Cycles, 2: 427-444.
34. Clegg, S.L., and J.L. Sarmiento, 1989. The hydrolytic scavenging of metal ions by marine particulate matter. Prog. Oceanogr., 23: 1-21.
35. Thiele, G., and J.L. Sarmiento, 1990. Tracer dating and ocean ventilation. J. Geophys Res., 95: 9377-9391.
36. Murnane, R.J., J.L. Sarmiento, and M.P. Bacon, 1990. Thorium isotopes, particle cycling models, and inverse calculations of model rate constants. J. Geophys. Res., 95: 16195-16206.
37. Sarmiento, J.L., G. Thiele, R.M. Key, and W. S. Moore, 1990. Oxygen and nitrate new production and remineralization in the North Atlantic subtropical gyre. J. Geophys. Res., 95: 18303-18315.
38. Joos, F., J. L. Sarmiento, and U. Siegenthaler, 1991. Estimates of the effect of Southern Ocean iron fertilization on atmospheric CO_2 concentrations. Nature, 349: 772-774.
39. Sarmiento, J.L., 1991. Slowing the buildup of fossil CO_2 in the atmosphere by iron fertilization: a comment. Global Biogeochem. Cycles, 5: 1-2.
40. Nuttle, W. K., J. S. Wroblewski, and J. L. Sarmiento, 1991. Advances in modeling ocean primary production and its role in the global carbon cycle. Adv. Space Res., 11: (3)67-(3)76.
41. Joos, F., U. Siegenthaler, and J. L. Sarmiento, 1991. Possible effects of iron fertilization in the Southern Ocean on atmospheric CO_2 concentration. Global Biogeochem. Cycles, 5: 135-150.
42. Sarmiento, J. L., 1991. Oceanic uptake of anthropogenic CO_2: the major uncertainties. Global Biogeochem. Cycles, 5: 309-313.

43. Herbert, T. D., and J. L. Sarmiento, 1991. Ocean nutrient distribution and oxygenation: limits on the formation of warm saline bottom water in the oceans over the past 90 MA. Geology, 19: 702-705.
44. Sarmiento, J. L., and J. C. Orr, 1991. Three dimensional ocean model simulations of the impact of Southern Ocean nutrient depletion on atmospheric CO_2 and ocean chemistry. Limnol. Oceanogr., 36: 1928-1950.
45. Najjar, R. G., J. L. Sarmiento, and J. R. Toggweiler, 1992. Downward transport and fate of organic matter in the ocean: simulations with a general circulation model. Global Biogeochem. Cycles, 6: 45-76.
46. Sarmiento, J. L., J. C. Orr, and U. Siegenthaler, 1992. A perturbation simulation of CO_2 uptake in an ocean general circulation model. J. Geophys. Res., 97: 3621-3645.
47. Sarmiento, J. L., and E. Sundquist, 1992. Oceanic uptake of anthropogenic CO_2: a new budget. Nature, 356: 589-593.
48. Sarmiento, J. L., and U. Siegenthaler, 1992. New production and the global carbon cycle. In: Primary Productivity and Biogeochemical Cycles in the Sea, P. Falkowski, ed., Plenum Press, New York., pp. 317-332
49. Orr, J. C., and J. L. Sarmiento, 1992. Potential of marine macroalgae as a sink for CO_2: constraints from a 3-D general circulation model of the global ocean. Water, Air & Soil Pollution, 64: 405-421.
50. Sarmiento, J. L., 1992. Biogeochemical ocean models. In: Climate Systems Modeling, ed., K. Trenberth., Cambridge University Press, Cambridge, pp. 519-551.
51. Sarmiento, J. L., 1993. Ocean carbon cycle. Chemical and Engineering News, 71: 30-43.
52. Sarmiento, J. L., R. D. Slater, M. J. R. Fasham, H. W. Ducklow, J. R. Toggweiler, and G. T. Evans, 1993. A seasonal three-dimensional ecosystem model of nitrogen cycling in the North Atlantic euphotic zone. Global Biogeochem. Cycles, 7: 417-450.
53. Fasham, M. J. R., J. L. Sarmiento, R. D. Slater, H. Ducklow, and R. Williams, 1993. Ecosystem Behavior at Bermuda Station "S" and OWS "India": a GCM model and observational analysis. Global Biogeochem. Cycles, 7: 379-416.
54. Siegenthaler, U., and J. L. Sarmiento, 1993. Atmospheric carbon dioxide and the ocean. Nature, 365: 119-125.
55. Sarmiento, J. L., 1993. Atmospheric CO_2 stalled. Nature, 365: 697-698.
56. Slater, R. D., J. L. Sarmiento, and M. J. R. Fasham, 1993 Some parametric and structural simulations with a three dimensional ecosystem model of nitrogen cycling in the North Atlantic euphotic zone. In: Towards a Model of Ocean Biogeochemical Processes, edited by G. T. Evans and M. J. R. Fasham, NATO ASI Series, Vol. I 10, Springer-Verla, Publishers, New York, pp. 261-294.
57. Murnane, R. J., J. K. Cochran, and J. L. Sarmiento, 1994. Estimates of particle- and thorium-cycling rates in the northwest Atlantic Ocean. J. Geophys. Res., 99: 3373-3392.
58. Anderson, L. A., and J. L. Sarmiento, 1994. Redfield ratios of remineralization determined by nutrient data analysis. Global Biogeochem. Cycles, 8: 65-80.
59. Sarmiento, J. L., and M. Bender, 1994. Carbon biogeochemistry and climate change. Photosynthesis Res., 39: 209-234.
60. Sarmiento, J. L., 1994. The carbon cycle and the role of the ocean in climate. In: Ecological and Social Dimensions of Global Change, edited by D. D. Caron, F.S Chapin III, J. Donoghue, M. Firestone, J. Harte, L. E. Wells, and R. Stewardson, Institute of International Studies, University of California, Berkeley, California, pp. 5-41.
61. Shaffer, G., and J. L. Sarmiento, 1995. Biogeochemical cycling in the global ocean 1. A new, analytical model with continuous vertical resolution and high latitude dynamics. J. Geophys. Res., 100: 2659-2672.
62. Sarmiento, J. L., C. Le Quéré, and S. W. Pacala, 1995. Limiting future atmospheric carbon dioxide. Global Biogeochem. Cycles, 9: 121-137.

63. Armstrong, R. A., J. L. Sarmiento, and R. Slater, 1995. Monitoring ocean productivity by assimilating satellite chlorophyll into ecosystem models. In: Ecological Time Series, edited by T. M. Powell and J. H. Steele, Chapman and Hall, New York, pp. 371-390.
64. Joos, F., and J. L. Sarmiento, 1995. Der Anstieg des atmosphärischen Kohlendioxids. Phys. Bl., 51: 405-411.
65. Sarmiento, J. L., R. Murnane, and C. Le Quéré, 1995. Air-sea CO_2 transfer and the carbon budget of the North Atlantic. Phil. Trans. R. Soc., B, 348: 211-219.
66. Anderson, L., and J. L. Sarmiento, 1995. Global ocean phosphate and oxygen simulations. Global Biogeochem. Cycles, 9: 621-636.
67. Joos, F., M. Bruno, R. Fink, U. Siegenthaler, T. F. Stocker, C. Le Quéré, and J. L. Sarmiento, 1996. An efficient and accurate representation of complex oceanic and biospheric models of anthropogenic carbon uptake. Tellus, 48B: 397-417.
68. Gruber, N, J. L. Sarmiento, and T. F. Stocker, 1996. An improved method for detecting anthropogenic CO_2 in the oceans. Global Biogeochem. Cycles, 10: 809-837.
69. Sarmiento, J. L., and C. Le Quéré, 1996. Oceanic CO_2 uptake in a model of century-scale global warming. Science, 274: 1346-1350.
70. Michaels, A. F., D. Olson, J. L. Sarmiento, J. W. Ammerman, K. Fanning, R. Jahnke, A. H. Knap, F. Lipschultz, J. M. Prospero, 1996. Inputs, losses and transformations of nitrogen and phosphorus in the pelagic North Atlantic Ocean. Biogeochemistry, 35: 181-226
71. Gruber, N., and J. L. Sarmiento, 1997. Global patterns of marine nitrogen fixation and denitrification. Global Biogeochem. Cycles, 11: 235-266.
72. Sarmiento, J. L., T. M. C. Hughes, R. J. Stouffer, S. Manabe, 1998. Simulated response of the ocean carbon cycle to anthropogenic climate warming. Nature, 393: 245-249.
73. Fan, S.-M. M. Gloor, J. Mahlman, S. Pacala, J. L. Sarmiento, T. Takahashi, and P., Tans, 1998. A Large Terrestrial Carbon Sink in North America Implied by Atmospheric and Oceanic CO_2 Data and Models, Science, 282: 442-446.
74. Sabine, C. L., R. M. Key, K. M. Johnson, F. J. Millero, A. Poisson, J. L. Sarmiento, D. W. R. Wallace, and C. D. Winn, 1999. Anthropogenic CO_2 inventory of the Indian Ocean, Global Biogeochem. Cycles, 13, 179-198.
75. Fan, S., M. Gloor, J. Mahlman, S. Pacala, J. Sarmiento, T. Takahashi, and P. Tans, 1999. North American carbon sink, Science, 283, 1815 (summary). Full text at www.sciencemag.org/cgi/content/full/283/5409/1815a.
76. Murnane, R. J., J. L. Sarmiento, and C. Le Quéré, 1999. Spatial distribution of air-sea CO_2 fluxes and the interhemispheric transport of carbon by the oceans. Global Biogeochemical Cycles, 13; 287-305
77. Sarmiento, J. L., and T.M.C. Hughes, 1999. Anthropogenic CO_2 Uptake in a Warming Ocean Tellus, 51B: 560-561.
78. Gloor, M., S.-M. Fan, S. Pacala, J. Sarmiento, and M. Ramonet, 1999. A model-based evaluation of inversions of atmospheric transport,, using annual mean mixing ratios, as a tool to monitor fluxes of nonreactive trace substances like CO_2 on a continental scale. J. Geophys. Res., 104: 14,245-14,260.
79. Fan, S.-M., J.L. Sarmiento, M. Gloor, and S. W. Pacala, 1999. On the use of regularization techniques in the inverse modeling of atmospheric carbon dioxide. J. Geophy. Res., 104: 21,503-21,512.
80. Fan, S.-M., T. L. Blaine, and J. L. Sarmiento, 1999. Terrestrial carbon sink in the Northern Hemisphere estimated from atmospheric CO_2 difference between Mauna Loa and South Pole since 1959. Tellus, 51B: 863-870.
81. Murnane, R. J., and J. L. Sarmiento, 2000. Roles of biology and gas exchange in determining the $\delta^{13}C$ distribution in the ocean and the preindustrial gradient in atmospheric $\delta^{13}C$. Global Biogeochem. Cycles, 14: 389-405
82. Gloor, M., S.-M. Fan, S. Pacala, and J. L. Sarmiento, 2000. Optimal sampling of the atmosphere for purpose of inverse modeling : A model study. Global Biogeochem. Cycles, 14: 407-428.

83. Suntharalingam, P., and J. L. Sarmiento, 2000. Factors governing the oceanic nitrous oxide distribution: Simulations with an ocean general circulation model. Global Biogeochem. Cycles, 14: 429-454.
84. Sarmiento, J. L., 2000. That sinking feeling. Nature, 408: 155-156.
85. Sarmiento, J.L. P. Monfray, E. Maier-Reimer, O. Aumont, R. Murnane, and J. Orr, 2000. Air-sea CO_2 Fluxes and carbon transport: a comparison of three ocean general circulation models . Global Biogeochem. Cycles, 14: 1267-1281
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