

DAVID SCHIMEL

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EDUCATION:

Degree	Year	Institution
B.A.	1977	Hampshire College, Amherst, Massachusetts
Ph.D.	1982	Colorado State University, Fort Collins

PROFESSIONAL EXPERIENCE:

2012-present	Research Scientist, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, Calif.
2011-2012	Chief Science Officer and Principal Investigator, NEON.
2007-2011	CEO, and Principal Investigator National Ecological Observatory, Inc.
1995-2009	Senior Scientist, National Center for Atmospheric Research
1997-2002	Professor and Director, Max-Planck Institute for Biogeochemistry
1992-1997	Section Head, Climate and Global Dynamics Division, NCAR
1992-95	Scientist III, National Center for Atmospheric Research (NCAR)
1990-1995	Project Scientist, Climate System Modeling Program, UCAR
1989-95	Associate Professor, Department of Forest & Wood Science, Colorado State University
1988-89	National Research Council Senior Fellow, NASA/ Ames Research Center
1995-present	Senior Research Scientist, NREL, Colorado State University (Affiliate)
1982-83	Postdoctoral Fellow, NREL, Colorado State University
1979-82	Graduate Research Assistant, NREL, Colorado State University
1977-79	Research Associate, The Marine Biological Laboratory, Ecosystems Center, Woods Hole, Massachusetts
1976-77	Statistical Consultant, University of Massachusetts, Research Computing Center, Amherst, Massachusetts

PROFESSIONAL AND HONORARY SOCIETIES, COMMITTEES AND BOARDS:

American Geophysical Union
Ecological Society of America
NSF Geosciences Directorate Advisory Committee (AC-GEO)
International Geosphere-Biosphere Program (IGBP): Founding member, Task Force on Global Analysis, Interpretation and Modeling
IGBP Steering Committee (2004-2011)
IBGP: Analysis, Interpretation and Modeling of the Earth System Task Force: Chair (2004-present)
NASA Earth Observing System Project, Biogeochemistry Panel, chairman (1992-1996)
SCOPE Working Group on Biogenic Trace Gases
Chair, National Technical Review Panel, National Institute for Global Environmental Change, DOE
Intergovernmental Panel on Climate Change (IPCC), Convening Lead Author, 1994, 1995, 2001 Reports
Member, Synthesis Team, US National Assessment of the Potential Consequences of Climate Variability and Change
U.S. National Academy Committee on Global Change Working groups on Biological Systems and Dynamics, Earth System Models, Nutrient Fluxes, and Dynamics

Member, U.S. National Academy Committee on Global Change Research (1995-1998)
Carbon Science Working Group (USGCRP)
UCAR Global Change Institute, steering committee (1990)
Committee on Global Change Research in China, National Academy of Sciences 1991-1993
National Research Council Committee on Atmospheric Chemistry
National Research Council Committee on Global Change Research
University of Colorado's Global Change and Environmental Quality Program Committee
Visiting Member of the Graduate Faculty of Texas A&M University
NASA Decadal Survey Ecosystems Panel, National Research Council
2011 NRC Interim review of the NASA Decadal Survey

GRANT EXPERIENCE (SELECTED):

Dahlem Konferenzen Workshop on Trace Gas Exchange Between and the Atmosphere
Fire in the Tallgrass Prairie, National Science Foundation, Principal Investigator (NSF) (3 renewals)
A Joint Facility for Regional Ecosystem Analysis (with the University of Colorado: NSF Biological Facilities Program)
A Model for Methane Flux (with the Natural Resources Research Institute, Duluth, MN, NASA)
NASA Earth Observing System Interdisciplinary Science Investigation (1989-2001):
 "Multisensor analysis of factors controlling carbon balance in global arid and semiarid ecosystems"
 (NASA)
China and the Global Nitrogen Cycle (NSF)
Regulation of Nitrogen Mineralization by Soil Physical Structure, Co-principal Investigator (NSF)
Surface Biophysical Properties and Trace Gas Flux in Tallgrass Prairie, Principal Investigator (NASA)
The Climate System Modeling Program, UCAR, Principal Investigator (NSF/ DOE)
Assimilation of satellite radiances for carbon cycle retrievals, EC, Principal Investigator (Partners:
 ECMWF, LSCE-Paris, MPIBGC-Jena, MPIM-Hamburg)
The Vegetation and Ecosystem Modeling Project, NASA/ EPRI/ USFS, Principal Investigator
The Airborne Carbon in the Atmosphere Experiment (ACME): Principal Investigator
The National Ecological Observatory, National Science Foundation, Principal Investigator (\$433,700,000,
 2011-2017)

HONORS AND AWARDS:

Nobel Peace Prize, 2007 (IPCC Convening Lead Author)
Fellow, American Geophysical Union
Founding Director, Max-Planck-Institute for Biogeochemistry
External Member, Max Planck Society (Germany)
Elected Member, Ecology Institute, (Germany)
National Research Council Senior Fellow at NASA/ Ames Research Center, 1988-89
Most Publications Award at the Natural Resource Ecology Lab,
 Colorado State University, 1994
ISI Highly Cited Researcher

REVIEWER (SELECTED):

Science
Journal of Climate
Climatic Change
Agronomy Journal
Global Biogeochemical Cycles
Journal of Climate
Journal of Geophysical Research
Ecology
Geoderma
Journal of Geophysical Research

Journal of Range Management
Nature
Soil Biology and Biochemistry
Soil Science Society of America Journal
Proceedings of the National Academy of Sciences

EDITOR:

Ecological Applications (Editor in Chief, 2002-present)
Global Change Biology (Editorial Board)
Biogeochemistry (Editorial Board)
Science Magazine (Editorial Board, 2005-2008)
PNAS (Guest editor)
Annual Reviews of Environment and Resources (2001-2010)

PUBLICATIONS

Refereed Journal Publications (154: current H-Index (10/2011) = 54)

- Russell, Lynn M., Philip J. Rasch, Georgina M. Mace, Robert B. Jackson, John Shepherd, Peter Liss, Margaret Leinen, David Schimel, Naomi E. Vaughan, Anthony C. Janetos, Philip W. Boyd, Richard J. Norby, Ken Caldeira, Joonas Merikanto, Paulo Artaxo, Jerry Melillo, and M. Granger Morgan. Ecosystem impacts of geoengineering: A Review for Developing a Science Plan. *Ambio*, (online first), March 2012.
- Weng, E., Yiqi Luo, Weile Wang, Han Wang, Daniel J. Hayes, A. David McGuire, Alan Hastings, David S. Schimel. Ecosystem carbon storage capacity as affected by disturbance regimes: a general theoretical model. *Journal of Geophysical Research-Biogeosciences*, in press.
- Shuli Niu, S., Y. Luo, S. Fei, W. Yuan and 62 others. Thermal Optimality of Net Ecosystem Exchange of Carbon Dioxide and Underlying Mechanisms. *New Phytologist*, in press.
- Sherry, Rebecca A., Arnone III, John A., Johnson, Dale W., Schimel, Dave S., Verburg, Paul S. and Luo, Yiqi. 2011. Carry over from previous year environmental conditions alters dominance hierarchy in a prairie plant community. *Journal of Plant Ecology*: 1–13
- Schimel, David. 2011. The era of continental-scale ecology. *Frontiers in Ecology and the Environment* 9: 311–311.
- Desai, A.R., Moore, D.J.P., Ahue, W., Wilkes, P.T.V., De Wekker, S., Brooks, B.G., Campos, T., Stephens, B.B., Monson, R.K., Burns, S., Quaife, T., Aulenbach, S., and Schimel, D.S., 2011. Seasonal patterns of regional carbon balance in the Central Rocky Mountains. *Journal of Geophysical Research-Biogeosciences*, 116, G04009, doi:10.1029/2011JG001655.
- John A. Arnone III, Richard L. Jasoni, Annmarie J. Lucchesi, Jessica D. Larsen, Elizabeth A. Leger, Rebecca A. Sherry, Yiqi Luo, David S. Schimel and Paul S.J. Verburg. 2011. A climatically extreme year has large impacts on C4 species in tallgrass prairie ecosystems but only minor effects on species richness and other plant functional groups. *Journal of Ecology*, 99, 678–688.
- Rebecca A. Sherry, Xuhui Zhou, Shiliang Gu, John A. Arnone III, Dale W. Johnson, David S. Schimel, Paul S. J. Verburg, Linda L. Wallace, Yiqi Luo. 2011. Changes in duration of reproductive phases and lagged phenological response to experimental climate warming. *Plant Ecology & Diversity*. DOI: 10.1080/17550874.2011.557669
- Sun, Jielun, Steven P. Oncley, Sean P. Burns, Britton B. Stephens, Donald H. Lenschow, Teresa Campos, and Andrew S. Watt, Russell K. Monson, David J. P. Moore, Jia Hu, Mark Tschudi, David S. Schimel and Steven Aulenbach, William J. Sacks, Stephan F. J. De Wekker, Chun-Ta Lai, Brian Lamb, Eugene Allwine, and Teresa Coons, Dennis Ojima, Patrick Z. Ellsworth and Leonel S., L. Sternberg, Sharon Zhong, Craig Clements, Dean E. Anderson. 2010. A Multiscale and Multidisciplinary Investigation Of Ecosystem–Atmosphere CO₂ Exchange Over the Rocky Mountains of Colorado. *Bull. Amer. Meteor. Soc.*, 91, 209–230.

- Schimel, David S. 2010. Drylands in the Earth System. *Science* 22, 418-419
- Zhou, X., Luo, Y., Gao, C., Verburg, P. S. J., Arnone, J. A., Darrouzet-Nardi, A. and Schimel, D. S. (2010), Concurrent and lagged impacts of an anomalously warm year on autotrophic and heterotrophic components of soil respiration: a deconvolution analysis. *New Phytologist*, 187: 184–198
- Graven, H. D., Stephens, B. B., Guilderson, T. P., Campos, T. L., Schimel, D. S., Campbell, J. E. and Keeling, R. F. 2009, Vertical profiles of biospheric and fossil fuel-derived CO₂ and fossil fuel CO₂ : CO ratios from airborne measurements of $\Delta^{14}\text{C}$, CO₂ and CO above Colorado, USA. *Tellus B*, 61: 536–546.
- Moore, David J.P., Jia Hu, William J. Sacks, David S. Schimel, Russell K. Monson, 2008. Estimating transpiration and the sensitivity of carbon uptake to water availability in a subalpine forest using a simple ecosystem process model informed by measured net CO₂ and H₂O fluxes, *Agricultural and Forest Meteorology*, Volume 148,10,
- Keller, Michael, David S Schimel, William W Hargrove, and Forrest M Hoffman. 2008. A continental strategy for the National Ecological Observatory Network. *Frontiers in Ecology and the Environment* 6: 282–284
- Baker, D. F. Bösch, H. Doney, S. C.; Schimel, D. S. 2008. Carbon source/ sink information provided by column CO₂ measurements from the Orbiting Carbon Observatory. *Atmospheric Chemistry and Physics Discussions*, 8, 20051-20112
- Arnone John A III., Paul S. J. Verburg Dale W. Johnson, Jessica D. Larsen Richard L. Jasoni, Annmarie J. Lucchesi, Candace M. Batts, Christopher von Nagy, William G. Coulombe, David E. Schorran, Paul E. Buck, Bobby H. Braswell, James S. Coleman, Rebecca A. Sherry, Linda L. Wallace, Yiqi Luo and David S. Schimel. 2008. Prolonged suppression of ecosystem carbon dioxide uptake after an anomalously warm year. *Nature* 455, 383-386
- Liu, Shugang Pamela Anderson, Guoyi Zhou, Boone Kauffman, Flint Hughes, David Schimel, Vicente Watson, Joseph Tosi. 2008. Resolving model parameter values from carbon and nitrogen stock measurements in a wide range of tropical mature forests using nonlinear inversion and regression trees, *Ecological Modelling* 219, 327-341
- Zobitz, J. M., D. Moore, W. J. Sacks, R. K. Monson, D. R. Bowling, D. S. Schimel, “Integration of Process-based Soil Respiration Models with Whole-Ecosystem CO₂ Measurements,” 2008. *Ecosystems*, 11:250-269.
- Von Fischer, J. C., Tieszen, L. L. and Schimel, D. S. 2008. Climate controls on C₃ vs. C₄ productivity in North American grasslands from carbon isotope composition of soil organic matter. *Global Change Biology*, 14: 1141–1155
- Doney, Scott C. and David S. Schimel. 2008. Carbon and Climate System Coupling on Timescales from the Precambrian to the Anthropocene. *Annual Review of Environment and Resources*, Vol. 32: 31 - 66
- Ammann, Caspar M., Fortunat Joos,, David S. Schimel, Bette L. Otto-Bliesner and Robert A. Tomas. Solar influence on climate during the past millennium: Results from transient simulations with the NCAR Climate System Model. *PNAS*. March 6, 2007 104 3713-3718
- Rebecca A. Sherry, Xuhui Zhou, Shiliang Gu, John A. Arnone III David S. Schimel, Paul S. Verburg, Linda L. Wallace and Yiqi Luo. Divergence of reproductive phenology under climate warming. *PNAS*, 2, 2007 vol. 104
- Sacks, William J., David S. Schimel, Russell K. Monson. 2007. Coupling between carbon cycling and climate in a high-elevation, subalpine forest: a model-data fusion analysis. *Oecologia* 4: 54-68
- F. S. Chapin, G. M. Woodwell, J. T. Randerson, E. B. Rastetter, G. M. Lovett, D. D. Baldocchi, D. A. Clark, M. E. Harmon, D. S. Schimel and R. Valentini, et al. Reconciling Carbon-cycle Concepts, Terminology, and Methods. 2006. *Ecosystems*, 2006 9, 71041-1050
- Sacks, W. J., Schimel, D. S., Monson, R. K. and Braswel, B. H. (2006), Model-data synthesis of diurnal and seasonal CO₂ fluxes at Niwot Ridge, Colorado. *Global Change Biology*, 12: 240–259
- Baker, D. F., Doney, S. C. and Schimel, D. S. (2006), Variational data assimilation for atmospheric CO₂. *Tellus B*, 58: 359–365
- Schimel, D.S., 2006. Climate Change and Crop Yields: Beyond Cassandra. *Science*: 312. pp. 1889-1890

- Rosenbloom, N. A., J. W. Harden, J. C. Neff, and D. S. Schimel. 2006. Geomorphic control of landscape carbon accumulation, *J. Geophys. Res.*, 111, G01004
- David Schimel, Inez Fung, and Ruth Defries. 2006. Space-based ecological observations: the NASA decadal survey. *Frontiers in Ecology and the Environment* 4: 171–171
- Hobbs, N. Thompson, Saran Twombly, and David S. Schimel. 2006. Deepening Ecological Insights Using Contemporary Statistics. *Ecological Applications* 16:3–4
- Churkina, G., Schimel, D., Braswell, B. H. and Xiao, X. (2005), Spatial analysis of growing season length control over net ecosystem exchange. *Global Change Biology*, 11: 1777–1787
- Li, Changsheng, Yahui Zhuang, Steve Frohking, James Galloway, Robert Harriss, Berrien Moore, David Schimel, and Xiaoke Wang. 2003. Modeling soil organic carbon change in croplands of China. *Ecological Applications* 13:327–336
- Dilling, Lisa, Scott C. Doney, Jae Edmonds, Kevin R. Gurney, Robert Harriss, David Schimel, Britton Stephens, and Gerald Stokes. 2003. The role of carbon cycle observations and knowledge in carbon management. *Annual Review of Environment and Resources*. Vol. 28: 521-558
- Hibbard, K. A., D. S. Schimel, S. Archer, D. S. Ojima, and W. Parton. 2003. Grassland to woodland transitions: Integrating changes in landscape structure and biogeochemistry. *Ecological Applications* 13:911–926.
- Rödenbeck C., S. Houweling, G. Churkina, C. LeQuere, S. Koerner, M. Gloor, D. Schimel & M. Heimann 2003. Time-dependent atmospheric CO₂ inversions based on interannually varying transport, *Tellus*, 55B, 488-497.
- Wang, Guiling and David Schimel. 2003. Climate change, climate modes and climate impacts. *Annual Review of Environment and Resources*, Vol. 28: 1 -28
- Schimel, D., T. G. F. Kittel, S. Running, R. Monson, A. Turnispeed, and D. Anderson (2002), Carbon sequestration studied in western U.S. mountains, *Eos Trans. AGU*, 83(40), doi:10.1029/2002EO000314.
- Schimel D and D Baker. 2002. The wildfire factor. *Nature* 420, 29-30.
- Reiners, W. A., S. Liu, K. G. Gerow, M. Keller, and D. S. Schimel (2002), Historical and future land use effects on N₂O and NO emissions using an ensemble modeling approach: Costa Rica's Caribbean lowlands as an example, *Global Biogeochem. Cycles*, 16(4), 1068-1086.
- S. W. Pacala, G. C. Hurtt, D. Baker, P. Peylin, R. A. Houghton, R. A. Birdsey, L. Heath, E. T. Sundquist, R. F. Stallard, P. Ciais, P. Moorcroft, J. P. Caspersen, E. Shevliakova, B. Moore, G. Kohlmaier, E. Holland, M. Gloor, M. E. Harmon, S.-M. Fan, J. L. Sarmiento, C. L. Goodale, D. Schimel, and C. B. Field. 2001. Consistent Land- and Atmosphere-Based U.S. Carbon Sink Estimates. *Science* 22 2001: 2316-2320.
- D. S. Schimel, J. I. House, K. A. Hibbard P. Bousquet, P. Ciais, P. Peylin, B. H. Braswell, M. J. Apps, D. Baker, A. Bondeau, J. Canadell, G. Churkina, W. Cramer, A. S. Denning, C. B. Field, P. Friedlingstein, C. Goodale, M. Heimann, R. A. Houghton, J. M. Melillo, B. Moore, III, D. Murdiyarso, I. Noble, S. W. Pacala, I. C. Prentice, M. R. Raupach, P. J. Rayner, R. J. Scholes, W. L. Steffen & C. Wirth. 2001. Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. *Nature* 414, 169-172.
- Parton, W. J., E. A. Holland, S. J. D. Grosso, M. D. Hartman, R. E. Martin, A. R. Mosier, D. S. Ojima, and D. S. Schimel 2001, Generalized model for NO_x and N₂O emissions from soils, *J. Geophys. Res.*, 106, 17,403–17,419,
- Del Grosso S., D. Ojima, W. Parton, A. Mosier, G. Peterson and D. Schimel. 2001. Simulated effects of dryland cropping intensification on soil organic matter and greenhouse gas exchanges using the DAYCENT ecosystem model. *Environmental Pollution*. 116, 75-83.
- Schulze, E-D and DS Schimel. Uncertainties of global biogeochemical prediction. 2001. In: Schulze, E-D., M Heimann, S. Harrison, E. Holland, J. Lloyd, IC Prentice and DS Schimel, eds. 2001. *Global Biogeochemical Cycles in the Climate System*. Academic Press, San Diego
- Schimel, DS. 2001. Preface. In: Schulze, E-D., M Heimann, S. Harrison, E. Holland, J. Lloyd, IC Prentice and DS Schimel, eds. 2001. *Global Biogeochemical Cycles in the Climate System*. Academic Press, San Diego

- Rosenbloom, N., S. Doney, and D. Schimel (2001), Geomorphic Evolution of Soil Texture and Organic Matter in Eroding Landscapes, *Global Biogeochem. Cycles*, **15**, 365-381.
- Hibbard, K. A., S. Archer, D. S. Schimel, and D. W. Valentine. 2001. Biogeochemical changes accompanying woody plant encroachment in a subtropical savanna. *Ecology* **82**:1999–2011.
- Vukićević, T., B.H. Braswell, D.S. Schimel. 2001. A diagnostic study of temperature controls on global terrestrial carbon exchange. *Tellus B* **53**, 150-170.
- Liu, S., W.A. Reiners, M. Keller, and D.S. Schimel. 2000. Simulation of nitrous oxide and nitric oxide emissions from tropical primary forests in the Costa Rican Atlantic Zone. *Environmental Modeling and Software* **15**: 727-743.
- Pfaff, A.S.P., S. Kerr, R.F. Hughes, S.G. Liu, G.A. Sanchez-Azofeifa, D. Schimel, J. Tosi, V. Watson. 2000. The Kyoto protocol and payments for tropical forest: An interdisciplinary method for estimating carbon-offset supply and increasing the feasibility of a carbon market under the CDM. *Ecological Economics* **35**: 203-221.
- Kelly, R.H., W.J. Parton, M.D. Hartman, L.K. Stretch, D.S. Ojima, D.S. Schimel. 2000. Intra-annual and interannual variability of ecosystem processes in shortgrass steppe. *Journal of Geophysical Research* **105**: 20,093-20,100.
- Schimel, D., J. Melillo, H. Tian, A.D. McGuire, D. Kicklighter, T. Kittel, N. Rosenbloom, S. Running, P. Thornton, D. Ojima, W. Parton, R. Kelly, M. Sykes, R. Neilson, and B. Rizzo. 2000. Contribution of increasing CO₂ and climate to carbon storage by ecosystems in the United States. *Science* **287**: 2004-2006.
- Schimel, D.S. and N.S. Panikov. 1999. Simulation models of terrestrial trace gas fluxes at soil microsites to global scales. In: L. Bouwman, (ed.). *Approaches to Scaling of Trace Gas Fluxes in Ecosystems*. Elsevier Science, pp 185-202.
- Wilby, R.L. and D.S. Schimel. 1999. Scales of interaction in eco-hydrological relations. In: A. Baird and R.L. Wilby, (eds.). *Eco-Hydrology: Plants and Water in Terrestrial and Aquatic Environments*. Routledge Physical Environment Series, pp 39–77.
- Ciais, P., P. Friedlingstein, D.S. Schimel, and P.P. Tans. 1999. A global calculation of the $\delta^{13}\text{C}$ of soil respired carbon: Implications for the biospheric uptake of anthropogenic CO₂. *Global Biogeochem. Cycles* **13**: 519-530.
- Cleveland, C.C., A.R. Townsend, D.S. Schimel, H. Fisher, R.W. Howarth, L.O. Hedin, S.S. Perakis, E.F. Latty, J.C. Von Fischer, A. Elseroad, and M.F. Wasson. 1999. Global patterns of terrestrial biological nitrogen (N₂) fixation in natural ecosystems. *Global Biogeochem. Cycles* **13**: 623-645.
- Constable, J.V.H., A.B. Guenther, D.S. Schimel, and R.K. Monson. 1999. Modeling changes in VOC emissions in response to climate change in the United States. *Global Change Biology* **5**: 791-806.
- Liu, S., W.A. Reiners, M. Keller, and D.S. Schimel. 1999. Model simulation of changes in N₂O and NO emissions with conversion of tropical rain forests to pastures in the Costa Rican Atlantic Zone. *Global Biogeochem. Cycles* **13**: 663-677.
- Asner, G.P., C.A. Wessman, D.S. Schimel, and S. Archer. 1998. Variability in leaf and litter optical properties: Implications for BRDF model inversions using AVHRR, MODIS, and MISR. *Remote Sensing of Environment* **63**: 243-257.
- Asner, G.P., B.H. Braswell, D.S. Schimel, and C.A. Wessman. 1998(b). Ecological research needs from multiangle remote sensing data. *Remote Sensing of Environment* **63**:155-165.
- Asner, G.P., C.A. Wessman, and D.S. Schimel. 1998. Heterogeneity of savanna canopy structure and function from imaging spectrometry and inverse modeling. *Ecological Applications* **8**:1022-1036.
- IGBP Terrestrial Carbon Working Group (including D. Schimel). 1998. The terrestrial carbon cycle: Implications for the Kyoto protocol. *Science* **280**:1393-1394.
- Kittel, T., D. Schimel, N. Rosenbloom, and H. Fisher. 1998: U.S. climate and ecological data available on CD-ROM and online. *Eos* **79**:47.
- Kittel, T., D. Schimel, N. Rosenbloom, and H. Fisher. 1998: VEMAP U.S. climate, vegetation, and soils dataset available on CD-ROM and on line. *The Biogeographer* **55**: 2.
- Pan, Y, J.M. Melillo, A.D. McGuire, D.W. Kicklighter, L.F. Pitelka, K. Hibbard, L.L. Pierce, S.W. Running, D.S. Ojima, W.J. Parton, D.S. Schimel, and other VEMAP Members. 1998. Modeled Responses of Terrestrial Ecosystems to Elevated Atmospheric CO₂: A Comparison of Simulations by the

- Biogeochemistry Models of the Vegetation/ Ecosystem Modeling and Analysis Project (VEMAP). *Oecologia* 114(3): 389-404.
- Parton, W. J., M. Hartman, D. Ojima, and D. Schimel. 1998. DAYCENT and its land surface submodel: Description and testing. *Global and Planetary Change* **19**:35-48.
- Schimel, D.S. 1998. Climate change, the carbon equation. *Nature* **393**:208-209.
- Braswell, B.H., D.S. Schimel, E. Linder, and B. Moore III. 1997. The response of global terrestrial ecosystems to interannual temperature variability. *Science* **278**:870-872.
- Schimel, D.S., M. Grubb, F. Joos, R. Kaufmann, R.H. Moss, W. Ogana, R. Richels and T.M.L. Wigley. 1997. Stabilisation of Atmospheric Greenhouse Gases: Physical, Biological and Socioeconomic Implications. Technical Paper No. 3. Intergovernmental Panel on Climate Change, Bracknell, U.K.
- Mosier, A.R., W.J. Parton, D.W. Valentine, D.S. Ojima, D.S. Schimel, and O. Heinemeyer. 1997. CH₄ and N₂O fluxes in the Colorado shortgrass steppe: 2. Long-term impact of land use change. *Global Biogeochemical Cycles* **11**: 29-42.
- Schimel, D.S., B.H. Braswell and W.J. Parton. 1997. Equilibration of the terrestrial water, nitrogen, and carbon cycles. *Proceedings of the National Academy of Sciences* 94: 8280-8283.
- Schimel, D.S., VEMAP Participants, and B.H. Braswell. 1997. Spatial variability in ecosystem processes at the continental scale: models, data, and the role of disturbance. *Ecological Monographs* **67**: 251-271.
- Schimel, D.S., M. Grubb, F. Joos, R. Kaufmann, R.H. Moss, W. Ogana, R. Richels and T.M.L. Wigley. 1997. Stabilization of Atmospheric Greenhouse Gases: Physical, Biological and Socio-economic Implications. Intergovernmental Panel on Climate Change, Bracknell, U.K.
- Braswell, B.H., D.S. Schimel, J.L. Privette, B. Moore III, W.J. Emery, E.W. Sulzman, and A.T. Hudak. 1996. Extracting ecological and biophysical information from AVHRR optical measurements: A new algorithm based on inverse modeling. *Journal of Geophysical Research* **101**: 23,335-23,348.
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- Bromberg, J.G., R. McKeown, L. Knapp, T.G.F. Kittel, D.S. Ojima, and D.S. Schimel. 1996. Integrating GIS and the CENTURY model to manage and analyze data. In: M.F. Goodchild, L.T. Steyaert, B.O. Parks, C. Johnson, D. Maidment, M. Crane, and S. Glendinning (eds.), *GIS and Environmental Modeling: Progress and Research Issues*. GIS World, Inc., Ft. Collins, CO, pp 429-431.
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