

BETTE L. OTTO-BLIESNER

Senior Scientist
Deputy Director
Climate and Global Dynamics Laboratory
National Center for Atmospheric Research
1850 Table Mesa Drive, Boulder, CO 80305
Email: ottobli@ucar.edu
Tel: 303-497-1723

SUMMARY OF EXPERIENCE AND QUALIFICATIONS

Leadership

2017-2018 National Center for Atmospheric Research (NCAR) Interim Associate Director, Climate and Global Dynamics Laboratory
2014- Deputy Director, Climate and Global Dynamics Laboratory, NCAR
2011- Co-chair, CESM Paleoclimate Working Group [also 1997-2005]
2011-2012 NCAR Science Advisor, National Center for Atmospheric Research.
2009-2011 Co-chair, IGBP Past Global Changes (PAGES) [Member 2006-2011]
2005 UCAR Leadership Academy
2002-2006 Chair of AGU Paleoceanography and Paleoclimatology Focus Group
1993-1996 Director, Center for Earth System History, University of Texas at Arlington

Education

1980 Ph.D University of Wisconsin Meteorology, Mathematics Minor

Professional Experience

2018-2019 Visiting Professor, School of Earth and Environmental Sciences, Leeds University
2007-present Senior Scientist, National Center for Atmospheric Research
2002-2007 Scientist III, National Center for Atmospheric Research
1997-2002 Scientist II, National Center for Atmospheric Research
1993-1996 Assistant Professor, Department of Geology University of Texas at Arlington
1990-1992 Adjunct Assistant Professor, Department of Geology, University of Texas at Arlington
1988-1989 Contract Scientist, ARC Technologies, College Station, Texas
1980-1986 Associate Scientist, University of Wisconsin-Madison

Honors

2018-2019 Visiting Professorship, The Leverhulme Trust
2016 Fellow of the American Meteorological Society
2016 Emiliani Lecture, American Geophysical Union

- 2015 Fellow of the American Geophysical Union
- 2010-2011 Sigma Xi Distinguished Lecturer, American Meteorological Society
- 2007 Co-recipient of Nobel Peace Prize as IPCC Lead Author

Other Awards:

- 2008 Woman of Achievement, Zonta Foothills Club of Boulder County
- 2008 Distinguished Alumni, William Fremd High School

Selected invited talks and keynote presentations

- 2019 *2019 AGU Fall Meeting*, "A retrospective on Common Era modeling efforts of the past two decades and a look into the future," San Francisco.
- 2019 *WCRP Grand Challenge on Regional Sea Level Change and Coastal Impacts Steering Committee Meeting*, "CESM2-CISM2 simulations: past, present, future," Orleans, France
- 2019 *UCLA Seminar*, "Sensitivity of the Greenland Ice Sheet to Warming: A View from the Past – The Last Interglacial," Los Angeles.
- 2019 *PAGES-QUIGS Workshop: Marine isotope stage 5e and its relevance to the future*, "Overview of status of CMIP6/PMIP4 simulations for Last Interglacial and mid-Holocene," Cambridge, United Kingdom.
- 2019 *CMIP6 Model Analysis Workshop*, "Using simple indices of global climate change: PMIP and CMIP simulations and paleoclimate data to evaluate how the Earth system responds to strong forcings," Barcelona.
- 2019 *Aspen Global Change Institute Workshop, The Future of Past Climate*, "How do models inform paleoclimate, and how does paleoclimate inform models?" Aspen
- 2019 *Priestley International Centre for Climate*, "What's new in the Community Earth System Model at NCAR," Leeds.
- 2019 *Priestley International Centre for Climate*, "Modeling long-term changes in climate, ice sheets and sea level; Using the paleoclimate record to understand possibilities for the future," Leeds.
- 2018 *2018 AGU Fall Meeting*, "The CESM Last Millennium Ensemble: Response to explosive volcanic eruptions," Washington, DC.
- 2018 *IUCN Workshop at the Center for Macroecology, Evolution, and Climate*, "Using climate proxies and models: Past as a key to the future," Copenhagen.
- 2018 *The 15th Urbino Summer School in Paleoclimatology*, "Pliocene Warm period case study" Urbino, Italy.
- 2018 *PalMod International Open Science Conference*, "A new TraCE simulation - Now with water isotopes and other geotracers," Vienna.
- 2018 *2018 EGU General Assembly*, "The Late Pliocene Atlantic Meridional Circulation and State of the Arctic gateways," Vienna.
- 2017 *2017 AGU Fall Meeting*, "Amplified North Atlantic warming in the Late Pliocene by changes in Arctic gateways, New Orleans.
- 2017 *NSF-Supported Workshop on Greenland Ice Sheet Stability*, "Coupled long-term evolution of climate and the Greenland ice Sheet during the Last Interglacial," Buffalo.

- 2017 *Gioppino 2017 Workshop*, "Towards coupled climate - Greenland Ice Sheet simulations: A comparison of orbital and CO₂ forcings," Urbino, Italy.
- 2017 *The Center for the Study of Origins, University of Colorado: The Coldest Centuries in 8000 Years: The Little Ice Age Causes and Human Consequences*, "Explosive volcanism in a warming world," Boulder.
- 2017 *PAGES/Oeschger Centre Climate Change Research Workshop, Lessons learnt from paleoscience on a possible 1.5 - 2 °C warmer world in the future*, "Global, Arctic, and Greenland Climates During Past Warm Periods: A Comparison for the Last Interglacial and the Late Pliocene," Bern.
- 2016 *2016 AGU Emiliani Lecture*, "Resolving Some Puzzles of Climate Evolution Since the Last Glacial Maximum: A Melding of Paleoclimate Modeling and Data," San Francisco.
- 2016 *Brown International Advanced Research Institutes 2016: Climate Change and Its Impacts: Connecting Local Variability and Knowledge in a Global System*, "Paleoclimate perspective on climate change: An African example," Providence.
- 2016 *University of Colorado Department of Physics Seminar*, "Lessons of the warm Pliocene – Melding knowledge from geology and physics," Boulder.
- 2015 *PALSEA2 2015 Meeting*, "The Last Interglacial as a testbed for coupled climate-ice sheet model simulations of past ice sheet and sea level evolution," Tokyo.
- 2015 *Past Earth Network Opening Conference*, "Regional Climate Variability and Change since 850 C.E.: Considering Internal Variability and Structural Differences When Assessing Differences in CMIP5 past1000 Simulations," Crewe, United Kingdom.
- 2015 *FATES workshop*, "Fast climate changes: Not just at polar latitudes," Gif-sur-Yvette, France.
- 2014 *Donald R. Johnson Symposium, 94th AMS Meeting*, "The global circulation: A paleoclimate perspective." Atlanta.
- 2014 *Sun Climate Workshop*, "Challenges in modeling the Sun-climate connection," Boulder.
- 2013 *Past4Future General Assembly*, "Perspectives on model-data comparisons," Vienna.
- 2013 *Aspen Institute CMIP6 Planning Workshop*, "Paleoclimate," Aspen.
- 2013 *Conference on Isotopes of Carbon, Water, and Geotracers in Paleoclimate Research*, "State of the Community Earth System Model (CESM)," Bern.
- 2012 *ESF-LFUI Conference: Modes of Variability in the Climate System: Past-Present-Future*, "Deglacial changes of climate modes," Obergurgl.
- 2012 *Bjerknes Centre 10-Years Anniversary Conference*, "Climate change at high latitudes during the Pliocene," Bergen.
- 2012 *Workshop on Climate Dynamics of Africa*, "Climate dynamics of tropical Africa: paleoclimate perspectives and challenges," John Hopkins University, Baltimore.
- 2011 *North Africa – Past, Present and Future Climate Change Workshop*, "Onset of the Wet Phase in North Africa: Orbital, Carbon Dioxide and Meltwater Effects," Hamburg.
- 2011 *Royal Netherlands Academy of Arts and Sciences Colloquium on Constraining Estimates of Future Climate Variability from Geological Records*, "Using the Pliocene to Constrain Climate Sensitivity," Amsterdam.
- 2011 *Royal Society of London: Warm climates of the past – a lesson for the future?* "Understanding warmth during the Last Interglacial: Our current state and the challenges yet," London.
- 2011 *East African Rift Lakes Workshop*, "The role of CO₂ in African paleoprecipitation," Providence.

- 2010/1 *Sigma Xi Distinguished Lectures*, “Climate Change: What Could Happen and What Can Earth’s Past Tell Us?” Iowa State University, Ames; University of Hawaii, Manoa; University of Hawaii, Hilo; Rockford College; Lamar University, Beaumont.
- 2010 *NSF Workshop on Future Land-Ice Loss*, “Coupled Climate-Ice Sheet Models and Sea level: Towards AR5 and Beyond,” Sterling, VA.
- 2010 *Global Monsoon Symposium*, “Transient Simulation of the African Humid Period: Orbital, Carbon Dioxide and Meltwater Effects,” Shanghai.
- 2009 *Butler University Woods Science Lecture Series*, “What Does the Past Tell Us about the Present and the Future,” Butler University, Indianapolis.
- 2009 *Climate, Statistics, and Satellites. A Symposium in honor of Dr. Gerald North*, “A Dream Almost Realized: Simulating the Transient Climate Evolution over the Last 21,000 years,” College Station.
- 2009 *Milankovitch Symposium*, “The last interglacial: Modeling of the spatial and temporal signatures to the evolving Milankovitch variations,” Belgrade.
- 2008 *PAGES-IMAGES Sea Level Workshop: Empirical Constraints on Sea-Level Rise over the Next Century*, “Modeling of MIS 5e – Polar Warmth, Ice Sheet Stability and Sea-level Rise,” Bern.
- 2008 *EPICA Open Science Meeting: Quaternary Climate: from Pole to Pole*, “Can climate records be used as indirect proxies for changes in the Atlantic meridional overturning circulation? A paleoclimate modeling study,” Venice.
- 2007 *Science Museum of the la Caixa Foundation*, “Arctic Warmth, Greenland Melting, and Sea-level Rise: Lessons from the Past,” Barcelona.
- 2007 *IUGG XXIV General Assembly, Union Lecture in Our Changing Planet*, “Arctic Warmth, Greenland Melting, and Sea-level Rise: A Lesson from the Past,” Perugia, Italy
- 2007 *Warren Washington Symposium: Evolution of Climate Modeling, the Prediction of Climate Change, and Science Policy*, “IPCC and Paleoclimate, Global Change Paleoclimatology,” Boulder.
- 2006 *David Houghton Retirement Symposium*, “A Paleoclimate Perspective on Climate Surprises,” Madison, Wisconsin.
- 2006 *Symposium on Global Warming, Sea Level Changes and Biotic Response: Past and Future*, “Paleoclimatic Evidence for Ice Sheet Instability and Rapid Sea Level Rise,” Utrecht, Netherlands.
- 2006 *SAMSI Kickoff Workshop, 2006-07 Program on Development, Assessment and Utilization of Complex Computer Models*, “Studying Climate Change with Climate Models,” Durham, NC.
- 2006 *Rapid Climate Change International Science Conference*, “Freshwater in the North Atlantic and Rapid Climate Change: Modeling of the 8.2 ka and Heinrich Events,” Birmingham, U.K.
- 2006 *International Symposium on Dynamics of the Ice Age Climate*, “Simulating Past Abrupt Climate Changes and Ocean-Atmosphere Responses to Freshwater Forcing,” Nagoya, Japan.
- 2005 *Public lecture – College de France*, “The Glacial World: Carbon Dioxide and the Ocean Circulation Play Major Role,” Paris.
- 2005 *PAGES Open Science Meeting*, “Climate Sensitivity Derived from PMIP-2 Model-Data Intercomparisons for the Last Glacial Maximum and Mid-Holocene,” Beijing.
- 2004 *John Kutzbach Retirement Symposium*, “Modeling Paleozoic and Mesozoic Climates,” Madison.

- 2004 *XVIth Rencontres de Blois, Challenges in the Climate Sciences*, "Can Solar Forcing Explain the Dramatic Regional Signatures of Past Interglacial Climates?" Blois, France.
- 2004 *IPCC Climate Sensitivity Workshop*, "Climate Sensitivity from the Last Glacial Maximum from Paleoclimate Simulations and Observations," Paris.
- 2004 *Geosystems Workshop*, "Climate models, Status, Opportunities, and Barriers for Deep-time Paleoclimate Studies," Arlington, Virginia.
- 2003 *2003 EGS-AGU-EUG Joint Assembly*, "Evaluation of Cretaceous Atmospheric Carbon Dioxide Estimates Using Climate Model Simulations," Nice, France.
- 2003 *CLIVAR/PAGES/IPCC Workshop, A Multi-Millennia Perspective on Drought and Implications for the Future*, "Paleomodeling of Decreased Aridity in Northern Africa," Tucson, Arizona.
- 2003 *Gordon Research Conference, Solar Radiation and Climate*, "Milankovitch Orbital Variations of Insolation and Interglacial Climates," Colby-Sawyer College, New Hampshire.
- 2002 *Workshop on Cretaceous Climate and Ocean Dynamics*, "Late Cretaceous ocean: Coupled simulations with the NCAR Climate System Model," Florissant, Colorado.
- 2002 *The Hadley Circulation: The Present, Past and Future*, "The Hadley and Walker Circulation changes during warm periods of the past: Coupled simulations with the NCAR Climate System Model," Honolulu.
- 2001 *KNMI*, "Climate model evidence for ENSO behavior during the past: Pre-industrial, Holocene, Last Glacial Maximum, and Cretaceous," Utrecht, The Netherlands.
- 2001 Western Interior Paleontological Society Founders Symposium, Golden, Colorado.

Professional Societies

American Meteorological Society
 American Geophysical Union

RESEARCH

Book Chapters

1. Otto-Bliesner, B. L., 1998: Effects of tropical mountain elevations on the climate during the past: Climate model experiments, in *Tectonic Boundary Conditions for Climate Reconstructions*, T. J. Crowley & K.C. Burke (Eds.), Oxford Monographs on Geology and Geophysics, Chapter 5, 100-115.
2. Upchurch, G. R., Jr., B. L. Otto-Bliesner, and C.R. Scotese, 1999: Terrestrial vegetation and its effects on climate during the latest Cretaceous, in *Geological Society of America Special Paper 332*, E. Barrera & C.C. Johnson (Eds.), 407-426.
3. Otto-Bliesner, B. L., 2003: The role of mountains, polar ice, and vegetation in determining the tropical climate during the Middle Pennsylvanian: Climate model simulations, in C.B. Cecil (Ed.), *Climate Controls on Stratigraphy*, SEPM (Society for Sedimentary Geology) Special Publication No. 77, 227-237.
4. Otto-Bliesner, B.L., and A.C. Clement, 2004: The sensitivity of the Hadley circulation to past and future forcings in two climate models. *The Hadley Circulation: Present, Past and Future*, H.F. Diaz and R.S. Bradley (eds), Kluwer Academic Publishers, Dordrecht, The Netherlands, 437-464.

5. Braconnot, P., S.P. Harrison, S. Joussaume, C.D. Hewitt, A. Kitoh, J.E. Kutzbach, Z. Liu, B. Otto-Bliesner, J. Syktus, and S.L. Weber, 2004: Evaluation of PMIP coupled ocean-atmosphere simulations of the Mid-Holocene. *Past Climate Variability through Europe and Africa, Volume 6*, R.W. Battarbee, F. Gasse, and C.E. Stickley (eds), Springer, Dordrecht, The Netherlands, 515-534.
6. Pereira, J., I. Wainer, E. Brady, and B. Otto-Bliesner, 2004: A study of Antarctic circumpolar wave in the Community Coupled Climate Model. *CLIVAR Exchanges*, 28, 3-5.
7. Braconnot, P., S. Joussaume, S. Harrison, C. Hewitt, P. Valdes, G. Ramstein, R.J. Stouffer, B. Otto-Bliesner, and K. Taylor, 2004: The second phase of the Paleoclimate Modeling Intercomparison Project (PMIP2). *CLIVAR Exchanges*, 28, 19-20.
8. National Research Council, 2006: Surface temperature reconstructions for the last 2,000 years. The National Academies Press, Washington, D.C., 141 pp.
9. Jansen, E., J. Overpeck, K.R. Briffa, J.-C. Duplessy, F. Joos, V. Masson-Delmotte, D.O. Olago, B. Otto-Bliesner, W.R. Peltier, S. Rahmstorf, R. Ramesh, D. Raynaud, D.H. Rind, O. Solomina, R. Villalba, D. Zhang, 2007: *Palaeoclimate. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University press, Cambridge, United Kingdom and New York, NY, USA, 433-497.
10. Alley, R.B., Andrews, J.T., Clarke, G.K.C., Cuffey, K.M., Funder, S., Marshall, S.J., Mitrovica, J.X., Muhs, D.R., Otto-Bliesner, B., 2009: Past Extent and Status of the Greenland Ice Sheet. In *Past Climate Variability and Change in the Arctic and at High Latitudes*. A report by the U.S. Climate Change Program and Subcommittee on Global Change Research. U.S. Geological Survey, Reston, VA, pp. 303 – 357.
11. Masson-Delmotte, V., M. Schulz, A. Abe-Ouchi, J. Beer, A. Ganopolski, J.F. Gonzalez Rouco, E. Jansen, K. Lambeck, J. Luterbacher, T. Naish, T. Osborn, B. Otto-Bliesner, T. Quinn, R. Ramesh, M. Rojas, X. Shao, and A. Timmermann, 2013: Information from Paleoclimate Archives. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P.M. Midgley (eds)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
12. Briner, J.P., Alley, R.B., Bender, M.L., Csatho, B., Poinar, K. and Schaefer, J.M., with input by Axford, Y., Born, A., Hatfield, R., Jennings, A.J., Keisling, B., Kelly, M., Langebroek, P., Miller, G.H., Morlighem, M., Osterberg, E.C., Otto-Bliesner, B., Robel, A. and Young, N.E., 2017: How stable is the Greenland ice sheet. *White Paper from Workshop supported by National Science Foundation grant "The Stability of the Greenland Ice Sheet," award No. OPP-1741833*.

Peer Reviewed Publications

1. Otto-Bliesner, B., D. P. Baumhefner, T. W. Schlatter, and R. Bleck, 1977: A comparison of several meteorological analysis schemes over a data-rich region. *Mon. Wea. Rev.*, 105, 1083-1091.

2. Holopainen, E. and B. L. Otto-Bliesner, 1982: A note on the effect of horizontal momentum fluxes by unresolved synoptic-scale eddies in a low-resolution spectral general model. *J. Atmos. Sci.*, *39*, 2629-2633.
3. Otto-Bliesner, B. L. and D. R. Johnson, 1982: Thermally-forced mean mass circulations in the Northern Hemisphere. *Mon. Wea. Rev.*, *110*, 916-932.
4. Kutzbach, J. E. and B. L. Otto-Bliesner, 1982: The sensitivity of the African-Asian monsoonal climate to orbital parameter changes for 9000 yr B.P. in a low-resolution general circulation model. *J. Atmos. Sci.*, *39*, 1177-1188.
5. Otto-Bliesner, B. L., G. W. Branstator, and D. D. Houghton, 1982: A global low-order spectral general circulation model. Part I: Formulation and seasonal climatology. *J. Atmos. Sci.*, *39*, 929-948.
6. Otto-Bliesner, B. L., 1984: A global low-order spectral general circulation model. Part II: Diagnosis of the seasonal energetics. *J. Atmos. Sci.*, *41*, 508-523.
7. Ni, Y.-Q., B. L. Otto-Bliesner, and D. D. Houghton, 1985: The effects of orography on the global characteristics of momentum, heat, and moisture transports in a low-resolution spectral model. *Meteor. Sci. in China*, *2*, 1-13.
8. Ni, Y.-Q., B. L. Otto-Bliesner, and D. D. Houghton, 1986: The effects of topography on the simulated atmospheric energetics in a low-resolution general circulation model. *J. Atmos. Sci.*, *43*, 1535-1543.
9. Otto-Bliesner, B. L. and D. D. Houghton, 1986: The sensitivity of the seasonal climate of a general circulation model to ocean surface conditions and solar forcing. *J. Geophys. Res.*, *91*, 6682-6694.
10. Gallimore, R. E., B. L. Otto-Bliesner, and J. E. Kutzbach, 1986: The effects of improved parameterizations for orography, snowcover, surface fluxes, and condensational processes on the climate of a low-resolution GCM. *J. Atmos. Sci.*, *43*, 1961-1983.
11. Ni, Y.-Q., B. L. Otto-Bliesner, and D. D. Houghton, 1987: The sensitivity of the global general atmospheric circulation to the orography specification in a low-resolution spectral model. *Advances in Atmos. Sci.*, *4*, 1-12.
12. Otto-Bliesner, B. L., 1993: Tropical mountains and coal formation: A climate model study of the Westphalian (306 Ma). *Geophys. Res. Lett.*, *20*, 1947-1950.
13. Balsam, W. L., B. L. Otto-Bliesner, and B. C. Deaton, 1995: Eolian sedimentation in the Atlantic Ocean: Modern and LGM deposition patterns of hematite. *Paleoceanography*, *10*, 493-507.
14. Otto-Bliesner, B. L., 1995: Continental drift, runoff and weathering feedbacks: Implications from climate model experiments. *J. Geophys. Res.*, *100*, 11537-11548.
15. Otto-Bliesner, B. L., 1996: Initiation of a continental ice sheet in a global climate model (GENESIS). *J. Geophys. Res.*, *101*, 16909-16920.
16. Otto-Bliesner, B. L., and G. R. Upchurch, Jr., 1997: Vegetation-induced warming of high latitudes during the latest Cretaceous. *Nature*, *385*, 804-807.
17. Upchurch, G. R., Jr., B. L. Otto-Bliesner, and C. Scotese, 1998: Vegetation-atmosphere interactions and their role in global warming during the latest Cretaceous. *Phil. Trans. R. Soc. Lond. B*, *353*, 1-17.
18. Otto-Bliesner, B. L., 1999: El Niño/La Niña and Sahel precipitation during the middle Holocene. *Geophys. Res. Lett.*, *26*, 87-90.

19. Lomax, B.H., D.J. Beerling, G.R. Upchurch, and B.L. Otto-Bliesner, 2000: Terrestrial ecosystem responses to global environmental change across the Cretaceous-Tertiary boundary. *Geophys. Res. Lett.*, *27*, 2149-2152.
20. Lomax, B.H., D.J. Beerling, G.R. Upchurch, and B.L. Otto-Bliesner, 2001: Rapid (10-yr) recovery of terrestrial productivity in a simulation study of the terminal Cretaceous impact event. *Earth Planet. Sci. Lett.*, *192*, 137-144.
21. Meehl, G.A., P.R. Gent, J.M. Arblaster, B.L. Otto-Bliesner, E. Brady, and A. Craig, 2001: Factors that affect the amplitude of El Nino in global coupled models. *Clim. Dyn.*, *17*, 515-526.
22. Blackmon, M., Boville, B., Bryan, F., Dickinson, R., Gent, P., Kiehl, J., Moritz, R., Randall, D., Shukla, J., Solomon, S., Bonan, G., Doney, S., Fung, I., Hack, J., Hunke, E., Hurrell, J., Kutzbach, J., Meehl, G., Otto-Bliesner, B., Saravanan, R., Schneider, E., Sloan, L., Spall, M., Taylor, K., Tribbia, J., and Washington, W., 2001: The Community Climate System Model. *Bull. Am. Meteor. Soc.*, *82*, 2357-2376.
23. Otto-Bliesner, B.L., and E.C. Brady, 2001: Tropical Pacific variability in the NCAR Climate System Model. *J. Climate*, *14*, 3587-3601.
24. Otto-Bliesner, B.L., E.C. Brady, and C. Shields, 2002: Late Cretaceous ocean: Coupled simulations with the National Center for Atmospheric Research Climate System Model. *J. Geophys. Res.*, *107*, 10.1029/2001JD000821.
25. Liu, Z., S. Shin, B. Otto-Bliesner, J.E. Kutzbach, E.C. Brady, and D.E. Lee, 2002: Tropical cooling at the Last Glacial Maximum and extratropical ocean ventilation. *Geophys. Res. Lett.*, *29*, 10.1029/2001GL013938. Corrected figures 10.1029/2002GL016795.
26. Shin, S.I., Z. Liu, B.L. Otto-Bliesner, E.C. Brady, J.E. Kutzbach, and S.P. Harrison, 2003: A simulation of the Last Glacial Maximum climate using NCAR-CCSM. *Clim. Dyn.*, *20*, 127-151.
27. Smith, L.M., G.H. Miller, B. Otto-Bliesner, and S. Shin, 2003: Sensitivity of the Northern Hemisphere climate system to extreme changes in Holocene Arctic sea ice. *Quaternary Science Reviews*, *22*, 645-658.
28. Oh, H.-S., C. Ammann, P. Naveau, D. Nychka, and B.L. Otto-Bliesner, 2003: Multi-resolution time series analysis applied to solar irradiance and climate reconstructions. *J. Atmos. And Solar-Terr. Physics*, *65*, 191-201.
29. Shin, S.I., Z. Liu, B.L. Otto-Bliesner, J. E. Kutzbach, and S. Vavrus, 2003: Southern Ocean sea-ice control of the glacial North Atlantic thermohaline circulation. *Geophys. Res. Lett.*, *30*, DOI: 10.1029/2002GL015513.
30. Harrison, S.P., J.E. Kutzbach, Z. Liu, P.J. Bartlein, B. Otto-Bliesner, D. Muhs, I.C. Prentice, and R. Thompson, 2003: Mid-Holocene climates of the Americas: A dynamical response to changed seasonality. *Clim. Dyn.*, *20*, 663-688.
31. Wainer, I., A. Taschetto, J. Soares, A. Oliveira, B. Otto-Bliesner, and E. Brady, 2003: Intercomparison of heat fluxes in the South Atlantic. Part I: The seasonal cycle. *J. Climate*, *16*, 706-714.
32. Trenberth, K.E., and B.L. Otto-Bliesner, 2003: Toward integrated reconstruction of past climates. *Science*, *300*, 589-591.
33. Liu, Z., B. Otto-Bliesner, J. Kutzbach, L. Li, and C. Shields, 2003: Coupled climate simulation of the evolution of global monsoons in the Holocene. *J. Climate*, *16*, 2472-2490.

34. Otto-Bliesner, B.L., E.C. Brady, S. Shin, Z. Liu, and C. Shields, 2003: Modeling El Niño and its teleconnections during the last glacial-interglacial cycle. *Geophys. Res. Lett.*, *30*, 2198, DOI: 10.1029/2003GL018553.
35. Kaufman, D.S., T.A. Ager, N.J. Anderson, P.M. Anderson, J.T. Andrews, P.J. Bartlein, L.B. Brubaker, L.L. Coats, L.C. Cwynar, M.L. Duvall, A.S. Dyke, M.E. Edwards, W.R. Eisner, K. Gajewski, A. Geirsdóttir, F.S. Hu, A.E. Jennings, M.R. Kaplan, M.W. Kerwin, A.V. Lozhkin, G.M. MacDonald, G.H. Miller, C.J. Mock, W.W. Oswald, B.L. Otto-Bliesner, D.F. Porinchu, K. Rühland, J.P. Smol, E.J. Steig, and B.B. Wolfe, 2004: Holocene thermal maximum in the western Arctic. *Quaternary Science Reviews*, *23*, 529-560.
36. Joos, F., S. Gerber, I.C. Prentice, B.L. Otto-Bliesner, and P.J. Valdes, 2004: Transient simulations of Holocene atmospheric carbon dioxide and terrestrial carbon since the Last Glacial Maximum. *Global Biogeochemical Cycles*, *18*, GB2002, DOI: 10.1029/2003GB002156.
37. Wainer, I., A. Taschetto, B. Otto-Bliesner, and E. Brady, 2004: A numerical study of the impact of greenhouse gases on the South Atlantic Ocean. *Climatic Change*, *66*, 163-189.
38. Liu, Z., S.P. Harrison, J. Kutzbach, B. Otto-Bliesner, 2004: Global monsoons in the mid-Holocene and oceanic feedback. *Climate Dynamics*, *22*, 157-182.
39. Wainer, I., G. Clauzet, G., M.P. Ledru, E. Brady, and B. Otto-Bliesner, 2005: Last Glacial Maximum in South America: Paleoclimate proxies and model results. *Geophys. Res. Lett.*, *32*, L08702, doi:10.1029/2004GL021244.
40. Liu, Z., S.-I. Shin, R.S. Webb, W. Lewis, and B.L. Otto-Bliesner, 2005: Atmospheric CO₂ forcing on glacial thermohaline circulation and climate. *Geophys. Res. Lett.*, *32*, L02706, doi:10.1029/2004GL021929.
41. Gladstone, R. M., I. Ross, P. J. Valdes, A. Abe-Ouchi, P. Braconnot, S. Brewer, M. Kageyama, A. Kitoh, A. Legrande, O. Marti, R. Ohgaito, B. Otto-Bliesner, and G. Vettoretti, 2005: Mid-Holocene NAO: a PMIP2 model intercomparison. *Geophysical Research Letters*, *32*, L16707, doi: 10.1029/2005GL023596.
42. Crucifix, M., P. Braconnot, S. P. Harrison, B. Otto-Bliesner, 2005: Second phase of Paleoclimate Modeling Intercomparison Project, *EOS Transactions*, *86*, 264.
43. Zhao, Y., P. Braconnot, O. Marti, S.P. Harrison, C. Hewitt, A. Kitoh, Z. Liu, U. Mikolajewicz, B. Otto-Bliesner, S.L. Weber, 2005, A multi-model analysis of the role of the ocean on the African and Indian monsoon during the mid-Holocene, *Climate Dynamics*, *25*, 777-800, DOI 10.1007/s00382-005-0075-7.
44. Otto-Bliesner, B.L., S. Marshall, J. Overpeck, G. Miller, A. Hu, and CAPE Last Interglacial Project Members, 2006: Simulating Arctic climate warmth and icefield retreat in the last interglaciation. *Science*, *311*, 1751-1753.
45. Overpeck, J.T., B.L. Otto-Bliesner, G.H. Miller, D.R. Muhs, R. Alley, J.T. Kiehl, 2006: Paleoclimatic evidence for future ice sheet instability and rapid sea level rise. *Science*, *311*, 1747-1750.
46. Otto-Bliesner, B.L., E.C. Brady, G. Clauzet, R. Tomas, S. Levis, and Z. Kothavala, 2006: Last Glacial Maximum and Holocene climate in CCSM3. *J. Climate*, *19*, 2526-2544.
47. Otto-Bliesner, B.L., R. Tomas, E.C. Brady, C. Ammann, Z. Kothavala, and G. Clauzet, 2006: Climate sensitivity of moderate and low resolution versions of CCSM3 to preindustrial forcings. *J. Climate*, *19*, 2567-2583.

48. Masson-Delmotte, V., M. Kageyama, P. Braconnot, S. Charbit, G. Krinner, C. Ritz, E. Guilyardi, J. Jouzel, A. Abe-Ouchi, M. Crucifix, R.M. Gladstone, C.D. Hewitt, A. Kitoh, A. Legrande, O. Marti, U. Merkel, T. Motoi, R. Ohgaito, B.L. Otto-Bliesner, W.R. Peltier, I. Ross, P.J. Valdes, G. Vettoretti, N. Weber, and F. Wolk, 2006: Past and future polar amplification of climate change: climate model intercomparisons and ice-core constraints. *Climate Dynamics*, 26, 513-529.
49. Kageyama, M, A. Laine, A. Abe-Ouchi, P. Braconnot, E. Cortijo, M. Crucifix, A. de Vernal, J. Guiot, C.D. Hewitt, A. Kitoh, M. Kucera, O. Marti, R. Ohgaito, B.L. Otto-Bliesner, W. R. Peltier, A. Rosell-Mele, G. Vettoretti, N. Weber and Margo Project Members, 2006: Last Glacial Maximum temperatures over the North Atlantic, Europe, and western Siberia: a comparison between PMIP models, MARGO sea-surface temperatures and pollen-base reconstructions. *Quaternary Science Reviews*, 25, 2082-2102.
50. CAPE Last Interglacial Project Members, 2006: Last Interglacial Arctic warmth confirms polar amplification of climate change. *Quaternary Science Reviews*, 25, 1383-1400.
51. Diffenbaugh, N.S., C.M. Eakin, B.L. Otto-Bliesner, and M. Zhao, 2006: Introduction to the special issue "Glacial-interglacial climate of the past 160,000 years: New insights from data and models". *Palaeogeography, Palaeoclimatology, Palaeoecology*, 236, 1-4.
52. Ammann, C.M., F. Joos, D.S. Schimel, B.L. Otto-Bliesner, and R.A. Tomas, 2007: Solar influence on climate during the past millennium: results from transient simulations with the NCAR Climate System Model, *Proc. National Academy Sci.*, 104, 3713-3718.
53. Weber, S.L., S. S. Drijfhout, A. Abe-Ouchi, M. Crucifix, M. Eby, A. Ganopolski, S. Murakami, B. Otto-Bliesner, and W. R. Peltier, 2007: The modern and glacial overturning circulation in the Atlantic Ocean in PMIP coupled model simulations. *Climate of the Past*, 3, 51-64.
54. Otto-Bliesner, B.L., C.D. Hewitt, T.M. Marchitto, E. Brady, A. Abe-Ouchi, M. Crucifix, S. Murakami, and S.L. Weber, 2007: Last Glacial Maximum ocean thermohaline circulation: PMIP2 model intercomparisons and data constraints. *Geophysical Research Letters*, 34, L12706, doi:10.1029/2007GL029475.
55. Braconnot, P., B. Otto-Bliesner, S. Harrison, Abe-Ouchi, M. Crucifix, C. D. Hewitt, M. Kageyama, A. Kitoh, O. Marti, U. Merkel, T. Motoi, R. Ohgaito, W. R. Peltier, J. Valdes, L. Weber, Y. Zhao, 2007: Results of the PMIP2 coupled simulations of the mid-Holocene and Last Glacial Maximum. Part 1: experiments and large-scale features. *Climate of the Past*, 3, 261-277.
56. Braconnot, P., B. Otto-Bliesner, S. Harrison, Abe-Ouchi, M. Crucifix, C. D. Hewitt, M. Kageyama, A. Kitoh, O. Marti, U. Merkel, T. Motoi, R. Ohgaito, W. R. Peltier, P. Valdes, L. Weber, Y. Zhao, 2007: Results of the PMIP2 coupled simulations of the mid-Holocene and Last Glacial Maximum. Part 2: feedbacks with emphasis on the location of the ITCZ and mid- and high-latitude heat budgets. *Climate of the Past*, 3, 279-296.
57. Hu, A., B.L. Otto-Bliesner, G.A. Meehl, W. Han, C. Morrill, E.C. Brady, and B. Briegleb, 2008: Response of thermohaline circulation to freshwater forcing under present day and LGM conditions. *Journal of Climate*, 21, 2239-2258.
58. Clauzet, G., I. Wainer, A. Lazar, E. Brady, B Otto-Bliesner, 2007: A Numerical Study of the South Atlantic circulation at the Last Glacial Maximum, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 253, 509-528.

59. Lee, J.-E., I. Fung, D.J. DePaolo, and B. Otto-Bliesner, 2008: Water isotopes during the Last Glacial Maximum: New GCM calculations. *J. Geophys. Res.*, 113, D19109, doi:10.1029/2008JD009859.
60. Otto-Bliesner, B.L., R. Schneider, E. Brady, M. Kucero, et al., 2009: A comparison of PMIP-2 model simulations and the MARGO proxy reconstruction for tropical sea surface temperatures at Last Glacial Maximum, *Climate Dynamic*, 32, 799-815.
61. Murakami, S., R. Ohgaito, A. Abe-Ouchi, M. Crucifix, and B.L. Otto-Bliesner, 2009: Global scale energy and freshwater balance in glacial climate: A comparison of three PMIP2 LGM simulations, *Journal of Climate*, 21, 5008-5033.
62. Liu, Z., B.L. Otto-Bliesner, et al., 2009: Transient simulation of last deglaciation with a new mechanism for Bolling-Allerod warming, *Science*, 325, 310-314.
63. Schneider, D.P., C.M. Ammann, B.L. Otto-Bliesner, and D.S. Kaufman, 2009: Climate response to large, high-latitude and low-latitude volcanic eruptions in the Community Climate System Model, *Journal of Geophysical Research*, 114, D15101, doi:10.1029/2008JD011222.
64. Murphy, L.N., D.B. Kirk-Davidoff, N. Mahowald, and B.L. Otto-Bliesner, 2009: A numerical study of the climate response to lowered Mediterranean Sea level during the Messinian Salinity Crisis, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 279, 41-59.
65. Kaufman, D.S., D.P. Schneider, N.P. McKay, C.M. Ammann, R.S. Bradley, K.R. Briffa, G.H. Miller, B.L. Otto-Bliesner, J.T. Overpeck, B.M. Vintner, and Arctic Lakes 2k Project Members, 2009: Recent warming reverses long-term Arctic cooling. *Science*, 325, 1236-1239.
66. Timmermann, A., L. Menviel, Y. Okumura, A. Schilla, U. Merkel, A. Hu, B. Otto-Bliesner, M. Schulz, 2010, Towards a quantitative understanding of millennial-scale Antarctic Warming events, *Quaternary Science Review*, 29, 74-85.
67. Brandefelt, J., and B.L. Otto-Bliesner, 2009: Equilibration and variability in a Last Glacial Maximum climate simulation with CCSM3, *Geophysical Research Letters*, 36, L19712, doi:10.1029/2009GL040364.
68. Otto-Bliesner, B.L., and E.C. Brady, 2010: The sensitivity of the climate response to the magnitude and location of freshwater forcing: last glacial maximum experiments. *Quaternary Science Reviews*, 29, 56-73.
69. Hu, A, G. A. Meehl, B. L. Otto-Bliesner, C. Waelbroeck, W. Han, M-F. Loutre, K. Lambeck, J. X. Mitrovica and N. Rosenbloom, 2010: Influence of Bering Strait flow and North Atlantic circulation on glacial sea level changes, *Nature Geosciences*, 3, 118-121.
70. Haywood, A.M., H.J. Dowsett, B. Otto-Bliesner, M.A. Chandler, A.M. Dolan, D.J. Hill, D.J. Hunt, M.M. Robinson, N. Rosenbloom, U. Salzmann, and L.E. Sohl, 2010: Pliocene Model Intercomparison Project (PlioMIP): experimental design and boundary conditions (Experiment 1), *Geosci. Model. Dev.*, 3, 227-242.
71. PALSEA (PALEO SEA level working group), 2010: The sea-level conundrum: case studies from palaeo-archives. *Journal of Quaternary Science*, 25, 19-25.
72. Alley, R.B., Andrews, J.T., Clarke, G.K.C., Cuffey, K.M., Funder, S., Marshall, S.J., Mitrovica, J.X., Muhs, D.R., Otto-Bliesner, B.L., 2010: History of the Greenland Ice Sheet: Paleoclimatic insights. *Quaternary Science Reviews*, 29, 1728-1756.
73. Newman, L., T. Kiefer, B. Otto-Bliesner, and H. Wanner, 2010: The science and strategy of the Past Global Changes (PAGES) project. *Current Opinion in Environmental Sustainability*, 2, 1-9.

74. Masson-Delmotte, V, Stenni, B, Pol, K, Braconnot, P, Cattani, O, Falourd, S, Kageyama, M, Jouzel, J, Landais, A, Minster, B, Barnola, JM, Chappellaz, J, Krinner, G, Johnsen, S, Rothlisberger, R, Hansen, J, Mikolajewicz, U, Otto-Bliesner, B, 2010: EPICA Dome C record of glacial and interglacial intensities. *Quaternary Science Reviews*, 29, 113-128.
75. Cheng, J., Z. Liu, F. He, P.W. Guo, Z.X. Chen, and B. Otto-Bliesner, 2010: Model evidence for climatic impact of thermohaline circulation on China at the century scale. *Chinese Science Bulletin*, 55, 3215-3221.
76. Schmidt, G. A., Jungclaus, J. H., Ammann, C. M., Bard, E., Braconnot, P., Crowley, T. J., Delaygue, G., Joos, F., Krivova, N. A., Muscheler, R., Otto-Bliesner, B. L., Pongratz, J., Shindell, D. T., Solanki, S. K., Steinhilber, F., and Vieira, L. E. A., 2011: Climate forcing reconstructions for use in PMIP simulations of the last millennium (v1.0), *Geosci. Model Dev.*, 4, 33-45, doi:10.5194/gmd-4-33-2011.
77. Brady, E.C., and B.L. Otto-Bliesner, 2011: The role of meltwater-induced subsurface ocean warming in regulating the Atlantic Meridional Overturning in glacial climate simulations. *Climate Dynamics*, 37, 1517-1532.
78. Zhong, Y., G. Miller, B. Otto-Bliesner, M. Holland, D. Bailey, D. Schneider and A. Geirsdottir, 2011: Explosive volcanism as a trigger for abrupt multi-centennial climate change: a coupled sea-ice/ocean mechanism. *Climate Dynamics*, 37, 2373-2387.
79. Marcott, S.A., P.U. Clark, L. Padman, G.P. Klinkhammer, S.R. Springer, Z. Liu, B.L. Otto-Bliesner, A.E. Carlson, A. Ungerer, J. Padman, F. He, J. Cheng, and A. Schmittner, 2011: Ice-shelf collapse from subsurface warming as a trigger for Heinrich events. *Proc. Natl. Acad. Sci.*, 108, 10.1073/pnas.1104772108.
80. Haywood, A.M., H.J. Dowsett, M.M. Robinson, D K. Stoll, A.M. Dolan, D.J. Lunt, B. Otto-Bliesner, and M.A. Chandler, 2011: Pliocene Model Intercomparison Project (PlioMIP): experimental design and boundary conditions (Experiment 2). *Geosci. Model Dev.* 4, 571–577.
81. Cheng, J., Z. Liu, F. He, and B. Otto-Bliesner, 2011: Impact of North Atlantic - GIN Sea exchange on deglaciation evolution of Atlantic Meridional Overturning Circulation. *Clim. Past*, 7, 935-940.
82. McKay, N.P., J.T. Overpeck, and B.L. Otto-Bliesner, 2011: The Role of Ocean Thermal Expansion in Last Interglacial Sea Level Rise. *Geophysical Research Letters* 38, doi:10.1029/2011GL048280.
83. DiNezio, P., A. Clement, G. Vecchi, B. Soden, A.J. Broccoli, B. Otto-Bliesner, and P. Braconnot, 2011: The Response of the Walker Circulation to LGM forcing: Implications for detection in proxies. *Paleoceanography*, 26, PA3217, doi:10.1029/2010PA002083.
84. Morrill, C., A.J. Wagner, B.L. Otto-Bliesner, and N. Rosenbloom, 2011: Evidence for significant climate impacts in monsoonal Asia at 8.2 ka from multiple proxies and model simulations. *Journal of Earth Environment*, 2, 426-441.
85. Cheng, J., Z. Liu, F. He, B. Otto-Bliesner, and M. Wehrenberg, 2011: Simulated two-stage recovery of Atlantic Meridional Overturning Circulation during last deglaciation. *Geophysical Monograph 193: Understanding the Causes, Mechanisms, and Extent of Abrupt Climate Change*, 75-92.
86. Jin, L., F. Chen, C. Morrill, B. Otto-Bliesner, and N. Rosenbloom, 2012: Causes of early Holocene desertification in arid central Asia. *Climate Dynamics*, 38, 1577-1591.

87. Shakun, J.D., P.U. Clark, F. He, S. A. Marcott, A.C. Mix, Z. Liu, B. Otto-Bliesner, A. Schmittner, E. Bard, 2012: Global warming preceded by increasing carbon dioxide concentrations during the last deglaciation. *Nature*, 484, 49-55.
88. Jochum, M., A. Jahn, S. Peacock, D.A. Bailey, J.T. Fasullo, J. Kay, S. Levis, and B.L. Otto-Bliesner, 2012: True to Milankovitch: Glacial Inception in the new Community Climate System Model. *Journal of Climate*, 25, 2226-2239.
89. Carlson, A.E., D.J. Ulman, F.S. Anslow, F. He, P.U. Clark, Z. Liu, and B.L. Otto-Bliesner, 2012: Modeling the Surface Mass-Balance Response of the Laurentide Ice Sheet to Bølling Warming and Its Contribution to Meltwater Pulse 1A. *Earth and Planetary Science Letters*, 315-316, 24-29.
90. Miller, G.H., Á. Geirsdóttir, Y. Zhong, D.J. Larsen, B.L. Otto-Bliesner, M.M. Holland, D.A. Bailey, K.A. Refsnider, S.J. Lehman, J.R. Southon, C. Anderson, H. Bjornsson, T. Thordarson, 2012: Abrupt onset of the Little Ice Age triggered by volcanism and sustained by sea-ice/ocean feedbacks. *Geophysical Research Letters*, 39, doi:10.1029/2011GL050168
91. Clark, P.U., Shakun, J.D., Baker, P.A., Bartlein, P.J., Brewer, Brook, E.J., Carlson, A.E., Cheng, H., Kaufman, D., Liu, Z., Marchitto, T.M., Mix, A.C., Morrill, C., Otto-Bliesner, B., Pahnke, K., Russell, J.M., Adkins, J.F., Colman, S.C., Curry, W.B., Flower, B., Johnson, T.C., Lynch-Stieglitz, J., Markgraf, V., McManus, J.F., Moreno, P., Stott, L., Whitlock, C., 2012. A proxy-based synthesis of global climate evolution during the last deglaciation. *PNAS*, 109, E1134-E1142.
92. Dowsett, H.J., M.M. Robinson, A.M. Haywood, D.J. Hill, A.M. Dolan, D.K. Still, W.-L. Chan, A. Abe-Ouchi, M.A. Chandler, N.A. Rosenbloom, B.L. Otto-Bliesner, F.J. Bragg, D.J. Lunt, K.M. Foley, and C.R. Riesselman, 2012: Assessing confidence in Pliocene sea surface temperatures to evaluate predictive models. *Nature Climate Change*, 2, 365-371.
93. Braconnot, P., S.P. Harrison, M. Kageyama, P.J. Bartlein, V. Masson-Delmotte, A. Abe-Ouchi, B. Otto-Bliesner, and Y. Zhao, 2012: Evaluation of climate models using palaeoclimatic data. *Nature Climate Change*, 2, 417-424.
94. Liu, Z., A.E. Carlson, F. He, E.C. Brady, B.L. Otto-Bliesner et al., 2012: Younger Dryas cooling and the Greenland climate response to CO₂. *PNAS*, 109, 11101-11104.
95. Veloz, S., Williams, J., He, F., Otto-Bliesner, B., Liu, Z., 2012: No-Analog Climates and Shifting Realized Niches During the Late Quaternary: Implications for 21st-Century Predictions by Species Distribution Models. *Global Change Biology*, 18, 1698-1713.
96. Blois, J.L., J.W. Williams, M.C. Fitzpatrick, S. Ferrier, S.D. Veloz, F. He, Z. Liu, G. Manion, and B. Otto-Bliesner, 2013: Modeling the climatic drivers of spatial patterns in vegetation composition since the Last Glacial Maximum. *Ecography*, 36, 460-473.
97. Williams, J.B., H. Kharouba, S. Veloz, M. Vellend, J. McLachlan, Z. Liu, B. Otto-Bliesner, F. He, 2013: The Ice Age Ecologist: Testing Methods for Reserve Prioritization During the Last Global Warming. *Global Ecology and Biogeography*, 22, 289-301.
98. Hu, A., G. A. Meehl, W. Han, A. Timmermann, B.L. Otto-Bliesner, Z. Liu, W.M. Washington, W. Large, A. Abe-Ouchi, M. Kimoto, K. Lambeck, and B. Wu, 2012: The Bering Strait and glacial climate stability. *PNAS*, 109, 6417-6422.
99. Murray, D.S., A.E. Carlson, B.S. Singer, F.S. Anslow, F. He, M. Caffee, S.A. Marcott, Z. Liu, and B.L. Otto-Bliesner, 2012: Northern Hemisphere forcing of the last deglaciation in southern Patagonia. *Geology*, 40, 631-634.

100. Brady, E.C., B.L. Otto-Bliesner, J.E. Kay, and N. Rosenbloom, 2013: Sensitivity to glacial forcing in the CCSM4. *Journal of Climate*, 26, 1901-1924.
101. Landrum, L., B.L. Otto-Bliesner, E.R. Wahl, A. Conley, P.J. Lawrence, N. Rosenbloom, and H. Teng, 2013: Last Millennium climate and its variability in CCSM4. *Journal of Climate*, 26, 1085-1111.
102. Schmidt, M.W., P. Chang, J.E. Hertzberg, T.R. Them II, L. Ji, and B.L. Otto-Bliesner, 2012: Impact of abrupt deglacial climate change on tropical Atlantic subsurface temperatures. *PNAS*, 109, 14348-14352.
103. Haywood, A.M., D. J. Hill, A. M. Dolan, B. L. Otto-Bliesner, F. Bragg, W.-L. Chan, M. A. Chandler, C. Contoux, H. J. Dowsett, A. Jost, Y. Kamae, G. Lohmann, D. J. Lunt, A. Abe-Ouchi, S. J. Pickering, G. Ramstein, N. A. Rosenbloom, U. Salzmann, L. Sohl, C. Stepanek, H. Ueda, Q. Yan, and Z. Zhang, 2013: Large-scale features of Pliocene climate: results from the Pliocene Model Intercomparison Project. *Clim. Past*, 9, 191-209.
104. PALAEOSENS Project members, 2012: Making sense of paleoclimate sensitivity. *Nature*, 491, 683-691.
105. He, F. J.D. Shakun, P.U. Clark, A.E. Carlson, Z. Liu, B.L. Otto-Bliesner, and J.E. Kutzbach, 2013: Northern Hemisphere forcing of Southern Hemisphere climate during the last deglaciation. *Nature*, 494, 81-85.
106. Ault, T. R., J. E. Cole, J. T. Overpeck, G. T. Pederson, S. S. George, B. Otto-Bliesner, C. A. Woodhouse, and C. Deser, 2013: The continuum of hydroclimate variability in western North America during the last millennium. *Journal of Climate*, 26, 5863-5878.
107. Otto-Bliesner, B. L., N. Rosenbloom, E. J. Stone, N. McKay, D. Lunt, E. C. Brady, and J. T. Overpeck, 2013: How well do models reproduce Last Interglacial warmth? New model-data comparisons, *Philosophical Transactions of the Royal Society*, 371, 20130097, 10.1098.
108. Kageyama, M., U. Merkel, B. Otto-Bliesner, M. Prange, A. Abe-Ouchi, G. Lohmann, D. M. Roche, J. Singarayer, D. Swingedouw, and X. Zhang, 2013: Climatic impacts of fresh water hosing under Last Glacial Maximum conditions: a multi-model study. *Clim. Past*, 9, 935-953.
109. Morrill, C., A. N. LeGrande, H. Renssen, P. Bakker, and B. L. Otto-Bliesner, 2013: Model sensitivity to North Atlantic freshwater forcing at 8.2 ka. *Clim. Past*, 9, 955-968.
110. Lunt, D. J., A. Abe-Ouchi, P. Bakker, A. Berger, P. Braconnot, S. Charbit, N. Fischer, N. Herold, J. H. Jungclaus, V. C. Khon, U. Krebs-Kanzow, G. Lohmann, B. Otto-Bliesner, W. Park, M. Pfeiffer, M. Prange, R. Rachmayani, H. Renssen, N. Rosenbloom, B. Schneider, E. J. Stone, K. Takahashi, W. Wei, and Q. Yin, 2013: A multi-model assessment of last interglacial temperatures. *Clim. Past*, 9, 191-209.
111. Lu, H., S. Yi, Z. Liu, J. A. Mason, D. Jiang, J. Cheng, T. Stevens, Z. Xu, E. Zhang, L. Jin, Z. Zhang, Z. Guo, Y. Wang, and B. Otto-Bliesner, 2013: Variation of East Asian monsoon precipitation during the past 21 k.y. and potential CO₂ forcing. *Geology*, 9, 1023-1026, doi:10.1130/G34488.1.
112. Wagner, A.J., C. Morrill, B.L. Otto-Bliesner, N. Rosenbloom, and K.R. Watkins, 2013: Model support for forcing of the 8.2 ka event by meltwater from the Hudson bay ice dome. *Climate Dynamics*, 41, 2855-2873, doi: 10.1007/s00382-013-1706-z.
113. Rosenbloom, N.A., B. L. Otto-Bliesner, E. C. Brady, and P. J. Lawrence, 2013: Simulating the mid-Pliocene Warm Period with the CCSM4 model. *Geosci. Model Dev.*, 6, 549-561.

114. Colleoni, S. Masina, A. Cherchi, A. Navarra, C. Ritz, V. Peyaud, and B. Otto-Bliesner, 2012: Modelling Northern Hemisphere ice sheets distribution during MIS5 and MIS7 glacial inception. *Clim. Past*, 10, 269-291.
115. Ballantyne, A.P., Y. Axford, G.H. Miller, B.L. Otto-Bliesner, N. Rosenbloom, and J.W.C. White, 2013: The amplification of Arctic terrestrial surface temperatures by reduced sea-ice extent during the Pliocene. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 386, 59-67.
116. Zhang, R., Q. Yan, Z. S. Zhang, D. Jiang, B. L. Otto-Bliesner, A. M. Haywood, D. J. Hill, A. M. Dolan, C. Stepanek, G. Lohmann, C. Contoux, F. Bragg, W.-L. Chan, M. A. Chandler, A. Jost, Y. Kamae, A. Abe-Ouchi, G. Ramstein, N. A. Rosenbloom, L. Sohl, and H. Ueda, 2013: East Asian monsoon climate simulated in the PlioMIP. *Clim. Past*, 9, 2085-2099.
117. Zhang, Z.-S., K. H. Nisancioglu, M. A. Chandler, A. M. Haywood, B. L. Otto-Bliesner, G. Ramstein, C. Stepanek, A. Abe-Ouchi, W.-L. Chan, F. J. Bragg, C. Contoux, A. M. Dolan, D. J. Hill, A. Jost, Y. Kamae, G. Lohmann, D. J. Lunt, N. A. Rosenbloom, L. E. Sohl, and H. Ueda, 2013: Mid-Pliocene Atlantic meridional overturning circulation not unlike modern? *Clim. Past*, 9, 1495-1504.
118. Hill, D. J., A. M. Haywood, D. J. Lunt, S. J. Hunter, F. J. Bragg, C. Contoux, C. Stepanek, L. Sohl, N. A. Rosenbloom, W.-L. Chan, Y. Kamae, Z. Zhang, A. Abe-Ouchi, M. A. Chandler, A. Jost, G. Lohmann, B. L. Otto-Bliesner, G. Ramstein, and H. Ueda, 2013: Evaluating the dominant components of warming in Pliocene climate simulations. *Clim. Past*, 10, 79-90.
119. Saito, K., T. Sueyoshi, S. Marchenko, V. Romanovsky, B. Otto-Bliesner, J. Walsh, N. Bigelow, A. Hendricks, and K. Yoshikawa, 2013: LGM permafrost distribution: how well can the latest PMIP multi-model ensembles perform reconstruction? *Clim. Past*, 9, 1697-1714.
120. Dowsett, H.J., K.M. Foley, D.K. Stoll, M.A. Chandler, L.E. Sohl, M. Bentsen, B. L. Otto-Bliesner, and 22 others, 2013: Sea surface temperature of the mid-Piacenzian ocean: a data-model comparison. *Nature Sci. Rep.*, 3, doi:10.1038/srep02013.
121. Salzmann, U., A.M. Dolan, A.M. Haywood, A.Abe-Ouchi, F.J. Bragg, W.-L. Chan, M.A. Chandler, D.J. Lunt, B. Otto-Bliesner, M. Pound, and N. Rosenbloom, 2013: Challenges in quantifying Pliocene terrestrial warming revealed by data-model discord. *Nature Climate Change*, 3, 969-974.
122. Liu, Z., X. Wen, E.C. Brady, B. Otto-Bliesner, G. Yu, H. Lu, H. Cheng, Y. Wang, W. Zheng, Y. Ding, R.L. Edwards, J. Cheng, W. Liu, and H. Yang, 2014: Chinese cave records and the East Asian summer monsoon. *Quaternary Science Reviews*, 83, 115-128.
123. Back, L., K. Russ, Z. Liu, K. Inoue, J. Zhang, and B. Otto-Bliesner, 2013: Global hydrological cycle response to rapid and slow global warming. *Journal of Climate*, 26, 8781-8786.
124. Wainer, I., Prado, M. Khodri, and B. Otto-Bliesner, 2014: Reconstruction of the Subtropical South Atlantic Dipole index for the past 12,000 years from surface temperature proxy. *Nature Sci. Rep.*, 3, doi:10.1038/srep05291.
125. Buizert, V., J.P. Severinghaus, F. He, B.S. Lecavalier, P. Kindler, M. Leuenberger, A. Carlson, B. Vinther, V. Masson-Delmotte, J.W.C. White, Z. Liu, B. Otto-Bliesner, and E. Brook, 2014: Greenland temperature response to climate forcing during the last deglaciation. *Science*, 345, 1177-1180.
126. Liu, Z., J. Zhu, Y. Rosenthal, X. Zhang, B.L. Otto-Bliesner, A. Timmermann, R.S. Smith, G. Lohmann, W. Zhang, and O. Timm, 2014: The Holocene temperature conundrum. *PNAS*, 111, E3501-E3505.
127. Morrill, C., E.M. Ward, A.J. Wagner, B.L. Otto-Bliesner, and N. Rosenbloom, 2014: Large sensitivity to freshwater forcing location in 8.2 ka simulations. *Paleoceanography*, 29, 930-945.

128. Capron, E., A. Govin, E.J. Stone, V. Masson-Delmotte, S. Mulitza, B. Otto-Bliesner, T.L. Rasmussen, L.C. Sime, C. Waelbroeck, and E.W. Wolff, 2014: Temporal and spatial structure of multi-millennial temperature changes at high latitudes during the Last Interglacial. *Quaternary Science Reviews*, 103, 116-133.
129. Nace, T.E., P.A. Baker G. S. Dwyer, C.G. Silva, C.A. Rigsby, S.J. Burns, L. Giosan, B. Otto-Bliesner, Z. Liu, and J. Zhu, 2014: The role of North Brazil Current transport in the paleoclimate of the Brazilian Nordeste margin and paleoceanography of the western tropical Atlantic during the late Quaternary. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 1415, 3-13
<http://dx.doi.org/10.1016/j.palaeo.2014.05.030>.
130. Jomelli, V. et al., 2014: A major advance of tropical Andean glaciers during the Antarctic cold reversal. *Nature*, 513, 224-228.
131. Cheng, J., Z. Liu, F. He, B. Otto-Bliesner, E. Brady, and J. Lynch-Stieglitz, 2014: Model-proxy comparison for overshoot phenomenon of Atlantic thermohaline circulation at Bolling-Allerod. *Chinese Science Bulletin*, 59, 4510-4515.
132. Dolan, A.M., S.J. Hunter, D.J. Hill, A.M. Haywood, S.J. Koenig, B.L. Otto-Bliesner, et al., 2015: Using results from the PlioMIP ensemble to assess our understanding of the Greenland Ice Sheet during the warm Pliocene. *Climate of the Past*, 11, 403-424.
133. Albani, S., N. Mahowald, A. Perry, R. Scanza, C. Zender, N. Heavens, V. Maggi, J. Kok, and B. Otto-Bliesner, 2014: Improved dust representation in the Community Atmosphere Model. *Journal of Advances in Modeling Earth Systems*, 6, 541-570.
134. Shanahan, T.M., N.P. McKay, K.A. Hughen, J.T. Overpeck, B. Otto-Bliesner, C.W. Heil, J. King, C.A. Scholz, J. Peck, 2014: The time-transgressive demise of the African Humid Period. *Nature Geoscience*, 8, 140-144.
135. Liu, Z., Z. Lu, X. Wen, B. Otto-Bliesner, A. Timmermann, and K.M. Cobb, 2015: Evolution and forcing mechanisms of El Niño over the last 21,000 years. *Nature*, 515, 550-553.
136. Otto-Bliesner, B.L., J.M. Russell, P.U. Clark, Z. Liu, J.T. Overpeck, B. Konecky, P. deMenocal, S.E. Nicholson, F. He, and Z. Lu, 2014: Coherent changes of southeastern equatorial and northern African rainfall during the last deglaciation. *Science*, 346, 1223-1227.
137. Jahn, A. K. Lindsay, X. Giraud, N. Gruber, B. L. Otto-Bliesner, Z. Liu, and E. C. Brady, 2015: Carbon isotopes in the ocean model of the Community Earth System Model (CESM1). *Geosci. Model Dev.*, 8, 2419-2434.
138. Albani, S., N. M. Mahowald, G. Winckler, R. F. Anderson, L. I. Bradtmiller, B. Delmonte, R. François, M. Goman, N. G. Heavens, P. P. Hesse, S. A. Hovan, K. E. Kohfeld, H. Lu, V. Maggi, J. A. Mason, P. A. Mayewski, D. McGee, X. Miao, B. L. Otto-Bliesner, A. T. Perry, A. Pourmand, H. M. Roberts, N. Rosenbloom, T. Stevens, and J. Sun, 2015: Twelve thousand years of dust: the Holocene global dust cycle constrained by natural archives. *Clim. Past*, 11, 869-903.
139. Otto-Bliesner, B.L., E.C. Brady, J. Fasullo, A. Jahn, L. Landrum, S. Stevenson, N. Rosenbloom, A. Mai, G. Strand, 2016: Climate variability and change since 850 C.E.: An ensemble approach with the Community Earth System Model (CESM). *Bulletin of the American Meteorological Society*.
140. Stevenson, S. B. Otto-Bliesner, J. Fasullo, and E. Brady, 2016: El Niño like hydroclimate responses to Last Millennium volcanic eruptions. *Journal of Climate*, 29, 2907-2921.

141. Shakun, J.D., P.U. Clark, F. He, N.A. Lifton, Z. Liu, and B.L. Otto-Bliesner, 2015: Regional and global forcing of glacier retreat during the last deglaciation. *Nature Communications*, 6.
142. Howell, F.W., A.M. Haywood, B.L. Otto-Bliesner et al., 2016: Arctic sea ice simulation in the PlioMIP ensemble. *Clim. Past*, 12, 749-767.
143. Abe-Ouchi, A. et al., 2015: Ice-sheet configuration in the CMIP5/PMIP3 Last Glacial Maximum experiments. *Geosci. Model Dev.*, 8, 3621-3637.
144. Wong, C.I., G.L. Potter, I.P. Montanez, B.L. Otto-Bliesner, P. Behling, and J.L. Oster, 2016: Evolution of moisture transport to the western US during the last deglaciation. *Geophysical Research Letters*, 43, 3468-3477.
145. Past Interglacials Working Group PAGES, 2016: Interglacials of the last 800,000 years. *Reviews of Geophysics*, 54, 162-219.
146. Kleppin, H., M. Jochum, B. Otto-Bliesner, C.A. Shields, and S. Yeager, 2015: Stochastic atmospheric forcing as a cause of Greenland climate transitions. *Journal of Climate*, 28, 7741-7763.
147. Haywood, A.M., et al., 2016: The Pliocene Model Intercomparison Project (PlioMIP) Phase 2: scientific objectives and experimental design. *Climate of the Past*, 12, 663-675.
148. Gregoire, L.J., B.L. Otto-Bliesner, P.J. Valdes, and R. Ivanovic, 2016: Abrupt Bölling warming and ice saddle collapse contributions to the Meltwater Pulse 1a rapid sea level rise. *Geophysical Research Letters*, 43, 9130-9137.
149. DiNezio, P.N., A. Timmermann, J.E. Tierney, F.-F. Jin, B. Otto-Bliesner, N. Rosenbloom, B. Mapes, R. Neale, R.F. Ivanovic, and A. Montenegro, 2016: The climate response of the Indo-Pacific warm pool to glacial sea level. *Paleoceanography*, 31, 866-894.
150. Tabor, C.R., C.J. Poulsen, D.J. Lunt, N.A. Rosenbloom, B.L. Otto-Bliesner, P.J. Markwick, E.C. Brady, A. Farnsworth, and R. Feng, 2016: The cause of late Cretaceous cooling: a multi-model/proxy comparison. *Geology*, 44, 963-966.
151. Otto-Bliesner, B.L., A. Jahn, R. Feng, E.C. Brady, A. Hu, and M. Lofverstrom, 2017: Amplified North Atlantic warming in the late Pliocene by changes in Arctic gateways. *Geophysical Research Letters*, 44, 957-964.
152. Capron, E., A. Govin, R. Feng, B.L. Otto-Bliesner, and E.W. Wolff, 2017: Critical evaluation of climate syntheses to benchmark CMIP6/PMIP4 127 ka Last Interglacial simulations in the high-latitude regions. *Quaternary Science Reviews*, 168, 137-150.
153. Lunt, D.J. et al., 2017: The DeepMIP contribution to PMIP4: experimental design for model simulations of the EECO, PETM, and pre-PETM (version 1.0). *Geoscientific Model Development*, 10, 889-901.
154. Stevenson, S., J.T. Fasullo, B.L. Otto-Bliesner, R.A. Tomas, and C.C. Gao, 2017: Role of eruption season in reconciling model and proxy responses to tropical volcanism, *PNAS*, 11, 1822-1826.
155. Stevenson, S., A. Capotondi, J. Fasullo and B. Otto-Bliesner, 2017: Forced Changes to 20th Century ENSO Diversity in a Last Millennium Context, *Climate Dynamics*, doi:10.1007/s00382-017-3573-5.
156. Fordham, D.A., F. Saltre, S. Haythorne, T.M.L. Wigley, B.L. Otto-Bliesner, K.C. Chan, and B.W. Brook, 2017: PaleoView: a tool for generating continuous climate projections spanning the last 21,000 years at regional and global scales. *Ecography*, 40, doi: 10.1111/ecog.03031.

157. Feng, R., B.L. Otto-Bliesner, T.L. Fletcher, C.R. Tabor, A.P. Ballantyne, and E.C. Brady, 2017: Amplified Late Pliocene terrestrial warmth in northern high latitudes from greater radiative forcing and closed Arctic Ocean gateways. *Earth and Planetary Science Letters*, 466, 129-138.
158. PAGES Hydro2k Consortium, 2017: Comparing proxy and model estimates of hydroclimate variability and change over the Common Era. *Climate of the Past*, 13, 1851-1900.
159. Fasullo, J.T., R. Tomas, S. Stevenson, B. Otto-Bliesner, E. Brady, E. Wahl, 2017: The amplifying influence of increased ocean stratification on a future year without a summer, *Nature Communications*, 8, 1236, doi:10.1038/s41467-017-01302-z.
160. Kageyama, M. et al., 2017: The PMIP4 contribution to CMIP6 – Part 4: Scientific objectives and experimental design of the PMIP4-CMIP6 Last Glacial experiments and PMIP4 sensitivity experiments. *Geoscientific Model Development*, 10, 4035-4055, <https://doi.org/10.5194/gmd-10-4035-2017>.
161. Jungclaus, J.H. et al., 2017: The PMIP4 contribution to CMIP6 – Part 3: the Last Millennium, Scientific Objective and Experimental Design for the PMIP4 *past1000* simulations. *Geoscientific Model Development*, 10, 4005-4033, <https://doi.org/10.5194/gmd-10-4005-2017>.
162. Otto-Bliesner, B.L. et al., 2017: The PMIP4 contribution to CMIP6 – Part 2: Two interglacials, Scientific objectives and experimental design of the PMIP4-CMIP6 Holocene and Last Interglacial simulations. *Geoscientific Model Development*, 10, 3979-4003, <https://doi.org/10.5194/gmd-10-3979-2017>.
163. Zhu, J., Z.Y. Liu, E. Brady, B. Otto-Bliesner, J.X. Zhang, J. Nusbaumer, T.E. Wong, A. Jahn, and D. Noone, 2017: Investigating the direct meltwater effect in terrestrial oxygen-isotope paleoclimate records using an isotope-enabled Earth system model. *Geophysical Research Letters*, 44, 12501-12510, DOI: 10.1002/2017GL076253.
164. Zhu, J., Z.Y. Liu, E.C. Brady, B.L. Otto-Bliesner, S.A. Marcott, J. Zhang, A. Wang, D. Noone, R. Tomas, J. Nusbaumer, T. Wong, A. Jahn, and C. Tabor, 2017: Reduced ENSO variability at the LGM revealed by an isotope-enabled Earth system model. *Geophysical Research Letters*, 44, 6984-6992.
165. Kageyama, M., P. Braconnot, S.P. Harrison, A.M. Haywood, J. Jungclaus, B.L. Otto-Bliesner, J.Y. Peterschmitt et al., 2018: The PMIP4 contribution to CMIP6 - Part 1: Overview and over-arching analysis plan. *Geoscientific Model Development*, 11, 1033-1057.
166. Fasullo, J.T., B. Otto-Bliesner, and S. Stevenson, 2017: ENSO's changing influence on temperature and wildfire in a warming climate, *Geophysical Research Letters*, 45, 9216-9225.
167. Fischer, H., et al., 2018: Palaeoclimate constraints on a world with post-industrial warming of 2 degrees and beyond. *Nature Geoscience*, 11, 474-485.
168. Nolan, C. et al., 2018: Past and future global transformation of terrestrial ecosystems under climate change, *Science*, 361, 920-923.
169. DiNezio, P.N., J.E. Tierney, B.L. Otto-Bliesner, A. Timmermann, T. Bhattacharya, N. Rosenbloom, and E. Brady, 2018: Glacial changes in tropical climate amplified by the Indian ocean. *Science Advances*, 4, eaat9658.
170. Burke, K.D., J.W. Williams, M.A. Chandler, A.M Haywood, D.J. Lunt, B.L. Otto-Bliesner, 2018: A novel future: Pliocene and Eocene provide best analogues for new-future climates. *PNAS*, 115, 13288-13293.

171. Tabor, C., B. Otto-Bliesner, E. Brady, J. Nusbaumer, J. Zhu, M. Erb, A. Wong, Z. Liu, and D. Noone, 2018: Interpreting precession driven $\delta^{18}O$ variability in the South Asian monsoon region. *JGR-Atmospheres*, 123. doi:10.1029/2018JD028424.
172. Stevenson, S, J. Overpeck, J. T. Fasullo, S. Coats, L. Parsons, B. Otto-Bliesner, T. R. Ault, G. Loope, J. Cole, 2018: Climate Variability, Volcanic Forcing, and Last Millennium Climate Extremes, *Journal of Climate*, 31, 4309-4327.
173. Haywood, A., P. Valdes, T. Aze, N. Barlow, A. Burke, A. Dolan, A. von der Heydt, D. Hill, S. Jamieson, B. Otto-Bliesner, U. Salzmann, E. Saupe, and J. Voss, 2019: What can palaeoclimate models do for you? *Earth Systems and Environment*, <https://doi.org/10.1007/s41748-019-00093-1>.
174. Tabor, C.R., R. Feng, and B.L. Otto-Bliesner, 2019: Climate responses to the splitting of a supercontinent: Implications for the breakup of Pangea. *Geophysical Research Letters*, 46, 6059-6068.
175. Brady, E.C., S. Stevenson, D. Bailey, Z. Liu, D. Noone, J. Nusbaumer, B.L. Otto-Bliesner, C. Tabor, R. Tomas, A. Wong, J. Zhang, and J. Zhu, 2019: The connected isotopic water cycle in the Community Earth System Model, version 1. *Journal of Advances in Modeling Earth Systems*, 11. <https://doi.org/10.1029/2019MS001663>.
176. Tierney, J.E., A.M. Haywood, R. Feng, T. Bhattacharya, and B.L. Otto-Bliesner, 2019: Pliocene warmth consistent with greenhouse gas forcing. *Geophysical Research Letters*, 46, 9136-9144. <https://doi.org/10.1029/2019GL083802>
177. Feng, R., B. Otto-Bliesner, Y. Xu, E. Brady, T. Fletcher, and A. Ballantyne, 2019: Contributions of aerosol-cloud interactions to mid-Piacenzian seasonally sea ice-free Arctic Ocean. *Geophysical Research Letters*. <https://doi.org/10.1029/2019GL083960>.
178. Marcello, F., I. Wainer, P.R. Gent, B.L. Otto-Bliesner, and E.C. Brady, 2019: South Atlantic surface boundary current system during the Last Millennium in the CESM-LME: the Medieval Climate Anomaly and Little Ice Age. *Geosciences*, 9, doi:10.3390/geosciences9070299.
179. Meniel, L., ... B.L. Otto-Bliesner, 2019: The Penultimate deglaciation: protocol for PMIP4 transient numerical simulations between 140 and 127 ka. *Geoscientific Model Development*, 12, 3649-3685.
180. Stevenson, S., B.L. Otto-Bliesner, E.C. Brady, J. Nusbaumer, C. Tabor, R. Tomas, D. Noone, and A. Liu, 2019: Volcanic eruption signatures in the isotope-enabled Last Millennium Ensemble. *Paleoceanography and Paleoclimatology*, 34, 1534-1552.
181. Scussolini, P., et al., 2019: Empirical and modeling agreement on boreal precipitation of a past warmer world. *Science Advances*, 5, eaax7047.
182. Capron, E., ... B.L. Otto-Bliesner, ..., 2019: Challenges and research priorities to understand interactions between climate, ice sheet and global mean sea level during past interglacials. *Quaternary Science Reviews*, 219, 308-311.
183. Tabor, C., C. Bardeen, B.L. Otto-Bliesner, R. Garcia, and B. Toon, 2020: Drivers and consequences of the End-Cretaceous impact winter. *Geophysical Research Letters*, 47, e60121. <https://doi.org/10.1029/2019GL085572>.
184. Fasullo, J.T., B.L. Otto-Bliesner, S. Stevenson, 2019: The Influence of Volcanic Aerosol Meridional Structure on Monsoon Responses over the Last Millennium. *Geophysical Research Letters*. DOI: 10.1029/2019GL084377.

185. Dowsett, H.J., M.M. Robinson, K.M. Foley, T.D. Herbert, B.L. Otto-Bliesner, and W. Spivey, 2019: The mid-Piacenzian of the North Atlantic Ocean. *Stratigraphy*, 16, 119-144.
186. Danabasoglu, G. ... B.L. Otto-Bliesner, ... , 2020: The Community Earth System Model version 2. *JAMES*, 12, DOI: 10.1029/2019MS001916.
187. Lofverstrom, M. ... B.L. Otto-Bliesner, ... , 2020: An efficient ice-sheet/Earth system model spin-up procedure for CESM2.1 and CISM2.3: description, evaluation, and broader applicability. *JAMES*, 12, e2019MS002033
188. Feng, J., B. Otto-Bliesner, E. Brady, and N. Rosenbloom, 2020: Increasing Earth System Sensitivity in Mid-Pliocene simulations from CCSM4 to CESM2, *JAMES*, 12, e2019MS002033.
189. Brown, S.C., T.M.L. Wigley, B.L. Otto-Bliesner, C. Rahbek, and D.A. Fordham, 2020: Persistent Quaternary climate refugia are hospices for biodiversity in the Anthropocene. *Nature Climate Change*, 10, 244-+.
190. Zhu, J., C.J. Poulsen, B.L. Otto-Bliesner, Z. Liu, E.C. Brady, and D. Noone, 2020: Simulation of early Eocene water isotopes using an Earth system model and its implication for past climate reconstruction. *EPSL*, 537, DOI: 10.1016/j.epsl.2020.116164
191. Tabor, C., C. Bardeen, B.L. Otto-Bliesner, R. Garcia, and B. Toon, 2020: Causes and climatic consequences of the impact winter at the Cretaceous-Paleogene boundary. *Geophysical Research Letters*, 47, e60121. <https://doi.org/10.1029/2019GL085572>.
192. He, C., Z. Liu, J. Zhu, J. Zhang, S. Gu, B.L. Otto-Bliesner, E. Brady, C. Zhu, Y. Jin, and J. Sun, 2020: North Atlantic subsurface temperature response controlled by effective freshwater input in "Heinrich" events. *EPSL*, 539.
193. Joos, F., et al., 2020: N₂O changes from the Last Glacial Maximum to the preindustrial – Part 2: terrestrial N₂O emission and carbon-nitrogen cycle interactions. *Biogeosciences*, 17, 3511-3543.
194. Pontes, G.M. et al., 2020: Drier tropical and subtropical Southern Hemisphere in the mid-Pliocene Warm Period. *Scientific Reports*.
195. Scussolini, P. et al., 2020: Global river discharge and floods in the warmer climate of the Last Interglacial. *Geophysical Research Letters*, 47, e2020GL089375.
196. McClymont, E.L. et al., 2020: Lessons from a high-CO₂ world: an ocean view from ~3 million years ago. *Climate of the Past*, 16, 1599-1615.
197. Zhu, J., C.J. Poulsen, and B.L. Otto-Bliesner, 2020: High climate sensitivity in CMIP6 model not supported by paleoclimate. *Nature Climate Change*, 10, 378-379.
198. Fordham, D.A., et al., 2020: Using paleo-archives to safeguard biodiversity under climate change. *Science*, 369, 1072.
199. Coats, S., J.E. Smerdon, S. Stevenson, J.T. Fasullo, B. Otto-Bliesner, T.R. Ault, and J.E. Herrera Estrada, 2020: Paleoclimate constraints on the spatiotemporal character of past and future droughts in climate models. *Journal of Climate*, accepted.
200. Bacmeister, J.T. et al., 2020: CO₂ increase experiments using the Community Earth System Model (CESM): Relationship to climate sensitivity and comparison of CESM1 to CESM2. *JAMES*, accepted.
201. Tierney, J.E. et al., 2020: The Future of Past Climate. *Science*, accepted.

Peer Reviewed Publications – in review

202. Otto-Bliesner, B.L., E.C. Brady et al., 2020: Large-scale features of Last Interglacial climate: Results from evaluating the *lig127k* simulations for CMIP6-PMIP4. *Climate of the Past*, in review.
203. Otto-Bliesner, B.L., E.C. Brady et al., 2020: A comparison of the CMIP6 *midHolocene* and *lig127k* simulations in CESM2. *Paleoceanography and Paleoclimatology*, in review.
204. Haywood, A.M. ... B.L. Otto-Bliesner, ... , 2020: A return to large-scale feature of Pliocene climate: the Pliocene Model Intercomparison Project Phase 2. *Climate of the Past*, in review.
205. Kageyama, M. ... B.L. Otto-Bliesner, ... , 2020: A multi-model CMIP6 study of Arctic sea ice at 127ka: Sea ice data compilation and model differences. *Climate of the Past*, in review.
206. Brierley, C.M. ... B.L. Otto-Bliesner, ... , 2020: Large-scale features and evaluation of the PMIP4-CMIP6 *midHolocene* simulations. *Climate of the Past*, in review.
207. Lunt, D.J. ... B.L. Otto-Bliesner, ... , 2020: DeepMIP: Model intercomparison of early Eocene climatic optimum (EECO) large-scale climate features and comparison with proxy data. *Climate of the Past*, in review.
208. Brown, J.R. ... B.L. Otto-Bliesner, ... , 2020: Comparison of past and future simulations of ENSO in CMIP5/PMIP3 and CMIP6/PMIP4 models . *Climate of the Past*, in review.
209. He, C. Z. Liu, B.L. Otto-Bliesner, E.C. Brady, et al.: 2020: The Hydroclimate Footprint Accompanying Pan-Asian Monsoon Water Isotope Evolution during the Last Deglaciation. *Scientific Reports*, in review.
210. Stevenson, S. A.T. Wittenberg, J. Fasullo, S. Coats, and B.L. Otto-Bliesner, 2020: Understanding diverse model projections of future extreme El Nino. *Journal of Climate*, in review.

Selected Unrefereed Publications

1. Washington, W. M., B. Otto-Bliesner, and G. Williamson, 1977: January and July simulation experiments with the 2.5° latitude-longitude version of the NCAR general circulation model. Volume 1 – Text (39 pp.), Volume 2 – Figures (61 pp.). NCAR Technical Note 123+STR.
2. Otto-Bliesner, B. L., E. Becker, and N. Becker, 1994: Atlas of Phanerozoic paleoclimate simulated by a global climate model. CESH Technical Report #1. Center for Earth System History, University of Texas at Arlington, 149 pp.
3. Otto-Bliesner, B.L., S. Joussaume, P. Braconnot, S.P Harrison, and A. Abe-Ouchi, 2009: Modeling and data synthesis of past climates, *EOS*, 11, 93.
4. Otto-Bliesner, B.L., and M. Schulz, 2009: New methods to integrate paleodata into climate models, Data-assimilation techniques for paleoclimate data, Meeting Report, Vienna, Austria, 25 April 2009, *EOS*, 90, 300-301.
5. Otto-Bliesner, B.L., M. Lofverstrom, P. Bakker, and R. Feng, 2019: Arctic warming and the Greenland ice sheet during the Last Interglacial. *Science Highlights: Paleo Constraints on Sea-Level Rise*, *PAGES Magazine*, 27.

SERVICE

Professional Societies, Funding Agencies and Government

2018- Member, US CLIVAR Paleo AMOC Task Team 5

- 2018- Member, AGU College of Fellows
- 2017- International Scientific Advisory Board, Netherlands Earth System Science Centre
- 2017- Executive Team, WCRP Grand Challenge on Regional Sea Level Change and Coastal Impacts
- 2016- International Scientific Advisory Board, PalMOD, German Climate Modeling Initiative: From the Last Interglacial to the Anthropocene – Modeling a Complete Glacial Cycle
- 2017 Invited Participant, NSF-Supported Workshop on Greenland Ice Sheet Stability in Buffalo, NY
- 2016-19 Chair/Member, AGU Fellows Committee for Paleoceanography and Paleoclimatology Section
- 2016- Member, The Deep-Time Model Intercomparison Project (DeepMIP)
- 2015- Steering Committee Member, PAGES Working Groups: QUIGS (QUaternary InterGlacialS and PALSEA (PALEo constraints on SEA level rise)
- 1995- Steering Committee Member, PMIP
- 2017 The Bjerknes Centre for Climate Research Evaluation Committee
- 2017 Member, AGU Emiliani Lecture Committee
- 2016 Invited Participant, Scoping Meeting for IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC), Monaco
- 2013-14 Review Panel Chair, German Federal Ministry of Education and Research Funding Initiative on Paleoclimate Research
- 2012 Member, AGU Ewing Medal Committee
- 2011-15 Scientific Steering Committee Member, NERC Consortium Grant, iGlass - Using Interglacials to Assess Future Sea Level Scenarios
- 2010-14 Lead Author, IPCC Fifth Assessment Report, Chapter 5: Information from Paleoclimate Archives
- 2010 Invited participant, Scoping Meeting for IPCC Synthesis Report for the Fifth Assessment Report
- 2010 Science Steering Committee, NSF Workshop on Projecting Future Sea-Level Rise from Land-Ice Loss
- 2010 Panel member, NSF AGS Proposal Review Panel
- 2010 Invited participant, DOE BERAC Grand Challenges Workshop
- 2009 Session Chair, "Informing the Future by Understanding the Past," IARU Conference on Climate Change, Global Risks, Challenges & Decisions, Copenhagen
- 2009-10 PAGES OSM Special Issue Editor, *Climate of the Past*
- 2009 Program Committee, PAGES 3rd Open Science Meeting
- 2009 Program Committee, PAGES 1st Young Scientists Meeting
- 2008-12 AMQUA Council Member
- 2008-11 Topical Editor, *Geoscientific Model Development*
- 2008 Participant, NRC Workshop on Future Priorities for the U.S. Climate Change Science Program
- 2007 Advisory Panel Member, NSF Post ESH Panel
- 2007 Committee, AGU Policy Statement "Human Impacts on Climate"
- 2007 Workshop Participant, NSF Office of Polar Programs (OPP) Antarctic Integrated System Science (AISS) "Setting a Course for Antarctic Integrated System Science"
- 2007 Review Panel Member, NOAA Climate Change Data and Detection FY 2008 Proposals

- 2006 Committee Member, Surface Temperature Reconstructions for the Past 1000-2000 Years: Synthesis of Current Understanding and Challenges for the Future, National Academy of Sciences
- 2005-07 Lead Author, IPCC Fourth Assessment Report, Chapter 6: Paleoclimate
- 2005 Co-convener, Chapman Conference, Tropical-Extratropical Climatic Teleconnections, A Long-term Perspective
- 2004 Program Committee, A Workshop on Deep-Time Paleoclimatology
- 2004-08 Review Panel Member, NOAA Paleoclimatology Program
- 2004-06 Guest Editor, *Palaeogeography, Palaeoclimatology, Palaeoecology*, "Glacial-Interglacial Climate of the Past 160,000 Years: New Insights from Data and Models
- 2004-05 Steering Committee Member, Geosystems Initiative, National Science Foundation
- 2002-03 Program Committee, 2002 and 2003 Fall AGU Meeting
- 1999-2017 Co-convener/Session chair, Fall AGU Meetings
- 1999-2004 Steering Committee Member, PARCS (Paleoenvironmental Arctic Sciences), National Science Foundation
- 1999 Planning Committee Member and Co-Convener, IUGG99, On the Use of Coupled Models for Practical Paleoclimate Studies (MC11)
- 1998 Invited Participant, NSF Arctic Paleosciences Meeting. Drafted "The Arctic Paleosciences in the Context of Global Change Research, Science Implementation Plan for Paleoenvironmental Arctic Sciences (PARCS), Arctic System Science (ARCSS) and Earth System History (ESH) Programs", National Science Foundation
- 1996 Invited Participant, Workshop on Terrestrial Aspects of Earth System History (TESH), National Science Foundation
- 1992-2002 Associate Editor, *Palaeoclimates*
- 1992-93 Advisory Committee Member, Marine Aspects of Earth System History (MESH), National Science Foundation Ocean Sciences
- 1993 Program Committee and Session Chair, Fourth Conference on Global Change Studies
- 1992 Co-convener, Paleoclimate Modeling Session, International Research Workshop for Project PANGEA

Reviewer of: manuscripts for Journal of Climate, Nature, Science, Paleoceanography, Journal of Geophysical Research, Geophysical Research Letter, Geology, Global and Planetary Change, Journal of the Meteorological Society of Japan, Quaternary Science Reviews, Climate of the Past, Geoscientific Model Development, IPCC Fourth and Sixth Assessment Reports, and Book Chapters; proposals for National Science Foundation (Earth System History/Paleoclimate, Climate Dynamics, Earth Sciences, Geology and Paleontology, Antarctic Research, Arctic Natural Sciences, Life in Extreme Sciences), NOAA Climate and Global Change, Natural Environment Research Council (United Kingdom)

NCAR and University

- 2013- Lead Scientist, CESM Last Millennium Project
- 2009- Lead Scientist, TraCE and ITrACE projects
- 2006- Reviews, ASP Fellowship applicants

- 2016-17 Chair, Land Ice Ladder Track Scientist Recruitment, and Committee Member, Land Ice Project Scientist Recruitment
- 2016 Organizing Committee, NCAR Networking & Discovery Day
- 2014-16 NSF Facilities Ad Hoc Committee
- 2014 Committee Member, UCAR Strategic Plan Goal Team 2
- 2014 HAO Director Search Committee
- 2013 Organizing Team Member for retreat and writing of "CGD Strategic Plan (2013-2018)"
- 2013 Panel Member for Asian Circle + WORLS Event. "Where NCAR Was, and Where We Are Going: A Conversation with Female Scientists"
- 2013 HAO Advisory Panel
- 2012-14 Chair, NCAR Allocations Panel for Yellowstone NSC and ASD requests
- 2012 NCAR Distinguished Appointments Subcommittee
- 2012 Participant, NCAR-NSF Retreat, Washington D.C.
- 2011 UCAR Presidential Search Committee
- 2009-11 NCAR Appointments Review Group
- 2004 CGD Scientist I Interview Committee
- 2003 Member, UCAR Site Visit, Columbia University
- 2002 CGD Retreat Organizing Committee
- 2001 Scientist I Search Committee, Land Biogeochemistry
- 2000-10 CISL High Performance Computing Advisory Panel (CHAP)
- 1999-2000 Coordinator, CGD Seminar Series
- 1992-96 Member of various university and department faculty committees, University of Texas at Arlington

Summer Schools and Guest Lectures

- 2018 The 15th Urbino Summer School in Paleoclimatology
- 2017 Boston College, Science and Ethics of Climate Change: "Modeling (Past) Climates"
- 2017 The 14th Urbino Summer School in Paleoclimatology
- 2016 The 13th Urbino Summer School in Paleoclimatology
- 2015 NCAR ASP Summer Colloquium, Climate, Space Climate, and the Couplings Between
- 2015 The 12th Urbino Summer School in Paleoclimatology
- 2014 CIRES seminar series/ATOC 7500 class, 'Reading the IPCC report'
- 2009 8th International NCCR Climate Summer School, Grindelwald
- 2009 ASP Summer School – The Art of Climate Modeling
- 2009 Portland Community College, Course on Global Climate Change (videotaped)
- 2002/3 Climate and Global Change Geoscience Education Workshop
- 2002 Ted Scripps Fellows
- 2000/1 University of Colorado, Geology 5420, Quaternary Dating Methods

RESEARCH GRANTS

1. *Principal Investigator*, "Paleoclimate Reconstructions for the Paleozoic Era (570-245 Million Years Ago)," Center for High Performance Computing, University of Texas, 1992-1995.
2. *Principal Investigator*, "Paleoclimatic Models of Phanerozoic Paleogeography with Predictions of Coastal Upwelling," Consortium of Oil Companies, 1992.
3. *Principal Investigator*, "Paleovegetation and Global Climate Change Across the Cretaceous-Tertiary Boundary," Advanced Research program, Texas Coordinating Board, 1994-1995.
4. *Principal Investigator*, "Modeling the Effects of an Ice Sheet on the Climate of a Supercontinent," Atmospheric Sciences Division, NSF ATM, 1993-1996.
5. *Principal Investigator*, "NCAR Paleoclimate Modeling Program", NSF Special Funds, 1997-1999.
6. *Collaborating Scientist*, NSF proposal: "A Collaborative Effort Toward Adding an Interactive Dynamical Vegetation Component to the NCAR CCSM-Land Model," PI - Robert Gallimore and John Kutzbach, University of Wisconsin, 2001-2003.
7. *Academic Partner*, "Acquisition of High Performance Computing Systems to Support a Partnership in Modeling Earth System History, lead institution - Penn State University, 2001-2003.
8. *Principal Investigator*, "Ocean-Atmosphere Interaction in the South Atlantic in Different Climates," NSF Special Funds, 2001-2004.
9. *Co-Principal Investigator*, "Collaborative Research: A Synthesis of the Last 2000 Years of Climatic Variability from Arctic Lakes," NSF ARC, 3/2005-2/2009. (Collaborative with 13 institutions).
10. *Co-Principal Investigator*, "Assessing Global Climate Response of the NCAR CCSM3: CO₂ Sensitivity and Abrupt Climate Change," 2007 DOE Innovative and Novel Computational Impact on Theory and Experiment (INCITE) Award, 2007-2009, co-PIs: Z. Liu, University of Wisconsin, D. Erickson, ORNL, and R. Jacobs, ANL)
11. *Co-Principal Investigator*, "Climate Sensitivity to Arctic Freshwater Forcing: A Model-Data Comparison of the 8.2 ka Event," NSF OPP, 9/2007-8/2011, co-PI: C. Morrill, CIRES.
12. *Co-Principal Investigator*, "Volcanism in the Arctic SysTem (VAST): Geochronology and Climate Impacts," NSF OPP, 9/2007-8/2011, collaborative with Universities of Colorado, Massachusetts, Iceland, Bergen, Copenhagen, and Edinburgh, and SUNY Buffalo.
13. *Co-Principal Investigator*, "A Collaborative Proposal: Simulating and Understanding Abrupt Climate-Ecosystem Changes During Holocene with NCAR-CCSM3," DOE Program Notice DE-PS02-08ER08-05: Abrupt Climate Change Modeling: Climate Change Prediction Program, 8/2008-7/2011, co-PI: Z. Liu, University of Wisconsin.
14. *Co-Principal Investigator*, "Transient Climate Evolution of the last 21,000 years -- Understanding Climate Sensitivity and Abrupt Climate Change using CCSM3 (TraCE-21,000)," NSF Paleo Perspectives on Climate Change (P2C2), 7/2010-6/2013, co-PIs: Z. Liu and Anders Carlson, University of Wisconsin.
15. *Co-Principal Investigator*, "Assessing Global Climate Response of the NCAR CCSM3: CO₂ Sensitivity and Abrupt Climate Change," 2009 DOE Innovative and Novel Computational Impact on Theory and Experiment (INCITE) Award, 2009-2012, co-PIs: Z. Liu, University of Wisconsin, D. Erickson, ORNL, and R. Jacobs, ANL).
16. *Co-Principal Investigator*, "The Past Global Changes (PAGES) Project," NSF EAR, 8/2010-9-2014, PI: T. Kiefer, PAGES International Project Office.

17. *Co-Principal Investigator*, "WSC - Category 1: Water Sustainability and Climate in the Great Lakes Region of East Africa," NSF-EAR, 10/2010-9/2011, PI: T.C. Johnson, University of Minnesota-Duluth.
18. *NCAR Principal Investigator*, "Collaborative Project: Development of an Isotope-Enabled CESM for Testing Abrupt Climate Change." DOE SciDAC, 9/2011-8/2014, co-PIs: Z. Liu, University of Wisconsin, A. Gettelman, S. Peacock, M. Vertenstein, NCAR.
19. *NCAR Principal Investigator*, "CESM Paleoclimate Working Group Deep Time Paleoclimate Liaison Position to Support Community Use of the CESM." NSF-EAR, 3/2012-2/2013.
20. *NCAR Principal Investigator*, "EaSM2: Collaborative Research on Quantifying and Conveying the Risk of Prolonged Drought in Coming Decades." NSF AGS-CR, 2/2013-1/2018, co-PIs: J. Overpeck, J. Cole, and D. Liverman, University of Arizona.
21. *Principal Investigator*, "Collaborative Research: Isotope-enabled Transient Climate Evolution of the last 21,000 years (iTRACE21) Understanding Deglacial Climate/Isotope Changes using iCESM." NSF P2C2, co-PIs: Z. Liu, University of Wisconsin, P. Clark, Oregon State University.
22. *Principal Investigator*, "Collaborative Research: Arctic Temperature Amplification during the Middle Pliocene (ArcAMP): Assessing the interaction among feedback mechanisms." NSF Polar Programs, co-PI: A. Ballantyne, University of Montana.
23. *Principal Investigator*, "Modeling Long-Term Changes in Climate, Ice Sheets and Sea Level: Using the Paleo Record to Understand Possibilities for the Future." DOE SciDAC, co-PIs: W. Lipscomb, LANL; Shawn Marshall, University of Calgary.