

Curriculum Vitae
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Benjamin S. Cramer

Paleoceanography/Orbital climate and stratigraphy

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Education:

- 2002, Ph.D., Rutgers University, Department of Geological Sciences. Thesis: Milankovitch Cycles and Comet Catastrophes: Carbon Isotope Variations in the Late Paleocene–Early Eocene. Graduate committee: K.G. Miller (advisor), D.V. Kent, M.-P. Aubry, J.D. Wright, W.A. Berggren.
- 1998, M.S., Rutgers University, Department of Geological Sciences. Thesis: The Late Paleocene Thermal Maximum, Bass River, NJ: Neritic Response to a Runaway Greenhouse Event. K.G. Miller, advisor.
- 1995, A.B. cum laude, Columbia College of Columbia University, Geological Science/Russian Language and Literature.

Professional Experience:

- 2009- Research Scientist, Theiss Research.
- 2004-2010 Courtesy Research Associate, University of Oregon.
- 2002–2004 JSPS Postdoctoral Fellow, Tohoku University, Japan.
- 2001–2002 Schlanger Ocean Drilling Fellow, Rutgers University.
- 2001–2002 Lecturer, Geological Modeling, Rutgers University.
- 2000–2002 technical assistance, Stable Isotope Lab (J.D. Wright), Rutgers University.
- 1998–2001 NSF Graduate Research Fellow, Rutgers University.
- 1999 Lecturer, Honors Intro. Geology Lab, Rutgers University.
- 1998 Cruise, R/V Cape Hatteras, multi- and single channel seismics.
- 1996–2000 Sedimentologist, NJ Coastal Plain Drilling Project, ODP Leg 174AX.
- 1996–1998 Teaching assistant (Intro. Geology Lab, Stratigraphy Lab), Rutgers University.
- 1995 Research assistant to P.B. deMenocal, Lamont-Doherty Earth Observatory.
- 1995 Cruise, R/V Ewing, hydrothermal fluid flow, Juan de Fuca Ridge.

Awards, Fellowships, Invited talks:

- 2010, Invited Speaker, 10th International Conference on Paleoceanography, La Jolla, CA, USA: *Eocene–Oligocene development of the ACC, engine of deep ocean ventilation*
- 2004, Finalist, Council of Graduate Schools/University Microfilms International Distinguished Dissertation Award in Math, Physical Sciences, and Engineering.
- 2002, Japan Society for the Promotion of Science Postdoctoral Fellowship for Foreign Researchers.

2001, Schlanger Ocean Drilling Fellowship, Joint Oceanographic Institutions.
1998, National Science Foundation Graduate Research Fellowship.

Professional Societies:

Member, International Association for Mathematical Geology
Member, American Geophysical Union.
Member, Geological Society of America.
Member, American Association for the Advancement of Science

Current Research:

Manuscripts:

In review:

Cramer, B.S., K.G. Miller, P.J. Barrett, and J.D. Wright, Late Cretaceous–Neogene trends in deep ocean temperature and continental ice volume: reconciling records of benthic foraminiferal geochemistry ($\delta^{18}\text{O}$ and Mg/Ca) with sea level history, *Journal of Geophysical Research – Oceans*, in review.

Miller, K.G., J.V. Browning, A.Kulpecz, M.Kominz, T.R. Naish, Y.Rosenthal, **B.S. Cramer**, W.R. Peltier, S.Sosdian, and J.D. Wright, The high tide of the warm Pliocene: Implications of global sea level for Antarctic deglaciation, *Science*, in review.

Funding:

Cramer, B.S., Collaborative Research: Reorganization of deepwater circulation in response to the opening of Southern Ocean passages in the middle/late Eocene (40-33 Ma), National Science Foundation OCE0927663, \$120,802, 9/1/09–8/31/12.

Articles published:

2011

Peer reviewed:

33. Katz, M.E., **B.S. Cramer**, J.R. Toggweiler, G.Esmay, C.Liu, K.G. Miller, Y.Rosenthal, B.S. Wade, and J.D. Wright, Impact of Antarctic Circumpolar Current development on late Paleogene ocean structure, *Science*, 332(6033), 1076–1079, doi: 10.1126/science.1202122, 2011.

2010:

Peer reviewed:

32. Katz, M.E., **B.S. Cramer**, A. Franzese, B. Honisch, K.G. Miller, Y. Rosenthal, and J.D. Wright, Traditional and emerging geochemical proxies in foraminifera, *The Journal of Foraminiferal Research*, **40**, 165–192, doi: 10.2113/gsjfr.40.2.165, 2010.

31. Harris, A.D., K.G. Miller, J.V. Browning, P.J. Sugarman, R.K. Olsson, **B.S. Cramer**, and J.D. Wright, Integrated stratigraphic studies of Paleocene–lowermost Eocene sequences, New Jersey Coastal Plain: Evidence for glacioeustatic control, *Paleoceanography*, **25**, PA3211, doi: 10.1029/2009PA001800, 2010.

2009:

Peer reviewed:

30. **Cramer, B.S.**, J.R. Toggweiler, J.D. Wright, M.E. Katz, K.G. Miller, Ocean overturning since the Late Cretaceous: Inferences from a new benthic foraminiferal isotope compilation, *Paleoceanography*, **24**, PA4216, doi: 10.1029/2008PA001683, 2009.
29. Miller, K.G., J.D. Wright, M.E. Katz, J.V. Browning, B.S. Wade, **B.S. Cramer**, and Y. Rosenthal, Passing a climate threshold at the Eocene-Oligocene transition: Antarctic Ice takes the driver's seat, in Koeberl, C., and Montanari, A. (eds.), *The Late Eocene Earth: Hothouse, icehouse, and Impacts*. Geological Society of America, Special Paper No. 452, 169–178, 2009.
28. Pusz, A.E., K.G. Miller, J.D. Wright, M.E. Katz, **B.S. Cramer**, D.V. Kent, Stable Isotopic Response to Late Eocene Extraterrestrial Impacts, in Koeberl, C., and Montanari, A. (eds.), *The Late Eocene Earth: Hothouse, icehouse, and Impacts*. Geological Society of America, Special Paper No. 452, 83–95, 2009.
27. Wright, J.D., R.E. Sheridan, K.G. Miller, J. Uptegrove, **B.S. Cramer**, J.V. Browning, Late Pleistocene Sea level on the New Jersey Margin: Implications to Eustasy and Deep-sea Temperature, *Global and Planetary Change SEALAIX Special Issue*, **66**, 93–99, doi: 10.1016/j.gloplacha.2008.03.013, 2009.

2008:

Peer reviewed:

26. Katz, M.E., K.G. Miller, J.D. Wright, B.S. Wade, J.V. Browning, **B.S. Cramer**, and Y. Rosenthal, Stepwise transition from the Eocene greenhouse to the Oligocene icehouse. *Nature Geoscience*, **1**, 329–334, doi: 10.1038/ngeo179, 2008.
25. Miller, K.G., J.D. Wright, M.E. Katz, J.V. Browning, **B.S. Cramer**, B.S. Wade, and S.F. Mizintseva, A view of Antarctic ice-sheet evolution from sea-level and deep-sea isotope changes during the Late Cretaceous-Cenozoic, in Cooper, A.K., P.J. Barrett, H. Stagg, B. Storey, E. Stump, W. Wise, and the 10th ISAES editorial team (eds.) *Antarctica: A Keystone in a Changing World, Proceedings of the 10th International Symposium on Antarctic Earth Sciences*. The National Academies Press, Washington, DC, 55–70, 2008.

2005:

Peer reviewed:

24. **Cramer, B.S.** and D.V. Kent, Bolide Summer: Implications of a hypothesized comet impact trigger for the Paleocene/Eocene thermal maximum, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **224**, 144-166, doi:10.1016/j.palaeo.2005.03.040, 2005.

23. Katz, M.E., J.D. Wright, K.G. Miller, **B.S. Cramer**, K. Fennel, and P.G. Falkowski, Biological overprint of the geological carbon cycle, *Marine Geology*, **217**, 323-338, doi: 10.1016/j.margeo.2004.08.005, 2005.
22. Falkowski, P.G., M.E. Katz, A.J. Milligan, K. Fennel, **B.S. Cramer**, M.P. Aubry, R.A. Berner, M.J. Novacek, and W.M. Zapol, The rise of oxygen over the past 205 million years and the evolution of large placental mammals, *Science*, **309**, 2202–2204, doi: 10.1126/science.1116047.
21. Miller, K.G., M.A. Kominz, J.V. Browning, J.D. Wright, G.S. Mountain, M.E. Katz, P.J. Sugarman, **B.S. Cramer**, N. Christie-Blick, and S.F. Pekar, The Phanerozoic record of global sea-level change, *Science*, **310**, 1293–1298, doi: 10.1126/science.1116412, 2005.
20. Kaiho, K., Z.-Q. Chen, T. Ohashi, T. Arinobu, K. Sawada, and **B.S. Cramer**, A negative carbon isotope anomaly associated with the earliest Lopingian (Late Permian) mass extinction, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **223**, 172–180, doi: 10.1016/j.palaeo.2005.04.013, 2005.

2003:

Peer reviewed:

19. **Cramer, B.S.**, J.D. Wright, D.V. Kent, and M.-P. Aubry, Orbital climate forcing of $\delta^{13}\text{C}$ excursions in the late Paleocene–early Eocene (Chronos C24n–C25n), *Paleoceanography*, **18**, 1097, doi: 10.1029/2003PA000909, 2003.
18. Kent, D.V., **B.S. Cramer**, L. Lanci, D. Wang, J.D. Wright, and R. Van der Voo, A case for a comet impact trigger for the Paleocene/Eocene thermal maximum and carbon isotope excursion, *Earth and Planetary Science Letters*, **211**, 13–26, doi: 10.1016/S0012-821X(03)00188-2, 2003.
17. Dupuis, C., M.-P. Aubry, E. Steurbaut, W.A. Berggren, K. Ouda, R. Magioncalda, **B.S. Cramer**, D.V. Kent, R.P. Speijer, and C. Heilmann-Clausen, The Dababiya Quarry section: Lithostratigraphy, clay mineralogy, geochemistry and paleontology, *Micropaleontology*, **49** supplement no. 1 (The Upper Paleocene–Lower Eocene of the Upper Nile Valley: Part 1, Stratigraphy, edited by K. Ouda and M.-P. Aubry), 41–59, 2003.
16. Aubry, M.-P., W.A. Berggren, J.A. Van Couvering, J. Ali, H. Brinkhuis, **B. Cramer**, D.V. Kent, C.C. Swisher, III, P.D. Gingerich, C. Heilmann-Clausen, R.W.O'B. Knox, P. Laga, E. Steurbaut, L.D. Stott and M. Thiry, Chronostratigraphic Terminology at the Paleocene/Eocene Boundary, in S.L. Wing, P.D. Gingerich, E. Thomas and B. Schmitz (Eds.), *Causes and Consequences of Globally Warm Climates in the Early Paleogene*, GSA Special Paper 369, Boulder, CO (Geological Society of America), 551–566, 2003.

Non-peer reviewed:

15. Kent, D.V., **B.S. Cramer**, L. Lanci, D. Wang, J.D. Wright, and R. Van der Voo, Reply to a comment on “A case for a comet impact trigger for the Paleocene/Eocene thermal maximum and carbon isotope excursion” by G.R. Dickens and J.M. Francis, *Earth and Planetary Science Letters*, **217**, 201–205, doi: 10.1016/S0012-821X(03)00569-7, 2003.

14. Miller, K.G., J.V. Browning, P.J. Sugarman, P.P. McLaughlin, M.A. Kominz, R.K. Olsson, J.D. Wright, **B.S. Cramer**, S.J. Pekar, and Van Sickle, W., 174AX Leg summary: Sequences, sea level, tectonics, and aquifer resources: Coastal plain drilling, in K.G. Miller, P.J. Sugarman, J.V. Browning, et al., *Proceedings of the Ocean Drilling Program, Initial Reports, 174AX (suppl.)*, College Station, TX (Ocean Drilling Program), 1–38, 2003.
13. Miller, K.G., P.P. McLaughlin, J.V. Browning, R.N. Benson, P.J. Sugarman, Hernandez, J., K.W. Ramsey, S.J. Baxter, M.D. Feigenson, M.-P. Aubry, D.H. Monteverde, **B.S. Cramer**, M.E. Katz, T.E. McKenna, S.A. Strohmeier, S.F. Pekar, Uptegrove, J., Cobbs, G., Cobbs, G., III, and Curtin, S.E., Bethany Beach Site, in K.G. Miller, P.J. Sugarman, J.V. Browning, et al., *Proceedings of the Ocean Drilling Program, Initial Reports, 174AX (suppl.)*, College Station, TX (Ocean Drilling Program), 1–84, 2003.

2002:

Peer reviewed:

12. **Cramer, B.S.**, Milankovitch Cycles and Comet Catastrophes: Carbon Isotope Variations in the Late Paleocene–Early Eocene, Ph.D. Thesis, Rutgers University, Geological Sciences, New Brunswick, NJ, 116 p., 2002.
11. Olsson, R.K., K.G. Miller, J.V. Browning, J.D. Wright and **B.S. Cramer**, Sequence Stratigraphy and Sea Level Change across the Cretaceous–Tertiary Boundary on the New Jersey Passive Margin, in C. Koeberl and K.G. MacLeod, *Catastrophic Events and Mass Extinctions: Impacts and Beyond*, GSA Special Paper 356, Boulder, CO (Geological Society of America), 97–108, 2002.

2001:

Peer reviewed:

10. **Cramer, B.S.**, Latest Paleocene–earliest Eocene cyclostratigraphy: using core photographs for reconnaissance geophysical logging, *Earth and Planetary Science Letters*, **186**, 231–244, doi: 10.1016/S0012-821X(01)00249-7, 2001.
9. Katz, M.E., **B.S. Cramer**, G.S. Mountain, S. Katz and K.G. Miller, Uncorking the bottle: did thermal dissociation or mechanical disruption trigger the latest Paleocene methane release?, *Paleoceanography*, **16**, 549–562, doi: 10.1029/2000PA000615, 2001.

Non-peer reviewed:

8. Miller, K.G., P.J. Sugarman, J.V. Browning, S.F. Pekar, M.E. Katz, **B.S. Cramer**, D. Monteverde, J. Uptegrove, P.P. McLaughlin Jr., S.J. Baxter, M.-P. Aubry, R.K. Olsson, B. Van Sickle, K. Metzger, M.D. Feigenson, S. Tiffin, F. McCarthy, Ocean View Site, in K.G. Miller, P.J. Sugarman, J.V. Browning, et al., *Proceedings of the Ocean Drilling Program, Initial Reports, 174AX (suppl.)*, College Station, TX (Ocean Drilling Program), 1–72, 2001.

2000:

Peer reviewed:

7. Aubry, M.-P., **B.S. Cramer**, K.G. Miller, J.D. Wright, D.V. Kent and R.K. Olsson, Late Paleocene event chronology; unconformities, not diachrony, *Bulletin de la Société géologique de France*, **171**, 367–378, 2000.

Non-peer reviewed:

6. **Cramer, B.S.**, K.G. Miller, J.D. Wright, M.-P. Aubry and R.K. Olsson, Neritic records of the latest Paleocene thermal maximum from New Jersey, *GFF*, **122**, 38–39, 2000.

1999:

Peer reviewed:

5. **Cramer, B.S.**, M.-P. Aubry, K.G. Miller, R.K. Olsson, J.D. Wright and D.V. Kent, An exceptional chronologic, isotopic, and clay mineralogic record of the latest Paleocene thermal maximum, Bass River, NJ, ODP 174AX, *Bulletin de la Société géologique de France*, **170**, 883–897, 1999.

Non-peer reviewed:

4. Aubry, M.-P., W. A. Berggren, **B. Cramer**, C. Dupuis, D. V. Kent, K. Ouda, B. Schmitz, E. Steurbaut, Paleocene/Eocene Boundary Sections in Egypt, in M.-P. Aubry, Kh. Ouda, and W.A. Berggren, (Eds.) *Late Paleocene–Early Eocene Events from North Africa to the Middle East, Special Symposium organized in connection with The First International Conference on the Geology of North Africa*, November 23–25 1999, Assiut, Egypt, Abstract Volume, 1–11, 1999.
3. Miller, K.G., P.J. Sugarman, J.V. Browning, **B.S. Cramer**, R.K. Olsson, L. de Romero, M.-P. Aubry, S.F. Pekar, M.D. Georgescu, K.T. Metzger, D.H. Monteverde, E.S. Skinner, J. Uptegrove, L.G. Mullikin, F.L. Muller, M.D. Feigenson, T.J. Reilly, G.J. Brenner and D. Queen, Ancora Site, in K.G. Miller, P.J. Sugarman, J.V. Browning, et al., *Proceedings of the Ocean Drilling Program, Initial Reports, 174AX (suppl.)*, College Station, TX (Ocean Drilling Program), 1–65, 1999.

1998:

Non-peer reviewed:

2. Miller, K.G., P.J. Sugarman, J.V. Browning, R.K. Olsson, S.F. Pekar, T.J. Reilly, **B.S. Cramer**, M.-P. Aubry, R.P. Lawrence, J. Curran, M. Stewart, J.M. Metzger, J. Uptegrove, D. Bukry, L.H. Burckle, J.D. Wright, M.D. Feigenson, G.J. Brenner and R.F. Dalton, Bass River Site, in K.G. Miller, P.J. Sugarman, J.V. Browning, et al., *Proceedings of the Ocean Drilling Program, Initial Reports, 174AX*, College Station, TX (Ocean Drilling Program), 5–43, 1998.

1997:

Peer reviewed:

1. Fisher, A.T., M.G. Langseth, P.A. Baker, W. Ryan, J. Stein, S. Glenn, P.J. Schultheiss, R.A. Zierenberg, G.J. Iturrino, W. Jin, E. Darlington, W.D. Goodfellow, D.N. Daniel, A.G. Conly, S.L. Cross, M. Grove and **B. Cramer**, The devil's in the details; hydrogeology of Middle Valley active venting areas, *EOS, Transactions, American Geophysical Union*, **78**, 165–170, 1997.

Abstracts and presentations:

2010:

33. **Cramer, B.S.**, J.R. Toggweiler, M.E. Katz, and K.G. Miller, Eocene–Oligocene development of the ACC, engine of deep ocean ventilation, *10th International Conference on Paleoceanography*, August 29–September 3, 2010, La Jolla, CA, USA.
32. Katz, M.E., **B. Cramer**, G. Esmay, C. Liu, K. Miller, Y. Rosenthal, J.R. Toggweiler, B.S. Wade, and J.D. Wright, Revving the engine of ocean circulation: Antarctic circumpolar current development, late Eocene–early Oligocene, *GSA Annual Meeting*, October 31–November 3, 2010, Denver, CO, USA, *Geological Society of America, Abstracts with Programs*, **42**, Abstract 229-7, 2010.
31. Monahan, K.M., M.E. Katz, and **B. Cramer**, Eocene fluctuations in the CCD and climate: Evidence from carbonate and oxygen isotopes (ODP Site 1090), *GSA Annual Meeting*, October 31–November 3, 2010, Denver, CO, USA, *Geological Society of America, Abstracts with Programs*, **42**, Abstract 110-11, 2010.

2008:

30. Miller, K.G., **B.S. Cramer**, J.D. Wright, J.V. Browning, A.A. Kulpecz, P. Barrett, and M.A. Kominz, Late Cretaceous to Cenozoic Antarctic ice-sheet evolution from sea-level and deep-sea isotope changes, *AGU Fall Meeting*, December 15–19, 2008, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **89**, Abstract C34B-07, 2008
29. Katz, M., **B. Cramer**, M. Feigenson, K. Miller, C. Liu, Y. Rosenthal, B. Wade, and J.D. Wright, Reorganization and strengthening of ocean circulation in the Oligocene: Stable isotopic and trace element records from western North Atlantic intermediate waters, *GSA Annual Meeting*, October 5–9, 2008, Houston, TX, USA, *Geological Society of America, Abstracts with Programs*, **40**, Abstract 294-5, 2008.

2007:

28. **Cramer, B.S.**, J.D. Wright, M.E. Katz, and K.G. Miller, Tectonic gateways, circumglobal currents, and the evolution of the ocean conveyor: inferences from deep-sea benthic foraminiferal isotope syntheses, *AGU Fall Meeting*, December 10–14, 2007, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **88**, Abstract PP23C-07, 2007.

2005:

27. Miller, K.G., M.A. Kominz, J.V. Browning, J.D. Wright, G.S. Mountain, M.E. Katz, P.J. Sugarman, **B.S. Cramer**, N. Christie Blick, and S.F. Pekar, The Phanerozoic record of global sea-level change, *GSA Annual Meeting*, October 16–19, 2005, Salt Lake City, UT, USA, *Geological Society of America, Abstracts with Programs*, **37**, Abstract 180-1, 2005.

2004:

26. Katz, M.E., A.J. Milligan, **B.S. Cramer**, K. Fennel, K.G. Miller, J.D. Wright, P.G. Falkowski, Effects of Organic Carbon/Carbonate Burial Ratios and Biological Carbon Fixation on the Global Carbon Cycle Over the Past ~200 myr, *AGU Fall Meeting*, December 13–17, 2004, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **85**, Abstract PP53D-05, 2004.
25. Wright, J.D., K.G. Miller, R.E. Sheridan, **B.S. Cramer**, Late Pleistocene Sea-level and Deep-sea Temperature Changes Constrained by U.S. Mid-Atlantic Margin Sequences, *AGU Fall Meeting*, December 13–17, 2004, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **85**, Abstract U31A-0016, 2004.

2003:

24. **Cramer, B.S.**, Deconvolving the Carbon Isotope Record, *AGU Fall Meeting*, December 8–12, 2003, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **84**, Abstract B11B-07, 2003.
23. Wright, J.D., **B.S. Cramer**, K.G. Miller, M.E. Katz, Orbital cycles, climate, and diagenesis mimic methane releases: Results from a high resolution study of OAE2, New Jersey Coastal Plain, *AGU Fall Meeting*, December 8–12, 2003, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **84**, Abstract PP42D-03, 2003.
22. **Cramer, B.S.**, Influence of orbital forcing on the development of the Paleocene/Eocene carbon isotope excursion, *Bioevents: Their Stratigraphic Records, Patterns and Causes, International Meeting*, June 3–8, 2003, Caravaca, Spain, 2003.
21. **Cramer, B.S.**, K. Kaiho, and M.A. Lamolda, Milankovitch stratigraphy of the Paleocene/Eocene thermal maximum interval in a cored section from Caravaca, Spain, *Bioevents: Their Stratigraphic Records, Patterns and Causes, International Meeting*, June 3–8, 2003, Caravaca, Spain, 2003.
20. Kent, D.V., **B.S. Cramer**, L. Lanci, D. Wang, J.D. Wright and R. Van Der Voo, A case for a comet impact trigger for the Paleocene/Eocene thermal maximum and carbon isotope excursion, *Bioevents: Their Stratigraphic Records, Patterns and Causes, International Meeting*, June 3–8, 2003, Caravaca, Spain, 2003.
19. Patrick, L., **B.S. Cramer**, and J.D. Wright, Orbital forcing of lithology and carbon geochemistry during the Valanginian (Early Cretaceous) anoxic event, *EGS-AGU-EUG Joint Assembly*, April 7–11, 2003, Nice, France, *Geophysical Research Abstracts*, **5**, Abstract 13962, 2003.

18. Katz, M.E., J.D. Wright, K.G. Miller, **B.S. Cramer**, K. Fennel, and P.G. Falkowski, Biological overprint of the geological carbon cycle, *GSA Annual Meeting*, November 2–5, 2003, Seattle, WA, USA, *Geological Society of America, Abstracts with Programs*, **35**, Abstract 81-11, 2003.
 17. Berggren, W.A., D.V. Kent, C.C. Swisher III, M.-P. Aubry, **B.S. Cramer**, Twenty years of Paleogene geochronology (1985–2005): review and future prospects, *Symposium on the Paleogene: Preparing for Modern Life and Climate*, August 25–30, 2003, Leuven, Belgium, 2003.
 16. Kaiho, K., M. Nakamura, **B.S. Cramer**, A.M. Hussein, and M.A. Lamolda, Extensive fires immediately preceded the extreme warming and benthic extinction event at the Paleocene/Eocene boundary, *Bioevents: Their Stratigraphic Records, Patterns and Causes, International Meeting*, June 3–8, 2003, Caravaca, Spain, 2003.
 15. Katz, M.E., J.D. Wright, K.G. Miller, P.G. Falkowski, and **B.S. Cramer**, Long-term changes in the carbon cycle: Links among geologic proxies and phytoplankton evolution in the Mesozoic–Cenozoic, *EGS-AGU-EUG Joint Assembly*, April 7–11, 2003, Nice, France, *Geophysical Research Abstracts*, **5**, Abstract 11740, 2003.
- 2002:
14. Kent, D.V., **B.S. Cramer**, L. Lanci, D. Wang, J.D. Wright and R. Van Der Voo, Evidence for a comet impact trigger for the Paleocene/Eocene thermal maximum and carbon isotope excursion, *GSA Annual Meeting*, October 27–30, 2002, Denver, CO, USA, *Geological Society of America, Abstracts with Programs*, **34**, Abstract 178-2, 2002.
- 2001:
13. **Cramer, B.S.** and J.D. Wright, Bringing Milankovitch to bear on the Paleocene/Eocene carbon isotope excursion, *AGU Fall Meeting*, December 10–14, 2001, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **82**, Abstract PP31B-08, 2001.
 12. Kent, D.V., **B.S. Cramer** and L. Lanci, Evidence of an Impact Trigger for the Paleocene/Eocene Thermal Maximum and Carbon Isotope Excursion, *AGU Fall Meeting*, December 10–14, 2001, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **82**, Abstract PP32A-0509, 2001.
 11. Katz, M.E., **B.S. Cramer**, G.S. Mountain, S. Katz and K.G. Miller, Two mechanisms for methane release at the Paleocene/Eocene boundary, *AGU Fall Meeting*, December 10–14, 2001, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **82**, Abstract PP32A-0508, 2001.
 10. **Cramer, B.S.**, M.-P. Aubry, J.D. Wright, Revising time: Implications of astrochronologic calibration and cyclostratigraphic correlation of events in the late Paleocene–early Eocene, *Climate and Biota of the Early Paleogene, International Meeting*, July 3–8, 2001, Powell, WY, USA, 2001.

9. Wright, J.D., K.G. Miller, **B.S. Cramer**, R.K. Olsson, M.E. Katz and P.J. Sugarman, Transient climate events at the Cenomanian/Turonian boundary (OAE2), *AGU Fall Meeting*, December 10–14, San Francisco, CA, USA, 2001, *EOS, Transactions, American Geophysical Union*, **82**, Abstract PP32A-0515, 2001.
8. Olsson, R.K., K.G. Miller, J.V. Browning, J.D. Wright and **B.S. Cramer**, Sea-level change across the Cretaceous–Tertiary boundary, a chimera?, *GSA Annual Meeting*, November 5–8, 2001, Boston, MA, USA, *Geological Society of America, Abstracts with Programs*, **33**, Abstract 22335, 2001 .

2000:

7. **Cramer, B.S.** and K.G. Miller, Early Paleogene lithology and sequences in the New Jersey Coastal Plain, *GSA Northeastern Section Meeting*, New Brunswick, NJ, USA, *Geological Society of America, Abstracts with Programs*, **32**, 44, 2000.

1999:

6. **Cramer, B.S.**, Latest Paleocene–earliest Eocene (Chron C24r) Milankovitch climate forcing in the North Atlantic, Southern, and Pacific Oceans, *AGU Fall Meeting*, December 13–17, 1999, San Francisco, CA, USA, *EOS, Transactions, American Geophysical Union*, **80**, F488, 1999.
5. **Cramer, B.S.**, K.G. Miller, J.D. Wright, J.V. Browning, R.K. Olsson, M.-P. Aubry, Neritic records of the latest Paleocene and early Eocene from New Jersey: Comparisons between shelf and deep-sea settings, *Early Paleogene Warm Climates and Biosphere Dynamics, International Meeting*, June 9–13, 1999, Göteborg, Sweden (Earth Sciences Centre, Göteborg University), C21, 1999.

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