

CATHERINE CONSTABLE - CURRICULUM VITAE

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PROFESSIONAL PREPARATION:

University of Western Australia	Physics	B.Sc. (Hons.)	1979
Australian National University	Paleomagnetism	Master of Science	1982
Scripps Institution of Oceanography, UCSD	Geophysics	Ph.D.	1987

POSITIONS HELD:

1998– present Professor of Geophysics, SIO, UCSD

2014.0– 2014.5 Alexander von Humboldt Research Awardee, Visitor at Helmholtz-Zentrum
Potsdam, Deutsches GeoForschungsZentrum - GFZ

2012–2013 Interim Director, Interim Dean, and Interim
Vice Chancellor for Marine Sciences, SIO, UCSD

2009–2012 Deputy Director for Research,
Associate Vice Chancellor for Marine Sciences, SIO, UCSD

2010-2012 IGPP Director at SIO, UCSD

1993–1998 Associate Professor of Geophysics, SIO, UCSD

1991–1993 Assistant Professor of Geophysics, SIO, UCSD

1989–1991 Assistant Research Geophysicist, SIO, UCSD

1987–1989 Postgraduate Research Geophysicist, SIO, UCSD

RESEARCH INTERESTS:

Paleomagnetism and Geomagnetism, associated databases and cyberinfrastructure
Database interoperability across Earth and ocean science
Recent and long term secular variation and reversals of the geomagnetic field
Linking geodynamo simulations to paleomagnetic results
Inverse problems; Applications of statistical techniques in geophysics
Applications of Satellite Magnetometry; Electrical conductivity of the mantle

AWARDS:

1997 Royal Astronomical Society’s Price Medal for Geomagnetism

1999 Fellow, American Geophysical Union

2004 NSF Antarctica Service Medal

2012 Alexander von Humboldt Foundation Research Award

2013 William Gilbert Award, Geomagnetism & Paleomagnetism Section,
American Geophysical Union

PROFESSIONAL SOCIETIES:

American Geophysical Union, Fellow
Royal Astronomical Society, Fellow
European Geophysical Union
American Association for the Advancement of Science

PUBLIC SERVICE: EXTERNAL

NSF
GEO Advisory Committee, 2015–2017

EarthCube Advisory Committee, Co-Chair 2016–
 AC GEO ad hoc subcommittee on ocean drilling, 2011
 Deep Earth Section Committee of Visitors, November, 2011
 Deep Earth Section Committee of Visitors, June 2008
 IAGA Division I, Chair 2015–
 IAGA liaison to SEDI, 2011– present
 SEDI Co-Convener CSEDI Workshop, January 2015
 Studies of Earth’s Deep Interior Advisory Council, 2000–present
 SEDI Meeting Organizer, Lake Tahoe, 2002
 Co-Convener CSEDI Workshop, February 2004
 CIG (Computational Infrastructure for Geodynamics), Geodynamo Working Group, 2011– present
 CIDER (Cooperative Institute for Deep Earth Research) Advisory Committee, 2008– present
 American Geophysical Union (AGU):
 AGU Board Member, 2013-2017
 AGU Bylaws committee, 2010-2012
 President, President-Elect, Geomagnetism and Paleomagnetism Section, 2006-2010
 AGU Executive Review Committee, 2006-2010
 AGU Publications Committee, 2006-2008
 Committee, for AGU position statement on U.S. Vision for Space Exploration, 2006
 Web Page Committee, Chair (2004-2005)
 Guest Editor, *Geochem. Geophys. Geosyst.* Theme on Geomagnetic Field Behavior, 2002–2006
 GP Section Webmistress (2000-2006)
 Fleming Medal Committee 2000-2005 (Chair 2004–05)
 Geomagnetism and Paleomagnetism, Executive Committee 1998–2012
 Joint AGU/GSA Advisory Council for *Geochem. Geophys. Geosyst.* 2005– 2009
 Secretary, Geomagnetism and Paleomagnetism Section of AGU, 1998-2000
 Committee on Studies of Earth’s Deep Interior, 1996 – 1998
J. Geophys. Res., Direction and Review Committee, 1996 – 1997
 Associate Editor, *Journal of Geophysical Research*, Dec 1994-1997
 International Geo Sample Number, IGSNeV, Treasurer, 2012– 2016
 Chair, Research Advisory Committee, Institute for Rock Magnetism, University of Minnesota, 2010 – 2014
 Physics of the Earth and Planetary Interiors, Advisory Editor , 1995 –present
 Magnetics Information Consortium (MagIC) — Steering Committee, Chair 2002 – present
 Administrator for Gpmag-1 list server for researchers in geomagnetism and paleomagnetism, 1998 – present
 European Geophysical Union Petrus Peregrinus Medal Committee (2004-2006)
 National Research Council Committee to review NASA’s Solid Earth Science Strategy (2004)
 NASA Geomagnetism Science Working Group 2008
 Convener for International Space Science Institute, workshop on Terrestrial Magnetism, Bern, Switzerland, 2009
 Member Ørsted Science Advisory Council, 1995–2002
Reviewer for Science, Nature, Geophys. Research Letters, Earth Planet Sci Lett, Phys. of Earth Planet. Interiors,
 Geophys. J. International, Geochem. Geophys. Geosyst., National Science Foundation, NASA,
 National Environment Research Council (NERC) of the UK and others

FIELD EXPERIENCE:

1979 Atherton Tableland, N. Queensland, Australia, Holocene lake sediments for paleomagnetic study
 1980-82 Central Australia, Various EM Resistivity Soundings, field assistant
 1994,1998 Scaglia Bianca, Umbria, Italy, Cretaceous Normal Superchron, relative paleointensity study
 1996 Saõ Miguel, Azores, 0-5 Ma lava flows for time-averaged field investigations
 2000 Costa Rica, 0-5 Ma lava flows for time-averaged field investigations
 1999, 2000 San Francisco Volcanics, Arizona, 0-5 Ma lava flows for time-averaged field investigations
 2001 Spitsbergen, early Brunhes to Miocene volcanics for time-averaged field investigations
 2003 McMurdo Volcanic Province, Antarctica, 0-5 Ma volcanics for time-averaged field investigations

TEACHING EXPERIENCE:

1990, 1995 Rock and Paleomagnetism
1991–present Geophysical Data Analysis
1991,1993 Introductory Geomagnetism
1991,1992 Current Research in Geomagnetism and Paleomagnetism
1993–present Gravity and Geomagnetism
1996–2002 Introduction to Geophysics- upper division undergraduate class
2003, 2011– Geophysical Inverse Theory
2011– present Ethical and Professional Science

GRADUATE STUDENT ADVISEES:

Thomas Pick: PhD, Co-Chair (with Lisa Tauxe), graduated 1993
Catherine Johnson PhD, Co-Chair (with David Sandwell), graduated 1994
Michael O'Brien: PhD, Co-Chair (with Robert Parker), graduated 1996
David Lowe: MS, Chair, graduated 2000
Camilla Rygaard-Hjalsted: visiting from Copenhagen University, Jan-Jun, 96
David McMillan: PhD, Co-Chair (with Robert Parker), graduated 2003
Leah Ziegler PhD, Chair, graduated 2011
Joseph Ribaud PhD, Chair, graduated 2011
Lindsay Smith PhD Chair, graduated 2016
Margaret Avery PhD Chair (with Jeffrey Gee) 2011 – present
Mayuri Sadhasivan MS candidate, 2017 – present

POSTDOCTORAL ADVISEES:

Monika Korte (2001-2002), now at GeoForschungsZentrum, Potsdam, Germany
Jeffrey Love (2001), now at USGS, Golden, Colorado
Agnès Genevey (2002-2003), now at Universit Pierre et Marie Curie, Paris, France
Nicola Richmond (2004-2006), now at Planetary Science Insititute
Fabio Donadini (2007-2009) now at Université de Fribourg, Switzerland
Christopher Davies (2010-2011) now at Leeds University, UK
Sanja Panovska (2012–2015)

UNIVERSITY SERVICE:

UCSD

- 2016 Chair, Search Committee for UCSD Dean of Physical Sciences
- 2015 Chair, Search Committee for Executive Director for SIO Birch Aquarium
- 2015 – Chancellor’s Standing Committee on Service and People Oriented Culture
- 2015–2016 Joint Academic Senate-Administration Council Task Force on Research Integrity
- 2014 - Fall UCSD Graduate Council
- 2011–2012 UCSD Advisory Committee for Research Cyberinfrastructure
- 2010–2012 Review Committee of the Research Ethics Program
- 2007–2009 UCSD Joint Senate/Administration Task Force on Organized Research Units
- 2005–2008 UCSD Graduate Council (2006, Vice Chair)
- 2006 UCSD Senate Task Force on Faculty Service
- 2002– 05 UCSD Committee on Committees (Chair, 2004-05)
- 2000–2002 UCSD Committee on Academic Personnel
- 1998 University Centers Advisory Board
- 1998 – 2001 Academic Administrator Review Panel
- 1998 – 2001 UCSD Committee on Affirmative Action and Diversity
- 1993 – 1997 UCSD Library Committee
- UCSD various ad hoc Search and Review Committees

SIO

- 2015— Vice Chair SIO Department
- 2015— GEO Program Chair, SIO
- 2014- SIO Aquarium Museum Panel
- 2007-2008 SIO Aquarium Museum Panel
- 2007-2008 SIO Geological Data Center Steering Committee
- 2007-2008 SIO Oceanographic Collections Committee
- 2003–2006 SIO Geophysics Curricular Group Chair
- 2004–2007 SIO Educational Policy Council
- 2006– 2010 SIO Center for Earth Observations and Applications Advisory Committee
- 2001-2004 SIO Committee on Committees (Chair, 2003)
- 1998–1999 SIO Aquarium panel
- 1990 –1998 SIO Library Committee July,
- 1993 –1996 SIO Committee on Academic Personnel
- 1995-1997 SIO Oceanographic Collections Committee
- 1995 – 1997 Geophysics Admissions Chair
- Various Search and promotion Committees for SIO Research and Faculty Positions
- 1993, 1994, 1996, 1997, 2005, 2011, 2014, 2015 Geophysics Departmental Exam Committees

UC

- 2006– 2007 Coordinating Council on Graduate Affairs
- 2009 UCSC Earth and Planetary Sciences External Program Review
- 2011 UCD Geology Graduate Program Review

PUBLICATIONS:

89 publications at www.researcherid.com/rid/F-7784-2010, ISI h-index 34

- Constable, C.G., (1982). *Holocene Geomagnetic Secular Variation in Queensland*. M.Sc. thesis, Australian National University.
- Constable, C.G., (1985). Eastern Australian geomagnetic field intensity over the past 14 000 yr. *Geophys. J. Roy. astr. Soc.*, **81**, 121–130.
- Constable, C.G., & M.W. McElhinny, (1985). Holocene geomagnetic secular variation records from north-eastern Australian lake sediments. *Geophys. J. Roy. astr. Soc.*, **81**, 103–120.
- Constable, C., (1987). *Some Statistical Aspects of the Geomagnetic Field*. Ph.D. thesis, Scripps Institution of Oceanography, University of California at San Diego.
- Constable, S.C., R.L. Parker & C.G. Constable, (1987). Occam's Inversion: a practical inversion method for generating smooth models from EM sounding data. *Geophysics*, **52**, 289–300, doi:10.1190/1.1442303. (This paper has been reprinted in the S.E.G. volume *Inversion of Geophysical Data*, 1988: L.R.Lines, ed.)
- Constable, C.G., & L. Tauxe, (1987). Palaeointensity in the pelagic realm: marine sediment data compared with archaeomagnetic and lake sediment records. *Geophys. J.R. astr. Soc.*, **90**, 43–59.
- Constable, C.G., (1988). Parameter estimation in non-Gaussian noise. *Geophys. J.*, **94**, 131–142.
- Constable, C.G., & R.L. Parker, (1988). Smoothing, splines and smoothing splines: their application in geomagnetism. *J. Comp. Physics*, **78**, 493–508.
- Constable, C.G., & R.L. Parker, (1988). Statistics of the geomagnetic secular variation for the past 5 Ma. *J. Geophys. Res.*, **93**, 11569–11582.
- Tauxe, L., Constable, C.G., Stokking, L., and Badgley, C., (1990). The use of anisotropy to distinguish characteristic remanence in the Siwalik red beds of Northern Pakistan. *J. Geophys. Res.*, **95**, 4391–4404.
- Constable, C.G., & L. Tauxe, (1990). The bootstrap for magnetic susceptibility tensors. *J. Geophys. Res.*, **95**, 8383–8395.
- Constable, C.G., (1990). A simple statistical model for geomagnetic reversals. *J. Geophys. Res.*, **95**, 4587–4596.
- Constable, C.G., & R.L. Parker, (1991). Deconvolution of long-core paleomagnetic measurements; spline therapy for the linear problem. *Geophys. J. Int.*, **104**, 453–468.
- Clement, B.M., & C.G. Constable, (1991). Polarity transitions and paleosecular variation of the earth's magnetic field. *Rev. Geophys., Supplement, U.S. National Report to IUGG, 1987-1990*, **433–442**, April 1991.
- Tauxe, L., N. Kylastra, & C.G. Constable, (1991). Bootstrap statistics for paleomagnetic data. *J. Geophys. Res.*, **96**, 11,723–11,740.
- Constable, C.G., (1992). Reply (to Comment on “The bootstrap for magnetic susceptibility tensors”, By B. Lienert). *J. Geophys. Res.*, **97**, 13,997–13,998.
- Constable, C.G., (1992). Link between geomagnetic reversal paths and secular variation of the field over the past 5 Myr. *Nature*, **358**, 230–232.
- Constable, C.G., Parker, R.L., & Stark, P.B., (1993). Geomagnetic field models incorporating frozen flux constraints. *Geophys. J. Int.*, **113**, 419–433.
- Hartl, P., Tauxe, L., Constable, C., 1993. Early Oligocene geomagnetic field behavior from DSDP site 522. *J. Geophys. Res.*, **98**, 19,649–19,666.
- Constable, C.G., (1993). About turn for reversals. *Nature, News & Views*, **361**, 305.

- Johnson, C.L., & C.G. Constable, 1995. The time-averaged geomagnetic field as recorded by lava flows over the last 5Ma. *Geophys. J. Int.*, **122**, 489–519.
- Johnson, C.L., & C.G. Constable, 1996. Palaeosecular variation recorded by lava flows over the past five million years. *Phil. Trans. Roy. Soc. London, A*, **354**, 89–141.
- Backus, G.E., Parker, R.L., & C.G. Constable, 1996. *Foundations of Geomagnetism*. Cambridge University Press .
- Constable, C.G., 1996. Earth's Magnetic Field. *Macmillan Encyclopedia of Earth Sciences*, , .
- Constable, C., & L.Tauxe, 1996. Towards absolute calibration of sedimentary paleointensity records. *Earth Planet. Sci. Lett.*, **143**, 269–274.
- O'Brien, M.S., Constable, C.G., & R.L. Parker, 1997. Frozen-flux modelling for epochs 1915 and 1980. *Geophys. J. Int.*, **128**, 434–450.
- Rygaard-Hjalsted, C., C.G. Constable, & R.L.Parker, 1997. The influence of correlated crustal signals in modelling the main geomagnetic field. *Geophys. J. Int.*, **130**, 717–726.
- Johnson, C.L. & C.G. Constable, 1997. The time-averaged geomagnetic field: global and regional biases for 0–5Ma. *Geophys. J. Int.*, **131**, 643–666.
- Johnson, C.L. & C.G. Constable, 1998. Persistently anomalous Pacific geomagnetic fields. *Geophys. Res. Lett.*, **25**, 1011–1014.
- Constable, C.G., L. Tauxe, & R.L. Parker, 1998. Analysis of 11 Myr of geomagnetic intensity variation . *J. Geophys. Res.*, **103**, 17,735–17,748.
- Johnson, C.L., J.R. Wijbrans, C.G. Constable, J. Gee, H. Staudigel, L. Tauxe, V. Forjaz, & M.Salgueiro, 1998. $^{40}\text{Ar}/^{39}\text{Ar}$ ages and paleomagnetism of São Miguel Lavas, Azores. *Earth Planet. Sci. Lett.*, **160**, 637–649.
- Constable, C.G., & C.L.Johnson, 1999. Anisotropic paleosecular variation models: Implications for geomagnetic observables. *Phys. Earth Planet. Inter.*, **115**, 35–51.
- O'Brien, M.S., R.L. Parker, & C.G. Constable, 1999. The magnetic power spectrum of the ocean crust on large scales. *J. Geophys. Res.*, **104**, 29,189–29,202.
- Constable, C., 2000. On rates of occurrence of geomagnetic reversals. *Phys. Earth Planet. Inter.*, **118**, 181–193.
- Constable, C.G., C.L. Johnson, & S.P. Lund, 2000. Global geomagnetic field models for the past 3000 years: transient or permanent flux lobes?. *Phil. Trans. Roy. Soc. London, A*, **358**, 991–1008.
- Olsen, N., *et al.* (25 authors, including C. Constable) , 2000. Ørsted initial field model. *Geophys. Res. Lett.*, **27**, 3607–3610.
- Lowe, D.A.J., R.L. Parker, M.E. Purucker, & C.G. Constable, 2001. Estimating the crustal power spectrum from vector Magsat data. *J. Geophys. Res.*, **106**, 8589–8598.
- Cronin, M., L. Tauxe, C. Constable, P. Selkin, & T. Pick, 2001. Noise in the Quiet Zone. *Earth Planet. Sci. Lett.*, **190**, 13–30.
- McMillan, D.G., C.G. Constable, R.L.Parker & G.A. Glatzmaier, 2001. A statistical appraisal of magnetic fields of geodynamo models. *Geochem. Geophys. Geosyst.*, **2**, 10.1029/2000GC000130.
- McMillan, D.G., C.G. Constable, R.L.Parker, 2002. Limitations on stratigraphic analyses due to incomplete age control and their relevance to sedimentary paleomagnetism. *Earth Planet. Sci. Lett.*, **201**, 509–523.
- Korte, M., C. Constable, R.L. Parker, 2002. Revised magnetic power spectrum of the oceanic crust. *J. Geophys. Res.*, **107**, 2205, doi:10.1029/2001JB001389.
- Solheid, P. Constable, C., Koppers, A., Jackson, M., Banerjee, S., 2002. Research-oriented Data Base for Rock and Paleomagnetism to Be Developed. *EOS Transactions, American Geophysical Union*, **83(48)**,

560.

- Love, J.J. & C.G. Constable, 2003. Gaussian Statistics for Paleomagnetic Vectors. *Geophys. J. Int.*, **152**, 515–565.
- Everett, M.E., S.C. Constable, & C.G. Constable, 2003. Effects of near-surface conductance on global satellite induction responses. *Geophys. J. Int.*, **153**, 277–286.
- Tauxe, L., C. Constable, C. L. Johnson, A. A. P. Koppers, W. R. Miller, and H. Staudigel, 2003. Paleomagnetism of the Southwestern USA recorded by 0–5Ma igneous rocks. *Geochem. Geophys. Geosyst.*, **4(4)**, 8802, doi: 10.1029/2002GC000343.
- Korte, M., Constable, S., & Constable, C., 2003. Separation of external magnetic signal for induction studies. In “*First CHAMP Mission Results for Gravity, Magnetic and Atmospheric Studies*”, ed. Ch. Reigber, H. Luehr and P. Schwintzer, Springer-Verlag Heidelberg, pp. 315–320.
- Johnson, C. L., C. G. Constable & L. T. Tauxe, 2003. Mapping Long-Term Changes in Earth’s Magnetic Field. *Science (Perspective Article)*, **300**, 2044–2045.
- Constable, C.G., 2003. Geomagnetic Reversals: Rates, Timescales, Preferred Paths, Statistical Models, and Simulations. In “*Earth’s Core and Lower Mantle*”, ed. Christopher A. Jones, Andrew M. Soward and Keke Zhang, Taylor and Francis, London, pp. 77–99.
- Korte, M. & C.G. Constable, 2003. Continuous global geomagnetic field models for the past 3000 years. *Phys. Earth Planet. Inter.*, **140**, 73–89.
- Staudigel, H., S.R. Hart, A.A. Koppers, C.G. Constable, R. Workman, M.Kurz, E.T. Baker, 2004. Hydrothermal venting at Vailulu’u Seamount: the smoking end of the Samoan Chain. *Geochem. Geophys. Geosyst.*, **5(2)**, Q02003 DOI 10.1029/2003GC000626.
- Constable, S.C. & C.G. Constable, 2004. Observing geomagnetic induction in magnetic satellite measurements and associated implications for mantle conductivity. *Geochem. Geophys. Geosyst.*, **5(1)**, Q01006 DOI 10.1029/2003GC000634.
- Constable, C.G., & S.C. Constable, 2004. Satellite magnetic field measurements: applications in studying the deep earth. In “*The State of the Planet: Frontiers and Challenges in Geophysics*”, ed. R.S.J. Sparks and C.J. Hawkesworth, American Geophysical Union. DOI 10.1029/150GM13, pp. 147–160.
- McMillan, D.G., C.G. Constable, R.L.Parker, 2004. Assessing the dipolar signal in stacked paleointensity records using a statistical error model and geodynamo simulations. *Phys. Earth Planet. Inter.*, **145**, 37–54.
- Korte, M., A. Genevey, C.G. Constable, U. Frank. E. Schnepp, 2005. Continuous geomagnetic models for the past 7 millennia I: A new global data compilation. *Geochem. Geophys. Geosyst.*, **6(2)**, Q02H15 DOI 10.1029/2004GC000800.
- Korte, M., and C.G. Constable, 2005. Continuous geomagnetic models for the past 7 millennia II: CALS7K. *Geochem. Geophys. Geosyst.*, **6(2)**, Q02H16 DOI 10.1029/2004GC000801.
- Korte, M., and C.G. Constable, 2005. The geomagnetic dipole moment over the last 7000 years - new results from a global model. *Earth Planet. Sci. Lett.*, **236**, 348–358.
- Constable, C.G., & C.L. Johnson, 2005. A Paleomagnetic Power Spectrum. *Phys. Earth Planet. Inter.*, **153**, 61–73 doi:10.1016/j.pepi.2005.03.015.
- Constable, C.G., and M. Korte, 2006. Is Earth’s magnetic field reversing?. *Earth Planet. Sci. Lett.*, **246**, 1–16, doi: 10.1016/j.epsl.2006.03.038.
- Lawrence, K.P., C.G. Constable, and C.L. Johnson, 2006. Paleosecular variation and the average geomagnetic field at $\pm 20^\circ$ latitude. *Geochem. Geophys. Geosyst.*, **7**, Q07007, doi:10.1029/2005GC001181.
- Korte, M., and C. G. Constable, 2006. On the use of calibrated relative paleointensity records to improve millennial-scale geomagnetic field models. *Geochem. Geophys. Geosyst.*, **7(9)**, Q09004, doi:10.1029/2006GC001368.

- Korte, M., and C.G. Constable, 2006. Centennial to millennial geomagnetic secular variation. *Geophys. J. Int.*, **167**, 43–52, doi: 10.1111/j.1365-246X.2006.03088.x.
- McMillan, D.G., C.G. Constable, 2006. Limitations in correlation of regional relative geomagnetic paleointensity. *Geophys. Geochem., Geosyst.*, **7**, Q09009, doi:10.1029/2006GC001350.
- Constable, C.G., 2006. Multi-taper response estimation for satellite induction studies. *Proceedings of 1st International SWARM Science Meeting, 3-5 May, 2006, Nantes, France*, **ESA WPP-261**, 87, European Space Agency Publications, Noordwijk.
- Richmond, N.C., C.G. Constable, & S.C. Constable, 2006. Quasi P_1^0 electromagnetic response estimates from Ørsted vector data: a study in ring current asymmetry. *Proceedings of 1st International SWARM Science Meeting, 3-5 May, 2006, Nantes, France*, **ESA WPP-261**, 83, European Space Agency Publications, Noordwijk.
- Constable, Catherine, 2007. Dipole moment variation. In *“Encyclopedia of Geomagnetism and Paleomagnetism”*, ed. D.G. Gubbins and E. Herrero-Bervera, Springer, Dordrecht, pp. 159–161.
- Constable, Catherine, 2007. Non-dipole field. In *“Encyclopedia of Geomagnetism and Paleomagnetism”*, ed. D.G. Gubbins and E. Herrero-Bervera, Springer, Dordrecht, pp. 701–704.
- Constable, Catherine, 2007. Geomagnetic temporal spectrum. In *“Encyclopedia of Geomagnetism and Paleomagnetism”*, ed. D.G. Gubbins and E. Herrero-Bervera, Springer, Dordrecht, pp. 353–355.
- Jackson, A., C.G. Constable, M.R. Walker, & R.L. Parker, 2007. Models of Earth’s main magnetic field incorporating flux and radial vorticity constraints. *Geophys. J. Int.*, **171**, 133–144, doi: 10.1111/j.1365-246X.2007.03526.x.
- Jackson, A., C. G. Constable & N. Gillet, 2007. Maximum entropy regularization of the geomagnetic core field inverse problem. *Geophys. J. Int.*, **171**, 995–1004, doi: 10.1111/j.1365-246X.2007.03530.x.
- Constable, C.G., 2007. Centennial to millennial-scale geomagnetic field variations . In *“Treatise on Geophysics, Volume 5, Geomagnetism”*, ed. Volume, M. Kono, Ed in Chief: G. Schubert, Elsevier, Amsterdam, pp. Chapter 9, 337–372.
- Korte, M., & C.G. Constable, 2008. Spatial and temporal resolution of millennial scale geomagnetic field models. *Advances in Space Research*, **41**, 57–69, doi:10.1016/j.asr.2007.03.094.
- Johnson, C.L., C.G. Constable, L. Tauxe, R. Barendregt, L.L. Brown, R. Coe, P. Layer, V. Mejia, N.D. Opdyke, B. Singer, H. Staudigel, & D. Stone, 2008. Recent Investigations of the 0-5 Ma Geomagnetic Field recorded by Lava Flows. *Geochem. Geophys. Geosyst.*, **9**, Q04032, doi:10.1029/2007GC001696.
- Genevey, A., Y. Gallet, C.G. Constable, M. Korte, & G. Hulot, 2008. ArcheoInt: An upgraded compilation of geomagnetic field intensity data for the past ten millennia and its application to the recovery of the past dipole moment. *Geochem. Geophys. Geosyst.*, **9**, Q04038, doi:10.1029/2007GC001881.
- Ziegler, L., C.G. Constable, & C.L. Johnson, 2008. Testing the robustness and limitations of 0–1 Ma absolute paleointensity data. *Phys. Earth Planet. Inter.*, **170**, 34–45, doi:10.1016/j.pepi.2008.07.027.
- Gee, J.S., L. Tauxe, & C. Constable, 2008. AMSSpin: A LabVIEW program for measuring the anisotropy of magnetic susceptibility with the Kappabridge KLY-4S. *Geochem. Geophys. Geosyst.*, **9**, Q08Y02, doi:10.1029/2008GC001976.
- Lawrence, K. L., L. Tauxe, H. Staudigel, C. G. Constable, A. Koppers, W. McIntosh, and C. L. Johnson, 2009. Paleomagnetic field properties at high southern latitude. *Geochem., Geophys., Geosyst.*, **10**, Q01005, doi:10.1029/2008GC002072.
- Donadini, F., M. Korte, & C.G. Constable, 2009. The geomagnetic field for 0–3 ka, Part I: New data sets for global modeling. *Geochem. Geophys. Geosyst.*, **10**, Q06007, doi:10.1029/2008GC002295.
- Korte, M., F. Donadini, & C.G. Constable, 2009. The geomagnetic field for 0–3 ka, Part II: A new series of time-varying global models. *Geochem. Geophys. Geosyst.*, **10**, Q06008, doi:10.1029/2008GC002297.

- Hulot, G., C.C. Finlay, C.G. Constable, N.Olsen, & M. Manda, 2010. The magnetic field of planet Earth. *Space Science Reviews*, **152**, 159-142, doi: 10.1007/s11214-010-9644-0.
- Donadini, F., M.Korte, & C.G. Constable, 2010. Millennial variations of the geomagnetic field: from data recovery to field reconstruction. *Space Science Reviews*, **155**, 219–246, doi:10.1007/s11214-010-9662-y.
- Hulot, G., A. Balogh, U.R. Christensen, C.G. Constable, M.Manda, & N.Olsen, 2010. The Earth's magnetic field in the space age: An introduction to terrestrial magnetism. *Space Science Reviews*, **155**, 1-7, doi:10.1007/s11214-010-9703-6.
- Ziegler, L., C.G. Constable, C.L. Johnson & L. Tauxe, 2011. PADM2M: A penalized maximum likelihood model of the 0-2 Ma paleomagnetic axial dipole moment. *Geophys. J. Int.*, **184**, 1069–1089, doi: 10.1111/j.1365-246X.2010.04905.x.
- Constable, C.G., 2011. Modelling the geomagnetic field from syntheses of paleomagnetic data. *Phys. Earth Planet. Inter.*, **187**, 109–117, doi:10.1016/j.pepi.2011.05.004.
- Korte, M., & C.G. Constable, 2011. Improving millennial geomagnetic field reconstructions. *Phys. Earth Planet. Inter.*, **188**, 247–259, doi:10.1016/j.pepi.2011.06.017.
- Smith-Boughner, L., L.B. Ziegler, & C.G. Constable, 2011. Changing Spectrum of Geomagnetic Intensity Variations in a Fragmented 12 My Sediment Record from the Oligocene. *Phys. Earth Planet. Inter.*, **188**, 260-269, doi:10.1016/j.pepi.2011.07.011.
- Ziegler, L.B., & C.G. Constable, 2011. Asymmetry in growth and decay of the geomagnetic dipole over the past 2 million years. *Earth Planet. Sci. Lett.*, **312**, 300-304, doi:10.1016/j.epsl.2011.10.019.
- Korte, M., C.G. Constable, F. Donadini, & R. Holme, 2011. Reconstructing the Holocene Geomagnetic Field. *Earth Planet. Sci. Lett.*, **312**, 497-505, doi:10.1016/j.epsl.2011.10.031.
- Amit, H., M.Korte, J. Aubert, C. Constable, G. Hulot, 2011. The time-dependence of intense archeomagnetic flux patches. *J. Geophys. Res.*, **116**, B12106, doi:10.1029/2011JB008538.
- Ribaudo, J, C.G. Constable, & R.L. Parker, 2012. Scripted finite element tools for electromagnetic induction studies. *Geophys. J. Int.*, **188**, 435—446, doi: 10.1111/j.1365-246X.2011.05255.x.
- Smith-Boughner, L.T., & C.G. Constable, 2012. Spectral estimation for geophysical time series with inconvenient gaps. *Geophys. J. Int.*, **190**, 1404–1422, doi: 10.1111/j.1365-246X.2012.05594.x.
- Buffett, B.A., L. Ziegler, C.G. Constable, 2013. A stochastic model for palaeomagnetic field variations. *Geophys. J. Int.*, **195**, 86–97, doi: 10.1093/gji/ggt218.
- Cromwell, G., L. Tauxe, H. Staudigel, C.G. Constable, A.A.P. Koppers, and R.-B. Pedersen, 2013. In search of long-term hemispheric asymmetry in the geomagnetic field: Results from high northern latitudes. *Geochem. Geophys. Geosyst.*, **14(8)**, doi: 10.1002/ggge.20174.
- Cromwell, G., C.G. Constable, H. Staudigel, L. Tauxe, and P. Gans, 2013. Revised and updated paleomagnetic results from Costa Rica. *Geochem. Geophys. Geosyst.*, **14 (9)**, doi: 10.1002/ggge.20199.
- Davies, C.J., & C.G. Constable, 2014. Insights from geodynamo simulations regarding long-term geomagnetic field behaviour. *Earth Planet. Sci Lett.*, **404**, 238-249, doi:10.1016/j.epsl.2014.07.042.
- Ziegler, L.B., & C.G. Constable, 2015. Testing the geocentric axial dipole hypothesis using regional paleomagnetic intensity records from 0-300 ka. *Earth Planet. Sci Lett.*, **423**, 48–56, doi: 10.1016/j.epsl.2015.04.022. .
- Panovska, S., M. Korte, C.C. Finlay, and C.G. Constable, 2015. Limitations in paleomagnetic data and modeling techniques and their impact on Holocene geomagnetic field models. *Geophys. J. Int.*, **202**, 402–418, doi: 10.1093/gji/ggv137.
- Brown, M.C., F. Donadini, M. Korte, A. Nilsson, K. Korhonen, A. Lodge, S.N. Lengyel and C.G. Constable, 2015. GEOMAGIA50.v3: 1. General structure and modifications to the archeological and volcanic database. *Earth Planets Space*, **67**, 83 doi:10.1186/s40623-015-0232-0.

- Brown, M.C., F. Donadini, A. Nilsson, S. Panovska, U. Frank, K. Korhonen, M. Schuberth, M. Korte, C.G. Constable, 2015. GEOMAGIA50.v3: 2. A new paleomagnetic database for lake and marine sediments. *Earth Planets Space*, **67**, 70-89, doi: 10.1186/s40623-015-0233-z.
- Constable, C.G. & M. Korte, 2015. Centennial to millennial-scale geomagnetic field variations . In *“Treatise on Geophysics (Second Edition), Volume 5, Geomagnetism”*, ed. Editor, M. Kono, Ed in Chief: G. Schubert, Elsevier, Amsterdam, pp. Chapter 9, pp 309-341.
- Constable, C.G., 2016. Earth’s Electromagnetic Environment. *Surveys in Geophysics*, **37(1)**, 27-45, doi: 10.1007/s10712-015-9351-1.
- Tauxe, L., R. Shaar, L. Jonestrask, N.L. Swanson-Hysell, K. Gaastra, L. Fairchild, N. Jarboe, R. Minnett, A.A.P. Koppers, and C.G. Constable, 2016. PmagPy: Software package for paleomagnetic data analysis and a bridge to the Magnetism Information Consortium (MagIC) Database. *Geochem. Geophys. Geosyst.*, **17(7)**, 2450-2463, doi:10.1002/2016GC006307.
- Constable, C.G., M. Korte, & S. Panovska, 2016. Persistent high paleosecular variation activity in Southern Hemisphere for at least 10 000 years. *Earth Planet. Sci. Lett.*, **453**, 78-86, doi:10.1016/j.epsl.2016.08.015.
- Panovska, S., and C.G. Constable, 2017. An activity index for geomagnetic paleosecular variation, excursions, and reversals. *Geochem. Geophys. Geosyst.*, **18**, doi: 10.1002/2016GC006668. .
- Avery, M.S., J.S. Gee, & C.G. Constable, 2017. Asymmetry in growth and decay of the geomagnetic dipole revealed in seafloor magnetization. *Earth Planet. Sci. Lett.*, **467**, 79-98, doi: 10.1016/j.epsl.2017.03.020. ■
- Davies, C., & C. Constable, 2017. Geomagnetic spikes on the core-mantle boundary. *Nature Communications*, doi: **10.1038/ncomms15593**, .
- Avery, M.S., C.G. Constable, C.J. Davies, D. Gubbins, 2017. Spectral methods for assessing energy balances in numerical geodynamos. submitted to *Phys. Earth Planet. Inter.*
- Panovska, S., C.G. Constable, & M.C. Brown, 2017. Global and regional assessments of paleosecular variation activity over the past 100 ka. *manuscript in preparation for Geophys. J. Int.* .
- Panovska, S., and C.G. Constable, 2015. The geomagnetic field for 0-100 ka: II, A new time-varying global model. *manuscript in preparation for Geophys. J. Int.* .
- Cromwell, G., C.L. Johnson, L. Tauxe, C.G. Constable, and N. Jarboe, 2014. Paleosecular variation over the last 10 Ma from a new global data set (PSV10). submitted to *Geochem. Geophys. Geosyst.* .

SELECTED ABSTRACTS:

- Constable, C.G., & M.W. McElhinny, (1983). A secular variation record from lake sediments in North Queensland, Australia. *presented at IUGG XVIII General Assembly, Hamburg, IAGA Bulletin No. , 48*, paper I2.09.
- Constable, C.G., Thomson, D.J., & Chave, A.D., (1983). Robust statistics in geomagnetism. *EOS Transactions, American Geophysical Union, 64(45)*, 690, presented at San Francisco Fall AGU Meeting .
- Constable, S.C., Constable, C.G., & Parker, R.L., (1985). Occam's Inversion. *EOS Transactions, American Geophysical Union, 66(46)*, 872, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., & Tauxe, L., (1985). Relative paleointensity estimates from sediments of the Ontong-Java Plateau. *EOS Transactions, American Geophysical Union, 66(46)*, 879, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., Chave, A.D., & Parker, R.L., (1986). Residuals in Geomagnetism. *Terra Cognita, 6(2)*, 287, presented at Conference on Mathematical Geophysics, Oosterbeek, The Netherlands.
- Constable, C.G., & Chave, A.D., (1986). Line amplitude estimation in geomagnetic data containing non-Gaussian noise. *paper 4-5-P5 in Abstracts of Eighth Workshop on Electromagnetic Induction in the Earth and Moon, ,* presented at Neuchatel, Switzerland.
- Constable, C.G., (1986). Maximum likelihood estimation of periodic processes in non-Gaussian noise. *EOS Transactions, American Geophysical Union, 67(44)*, 872, INVITED POSTER, presented at San Francisco Fall AGU Meeting.
- Tauxe, L., & Constable, C.G., (1988). Red beds: anisotropy and remanence. *EOS Transactions, American Geophysical Union, 69(44)*, 1159, INVITED PAPER, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., & Parker R.L., (1988). Long term statistics of the geomagnetic field and the axial dipole hypothesis. *EOS Transactions, American Geophysical Union, 69(44)*, 1162, INVITED PAPER, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., (1988). A simple statistical model for geomagnetic reversals. *EOS Transactions, American Geophysical Union, 69(44)*, 1168, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., (1989). Maximum likelihood estimation of parameters in the presence of non-Gaussian noise. *abstract for January 1989, URSI, National Radio Science Meeting at Boulder, Colorado, ,* INVITED PAPER.
- Constable, C.G., (1989). Simulation of geomagnetic reversals and observational constraints on the geodynamo. *Abstracts for 6th Scientific Assembly of International Association of Geomagnetism & Aeronomy, IAGA Bulletin No., 53*, 143.
- Parker, R.L., Constable, C.G., & Stark, P.B., (1989). Recent core field models consistent with geophysical constraints. *Abstracts for 6th Scientific Assembly of International Association of Geomagnetism & Aeronomy, IAGA Bulletin No., 53*, 130.
- Kylstra, N., Tauxe, L., & C.G.Constable, (1990). Bootstrapping and discrimination of paleomagnetic directions. *EOS Transactions, American Geophysical Union, 71(17)*, 490, presented at Baltimore Spring AGU Meeting.
- Constable, C.G., Parker, R.L., & Stark, P.B., (1990). Core field models from 1945 and 1980. *Abstracts for SEDI Symposium on Reversals, Secular Variation and Dynamo Theory Santa Fe, New Mexico, August 1990, , ,*
- Constable, C.G., & R.L. Parker, 1991. Geomagnetic field models incorporating frozen flux constraints. *Abstracts from XX general Assembly of IUGG, Vienna, August 1991, IAGA, GAM1.1*, p.8.
- Johnson, C.L., & Constable, C.G., 1991. A statistical model for geomagnetic secular variation. *EOS Transactions, American Geophysical Union, 72(44)*, 125, presented at San Francisco Fall AGU Meeting.
- Constable, C.G., 1992. Geomagnetic reversals, paleosecular variation, and core mantle boundary conditions.

- EOS Transactions, American Geophysical Union*, **73(14)**, 103, INVITED PAPER, presented at Montreal Spring AGU Meeting.
- Constable, C.G., 1992. Temporal Variation of Earth's Internal Magnetic Field. *EOS Transactions, American Geophysical Union*, **73(43)**, 57, INVITED PAPER, presented at San Francisco Fall AGU Meeting.
- Johnson, C., & Constable, C.G., 1992. The time-averaged geomagnetic field: 0-5Ma. *EOS Transactions, American Geophysical Union*, **73(43)**, 63, presented at San Francisco Fall AGU Meeting.
- Constable, C.G. & C.L. Johnson, 1993. Can we observe core-mantle boundary control over geomagnetic reversal paths?. *EOS Transactions, American Geophysical Union*, **74(16)**, 51, INVITED PAPER, presented at Baltimore Spring AGU Meeting.
- Constable, C.G. , 1993. Confidence bounds on geomagnetic reversal rates. *EOS Transactions, American Geophysical Union*, **74(16)**, 109, presented at Baltimore Spring AGU Meeting.
- Johnson, C., & Constable, C.G., 1993. Paleosecular variation and the time-averaged geomagnetic field: 0-5Ma. *EOS Transactions, American Geophysical Union*, **74(43)**, 218, presented at San Francisco Fall AGU Meeting.
- O'Brien, M.S., C.G. Constable, & R.L. Parker, 1993. Frozen flux modeling for epochs 1980,1915. *EOS Transactions, American Geophysical Union*, **74(43)**, 209, presented at San Francisco Fall AGU Meeting.
- Johnson, C.L., & Constable, C.G., 1994. Observational constraints on long-term properties of the geomagnetic field. *Session, S4*, presented at SEDI meeting, Whistler, Canada, August 1994 .
- Constable, C.G. , 1994. The time-averaged geomagnetic field and paleosecular variation models: possible constraints from paleointensity observations. *EOS Transactions, American Geophysical Union*, **75(44)**, 193, presented at San Francisco Fall AGU Meeting.
- Johnson, C.L. & Constable, C.G. , 1994. The time-averaged geomagnetic field over the last 5Myr. *EOS Transactions, American Geophysical Union*, **75(44)**, 194, presented at San Francisco Fall AGU Meeting.
- O'Brien, M.S., Parker, R.L., & Constable, C.G. , 1994. Improving resolution in core-geomagnetic field models by applying crustal field corrections to geomagnetic data. *EOS Transactions, American Geophysical Union*, **75(44)**, 197, presented at San Francisco Fall AGU Meeting.
- Constable, C.G. , 1995. Paleointensity, the time-averaged geomagnetic field and paleosecular variation. *Annales Geophysicae, Supplement 1 to Volume*, **13**, C75, presented at European Geophysical Society Meeting, April 1995.
- Constable, C.G., Lund, S.P., & Johnson, C.L. , 1995. Global Geomagnetic Field Models for 0-3000 BP. *EOS Transactions, American Geophysical Union*, **76(44)**, to be presented at San Francisco Fall AGU Meeting.
- Johnson, C.L. , Constable, C.G., J. Gee, H. Staudigel, L. Tauxe, V. H. Forjaz and M. Salgueiro, 1995. A Paleomagnetic Study of São Miguel Island, Azores. *EOS Transactions, American Geophysical Union*, **76(44)**, to be presented at San Francisco Fall AGU Meeting.
- O'Brien, M.S., Parker, R.L., & Constable, C.G. , 1995. Global Characterization of the Crustal Magnetic Field: New Uncertainty Estimates for Core Field Modelling. *EOS Transactions, American Geophysical Union*, **76(44)**, to be presented at San Francisco Fall AGU Meeting.
- Constable, C.G., Johnson, C.L., & Lund, S.P., 1996. 3000 Years of Quasi-Global Geomagnetic Secular Variation. *EOS Transactions, American Geophysical Union*, **77(22)**, W143, presented at Brisbane, Western Pacific AGU Meeting.
- Johnson, C.L., & Constable, C.G., 1996. Paleosecular Variation and Time Averaged Geomagnetic Fields: Global and Regional Biases for 0-5Ma. *EOS Transactions, American Geophysical Union*, **77(22)**, W142, presented at Brisbane, Western Pacific AGU Meeting.
- Rygaard-Hjalsted, C., C.G. Constable, & R.L. Parker, 1996. The influence of correlated crustal magnetiza-

- tion in main field modelling. *EOS Transactions, American Geophysical Union*, **77(46)**, F156, presented at San Francisco Fall AGU Meeting.
- Johnson, C.L., Constable, C.G., J. Gee, H. Staudigel, L. Tauxe, M. Salgueiro and V. H. Forjaz , 1996. Paleomagnetism of 0-4 Ma Lavas from São Miguel Island, Azores. *EOS Transactions, American Geophysical Union*, **77(46)**, F165, presented at San Francisco Fall AGU Meeting.
- O'Brien, M.S., Parker, R.L., & Constable, C.G. , 1996. A global magnetic power spectrum ($100 < l < 1000$) from Project Magnet data . *EOS Transactions, American Geophysical Union*, **77(46)**, F172, presented at San Francisco Fall AGU Meeting.
- Tauxe, L., C. Constable, & P. Hartl , 1996. Oligocene paleointensity from DSDP Hole 522. *EOS Transactions, American Geophysical Union*, **77(46)**, F169, presented at San Francisco Fall AGU Meeting.
- Constable, C., & Johnson, C.L., 1996. Lateral heterogeneity in the global geomagnetic field. *EOS Transactions, American Geophysical Union*, **77(46)**, F39, presented at San Francisco Fall AGU Meeting.
- Constable, C., R.L. Parker, & C. Rygaard-Hjalsted, 1997. Including covariance in geomagnetic core-field modelling. *EOS Transactions, American Geophysical Union*, **78(17)**, S113, presented at Baltimore Spring AGU Meeting.
- Lowe, D.A.J., R.L. Parker, & C.G. Constable, 1998. Estimating R_l from the power spectral density of scalar satellite data. *EOS Transactions, American Geophysical Union*, **79(46)**, F225, presented at San Francisco Fall AGU Meeting.
- Lowe, D.A.J., R.L. Parker, & C.G. Constable, 1999. Inverting Vector MAGSAT data for the crustal power spectrum. , presented at IUGG Meeting, Birmingham, UK, July, 1999.
- Everett, M.E., S. Constable, & C.G. Constable, 1999. Modeling 3-D Induction effects in satellite data. *2nd International Symposium on 3-D Electromagnetics*, p. **63-66**, Salt Lake City UT, October 27-29.
- McMillan, D.G., C.G. Constable, R.L.Parker & G.A. Glatzmaier, 1999. A statistical assessment of geomagnetic intensity models. *EOS Transactions, American Geophysical Union*, **80(46)**, F288, presented at San Francisco Fall AGU Meeting.
- Everett, M.E., S. Constable, & C.G. Constable, 1999. Modeling and observing 3-D satellite geomagnetic induction. *EOS Transactions, American Geophysical Union*, **80(46)**, F298, presented at San Francisco Fall AGU Meeting.
- Constable, S., & C. Constable, 2000. Observing geomagnetic induction in magnetic satellite measurements. *Proceedings of 3rd Ørsted International Science Team Meeting*, , Grasse, France. May 2-4
- Constable, C., 2000. Geomagnetic Reversals: Rates, Timescales, Preferred Paths, Statistical Models and Simulations. *7th Symposium on Study of the Earth's Deep Interior*, **Invited Review S6.1**, p109. Exeter, UK, July 30th - August 4th
- Constable, C., H. Staudigel, L. Tauxe, & P. Gans, 2001. A Paleomagnetic Study of 0-3 Ma Volcanic Rocks from Costa Rica. *Eos Trans. AGU*, **82(47)**, Fall Meet. Suppl., Abstract GP51A-0275.
- Constable, C. G. & C. L. Johnson, 2004. A Paleomagnetic Power Spectrum. *Studies of the Earth's Deep Interior*, **Abstract S2.8**, .
- Lawrence, K. L., C. G. Constable & C. L. Johnson, 2004. Paleomagnetic Secular Variation Study of the Pacific and Surrounding Regions.. *Studies of the Earth's Deep Interior*, **Abstract S2.10**, .
- Lawrence, K. P., C. Constable & C. L. Johnson, 2004. Evaluation of agreement between paleosecular variation models and empirical distributions at 20°latitude. *Eos Trans. AGU*, **85(47)**, Fall Meet. Suppl., Abstract GP11D-0856.
- Johnson, C. L., C. G. Constable & K. Lawrence, 2004. Detecting non-geocentric axial dipole structure in the time-averaged field. *Eos Trans. AGU*, **85(47)**, Fall Meet. Suppl., Abstract U33A-0023.
- Constable, C., & M. Korte, 2005. Prospects for Resolving Short-term Variations in the Paleomagnetic

- Dipole Moment. *EOS, Trans. AGU*, **86(52)**, Fall Meet. Suppl., Abstract GP24A-08.
- Johnson, C. L., C. Constable, L. Tauxe, K. Lawrence, H. Staudigel, L. Brown, V. Mejia, N. Opdyke, R. Coe & D. Stone, 2005. The Time-Averaged Field Investigations Project: A Synthesis. *Eos Trans. AGU*, **85(47)**, Fall Meet. Suppl., Abstract GP21A-0013.
- Koppers, A., L. Tauxe, C. Constable, S.A. Pisarevsky, M. Jackson, P. Solheid, S. Banerjee, C. Johnson, A. Genevey, R. Delaney, P. Baker, & E. Sbarbori, 2006. The Magnetics Information Consortium (MagIC) Online Database: Uploading, Searching and Visualizing Paleomagnetic and Rock Magnetic Data. *Eos Trans. AGU*, **86(52)**, Fall Meet. Suppl., Abstract GP33A-0088.
- Korte, M. & C. G. Constable, 2005. The Role of Intensity Data in Global Millennial Scale Geomagnetic Field Models. *EOS, Trans. AGU*, **86(52)**, Fall Meet. Suppl., Abstract GP21A-0008.
- Lawrence, K. L., L. Tauxe, C. G. Constable, H. Staudigel, J. Konter, & F. Vernon, 2005. A Paleomagnetic Study of Mt. Erebus Volcanic Province, Antarctica. *EOS, Trans. AGU*, **86(52)**, Fall Meet. Suppl., Abstract GP44A-06.
- Wardinski, I., M. Korte, & C. G. Constable & C. L. Johnson, 2005. The evolution of the core-surface flow over the last seven thousands years. *EOS, Trans. AGU*, **86(52)**, Fall Meet. Suppl., Abstract GP21A-0001.
- Constable, C.G., 2006. Linking Paleomagnetic Observations to Numerical Dynamo Simulations. *EOS Trans. AGU*, **87(36)**, Jt Assem. Suppl., DI51A-01. Invited.
- Constable, C., A. Koppers, L. Tauxe, & R.C. Minnett, 2006. The Five Dimensions of MagIC. *Eos Trans. AGU*, **87(52)**, Fall Meet. Suppl., Abstract IN13C-1172. Invited
- Minnett, R.C., A. Koppers, L. Tauxe, C. Constable, S.A. Pisarevsky, M. Jackson, P. Solheid, S. Banerjee, & C. Johnson, 2006. The Magnetics Information Consortium (MagIC) Online Database: Uploading, Searching and Visualizing Paleomagnetic and Rock Magnetic Data. *Eos Trans. AGU*, **87(52)**, Fall Meet. Suppl., Abstract GP11A-0067.
- Johnson, C. L., & C. G. Constable, 2006. An Update on the 0–5 Ma Geomagnetic Field recorded by Lava Flows. *Eos Trans. AGU*, **87(52)**, Fall Meet. Suppl., Abstract GP14A-08.
- Johnson, C. L., & C. G. Constable, 2007. A Re-evaluation of the Lava Flow Record for the 0–5 Ma Geomagnetic Field. *EGU, April 2007*, , Invited.
- Constable, C.G., 2007. Possibilities for Extending Time-Varying Geomagnetic Field Models to 100 ka. *EOS Trans. AGU*, **88(23)**, Jt Assem. Suppl., Abstract GP44A-01. Invited.
- Constable, C.G., 2007. Calibration and Validation of Relative Geomagnetic Paleointensity Records. *EOS Trans. AGU*, **88(23)**, Jt Assem. Suppl., Abstract GP51A-01. Invited.
- Constable, C. G. & C. L. Johnson, 2007. Resampling the 0-5 Ma Geomagnetic Field Recorded by Lavas. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP41A-04. Invited.
- Constable, C.G., 2007. Statistical Views of Long Term Geomagnetic Field Variations. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP23A-03. Invited.
- Donadini, F., M. Korte, & C.G. Constable, 2007. A new selection of archeomagnetic data for high resolution geomagnetic field modeling. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP41A-02.
- Minnett, R.C., A. Koppers, L. Tauxe, C. Constable, & F. Donadini, 2007. Uploading, Searching and Visualizing of Paleomagnetic and Rock Magnetic Data in the Online MagIC Database. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP21A-0114.
- Ribaudo, J.T. & C.G. Constable, 2007. Scripted Finite Element Methods Applied to Global Geomagnetic Induction. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP32A-05.
- Ziegler, L., C. G. Constable & C. L. Johnson, 2007. Robustness and Limitations of 0-1Ma Absolute Paleointensity Data. *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract GP43A-093.

- Constable, C.G., 2008. Puzzling over Paleointensity. *EOS Trans. AGU*, **89(23)**, Jt Assem. Suppl., Abstract GP34A-08.
- Donadini, F., M. Korte, & C.G. Constable, 2008. Geomagnetic Field Models for 0-3kA Derived Using Various Data Types and Selection Criteria. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP43C-11.
- Koppers, A., R.C. Minnett, L. Tauxe, C. Constable, & F. Donadini, 2008. Managing Rock and Paleomagnetic Data Flow with the MagIC Database: from Measurement and Analysis to Comprehensive Archive and Visualization. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP11A-0708.
- Korte, M., C.G. Constable & F. Donadini, 2008. Uncertainty Estimates for Millennial Scale Geomagnetic Field Models. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP51B-0755.
- Lawrence, K.P., L. Tauxe, H. Staudigel, C. Constable, A. Koppers, W. McIntosh, & C. Johnson, 2008. Paleomagnetic Field Properties at High Southern Latitude, Erebus Volcanic Province, Antarctica. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP11A-0701.
- Ribaudo, J.T. & C.G. Constable, 2008. Towards Realistic Global Geomagnetic Induction Modeling Using Scripted Finite Element Methods. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP51C-03.
- Ziegler, L., C. G. Constable, C. L. Johnson & L. Tauxe, 2008. PADM2M: A Time-varying Model of Paleomagnetic Axial Dipole Moment for 0-2 Ma. *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract GP21A-0774.
- Korte, M.C., C. Constable, 2011. Holocene geomagnetic field evolution. *Abstract IN13B-1130*, **presented at 2011 Fall Meeting, AGU, San Francisco, California, 5-9 Dec**, Invited. .
- Minnett, R., A.A.P. Koppers, L. Tauxe, C. Constable, N.A. Jarboe, 2011. Solving the challenges of data preprocessing, uploading, archiving, retrieval, analysis and visualization for large heterogeneous paleo- and rock magnetic datasets. *Abstract GP43A-01*, **presented at 2011 Fall Meeting, AGU, San Francisco, California, 5-9 Dec**, ..
- Jarboe, N.A., L. Tauxe, C. Constable, A.A.P. Koppers, R. Minnett, 2011. Transitional Field Studies Using a Large Scale Database (MagIC). *Abstract GP23A-1035*, **presented at 2011 Fall Meeting, AGU, San Francisco, California, 5-9 Dec**, ..
- Constable, C., R. Minnett, A.A.P. Koppers, L. Tauxe, N.A. Jarboe, 2011. The MagIC Online Database: Improving the Archive Quality via a New Review System. *Abstract GP11A-1008*, **presented at 2011 Fall Meeting, AGU, San Francisco, California, 5-9 Dec**, ..
- Tauxe, L., C. Constable, A.A.P. Koppers, R. Minnett, F. Donadini, N.A. Jarboe, A.J. Biggin, 2011. Paleointensity: Where we stand and where the MagIC database can take us. *Abstract GP14A-03*, **presented at 2011 Fall Meeting, AGU, San Francisco, California, 5-9 Dec**, Invited. .

FUNDED PROPOSALS:

Proposal Title: Paleointensity of the geomagnetic field:the last half million years
 Principal Investigator: C. Constable, L. Tauxe
 Granting Agency: NSF
 Time Period: 2/1/89–6/30/90
 Amount of Award: \$80,000

Proposal Title: Constructing core fields consistent with geomagnetic and geophysical constraints
 Principal Investigator: G.E.Backus, C. Constable, R.L. Parker
 Granting Agency: NASA
 Time Period: 2/1/90–1/31/91
 Amount of Award: \$74,000

Proposal Title: Whole Earth mantle conductivity
 Principal Investigator: C. Constable, S. Constable
 Granting Agency: NSF
 Time Period: 12/15/89–11/30/92
 Amount of Award: \$89,9826

Proposal Title: Statistical simulations of geomagnetic secular variation and reversals, . . .
 Principal Investigator: C. Constable
 Granting Agency: NSF
 Time Period: 2/1/90–1/31/92
 Amount of Award: \$39,999

Proposal Title: Bootstrap Statistics for Paleomagnetic Data
 Principal Investigator: C. Constable, L. Tauxe
 Granting Agency: NSF
 Time Period: 1/1/91–12/31/91
 Amount of Award: \$65,275

Proposal Title: Geomagnetic Field Models Incorporating Physical Constraints on the Secular Variation
 Principal Investigator: C. Constable, R.L. Parker
 Granting Agency: NASA
 Time Period: 1/1/92–12/31/93
 Amount of Award: \$145,424

Proposal Title: Paleointensity of the Earth's Magnetic Field using Basaltic Glass
 Principal Investigator: C. Constable, L. Tauxe
 Granting Agency: NSF
 Time Period: 7/1/92–6/30/94
 Amount of Award: \$113,866

Proposal Title: Large and Small Scales in Geomagnetic Field Modeling
 Principal Investigator: C. Constable, R.L. Parker
 Granting Agency: NASA
 Time Period: 1/1/94–12/31/95
 Amount of Award: \$149,645

Proposal Title: Global Geomagnetic Field Modeling for 0-3000 BP
 Principal Investigator: C. Constable
 Granting Agency: NSF
 Time Period: 7/1/93–6/30/95
 Amount of Award: \$98,612

Proposal Title: Lava Flow Records of Paleosecular Variation from the Azores
 Principal Investigator: C. Constable, L. Tauxe, C. Johnson
 Granting Agency: NSF
 Time Period: 12/1/94–11/30/95

Amount of Award: \$50,000

Proposal Title: Physical Interpretation of Magnetic Hysteresis Loops from Geological Materials
Principal Investigator: C. Constable, L. Tauxe
Granting Agency: NSF
Time Period: 8/1/95–7/31/96
Amount of Award: \$54,174

Proposal Title: Core and Crustal Geomagnetic Field Modelling using ØRSTED and MAGSAT data
Principal Investigator: C. Constable, R.L. Parker, S.C. Cande
Granting Agency: NASA
Time Period: 6/1/95–5/31/98
Amount of Award: \$170,000 (total)

Proposal Title: Long Term Structure and Variability in the Geomagnetic Field: the View from Lavas, Sedi
Principal Investigator: C. Constable
Granting Agency: NSF
Time Period: 7/1/96–6/30/99
Amount of Award: \$88,123 (total)

Proposal Title: Geomagnetic Intensity in Ancient Times
Principal Investigator: C. Constable, L. Tauxe
Granting Agency: NSF
Time Period: 7/1/97–6/30/99
Amount of Award: \$48,142 (year 1)

Proposal Title: Geodynamo Simulations and Geomagnetic Secular Variation Over the Past 3000 Years
Principal Investigator: C. Constable, G. Glatzmaier
Granting Agency: LANL, UCRP
Time Period: 10/1/98–9/30/00
Amount of Award: \$58,000 (total)

Proposal Title: Improved Spectral Characterization of the Crustal Geomagnetic Field
Principal Investigator: C. Constable, R.L. Parker, M.E. Purucker
Granting Agency: NASA
Time Period: 6/1/98–5/31/01
Amount of Award: \$210,000 (total)

Proposal Title: Earth Conductivity from Satellite Magnetic Data
Principal Investigator: C. Constable, S.C. Constable, R.L.Parker
Granting Agency: NASA
Time Period: 6/1/98–5/31/01
Amount of Award: \$255,000 (total)

Proposal Title: Collaborative Research: The Geomagnetic Field for the last 5 Myr
Principal Investigator: L.Tauxe, C. Constable, H. Staudigel
Granting Agency: NSF
Time Period: 9/15/98–8/31/01
Amount of Award: \$222,589 (total)

Proposal Title: Earth's Magnetic Field: its Source and Behavior
Principal Investigator: C. Constable, J.J. Love
Granting Agency: NSF
Time Period: 6/01/00–5/31/02
Amount of Award: \$140,000 (total)

Proposal Title: Collaborative Proposal: Paleomagnetism, the Geodynamo, and Core-Mantle Interactions
Principal Investigators: C. Constable, (with L.Tauxe UCSD, J. Bloxham, Harvard Univ.)
Granting Agency: NSF

Time Period: 8/15/01–7/31/03
Amount of Award: \$159,998 (total to SIO)

Proposal Title: A workshop on future development of paleo and rock magnetic community databases
Principal Investigator: C. Constable (w. L. Tauxe, C. Johnson)
Granting Agency: NSF
Time Period: 01/01/02–12/31/02
Amount of Award: \$44,462

Proposal Title: Participant Support for International 2002 SEDI meeting, Lake Tahoe
Principal Investigator: C. Constable (w. T.G. Masters)
Granting Agency: NSF
Time Period: 3/01/02–1/31/03
Amount of Award: \$25,000

Proposal Title: Geomagnetic field as recorded in the Mt Erebus Volcanic Province: key to field structure at high southern latitudes
Principal Investigator: L. Tauxe (w. C. Constable, A. Koppers, H. Staudigel)
Granting Agency: NSF
Time Period: 9/01/03–8/31/05
Amount of Award: \$635,960 (total to SIO)

Proposal Title: Collaborative Proposal: Development and Maintenance of the Magnetics Information Consortium (MagIC)
Principal Investigator: C. Constable (w. C. Johnson, L. Tauxe, A. Koppers (UCSD) and S. Banerjee, P. Solheid, (U. Minnesota)
Granting Agency: NSF
Time Period: 8/01/03–7/31/06
Amount of Award: \$635,960 (total to SIO)

Proposal Title: Modeling the Geomagnetic Field on Million Year Time Scales
Principal Investigator: C. Constable (w. C. Johnson)
Granting Agency: NSF
Time Period: 12/01/03–11/30/06
Amount of Award: \$484,180 (total award)

Proposal Title: Participant Support for International 2004 SEDI meeting
Principal Investigator: C. Constable
Granting Agency: NSF
Time Period: 01/01/04–12/31/04
Amount of Award: \$23,252

Proposal Title: Electromagnetic Induction Studies from Multiple Satellite Configurations
Principal Investigator: C. Constable (w. S. Constable, R. Parker)
Granting Agency: NASA
Time Period: 10/01/03–9/30/06
Amount of Award: \$385,724 (total award)

Proposal Title: The Geomagnetic Field during the Holocene
Principal Investigator: C. Constable
Granting Agency: NSF
Time Period: 01/01/06–12/31/08
Amount of Award: \$310,000 (total award)

Proposal Title: Participant Support for International 2006 SEDI meeting
Principal Investigator: C. Constable
Granting Agency: NSF
Time Period: 05/01/06–04/30/07
Amount of Award: \$25,005

Proposal Title: Supplement to Development and Maintenance of the Magnetism Information Consortium (MagIC), I
 Principal Investigator: C. Constable
 Granting Agency: NSF
 Time Period: 8/01/06–7/31/07
 Amount of Award: \$50,0001

Proposal Title: Supplement to Development and Maintenance of the Magnetism Information Consortium (MagIC), II
 Principal Investigator: C. Constable
 Granting Agency: NSF
 Time Period: 8/01/07–7/31/08
 Amount of Award: \$50,0000

Proposal Title: CMG Research: Constraints on the Earth's thermal history and probing the geomagnetic field beneath the core-mantle boundary using nonlinear inversions
 Principal Investigator: G. Ierley, C. Constable
 Granting Agency: NSF
 Time Period: 8/01/07–7/31/09
 Amount of Award: \$244,359

Proposal Title: The Geomagnetic Field during the past Million Years
 Principal Investigator: C. Constable (w. C. Johnson)
 Granting Agency: NSF
 Time Period: 7/01/08–6/30/11
 Amount of Award: \$479,999 (total award)

Proposal Title: Collaborative Research: Cyberinfrastructure Developments for the Magnetism Information Consortium (MagIC), II
 Principal Investigator: C. Constable (w. L. Tauxe, A. Koppers (OSU))
 Granting Agency: NSF
 Time Period: 7/01/08–6/30/11
 Amount of Award: \$850,823

Proposal Title: Upgrading of Shared Computing Equipment in Geophysics
 Principal Investigator: P. Shearer, C. Constable
 Granting Agency: NSF
 Time Period: 7/01/09–6/30/11
 Amount of Award: \$74,639

Proposal Title: Tuning Dynamo Models to Paleomagnetic Observations
 Principal Investigator: C. Constable (w. D. Gubbins)
 Granting Agency: NSF
 Time Period: 5/01/11–4/30/14
 Amount of Award: \$424,559

Proposal Title: Collaborative Research: Geo-Visualization and Data Analysis using the Magnetism Information Consortium
 Principal Investigator: C. Constable (w. L. Tauxe, A. Koppers (OSU))
 Granting Agency: NSF Proposal No. EAR Proposal 1225520
 Time Period: 7/01/12–6/30/14
 Amount of Award: \$375,980

Proposal Title: Asymmetries in Geomagnetic Field Structure and Variability
 Principal Investigator: C. Constable
 Granting Agency: NSF
 Time Period: 01/01/13–12/31/14
 Amount of Award: \$270,000

Proposal Title: Collaborative Research: Geo-Visualization and Data Analysis using the Magnetism

Principal Investigator: Information Consortium
Granting Agency: C. Constable (w. L. Tauxe, A. Koppers (OSU))
Time Period: NSF Proposal No. EAR 1347297
Amount of Award: 7/01/14–6/30/17
\$577,504

Proposal Title: A Workshop for Cooperative Studies of Earth's Deep Interior
Principal Investigator: C. Constable (w. T. Masters)
Granting Agency: NSF, Proposal No. EAR 1520917
Time Period: 02/15/15–01/31/17
Amount of Award: \$93,549

Proposal Title: Advances in Paleomagnetic Field Modeling: How does Earth's dipole grow and decay?
Principal Investigator: C. Constable
Granting Agency: NSF Proposal No. EAR 1623786
Time Period: 06/01/16–05/31/19
Amount of Award: \$350,000 - over 3 years