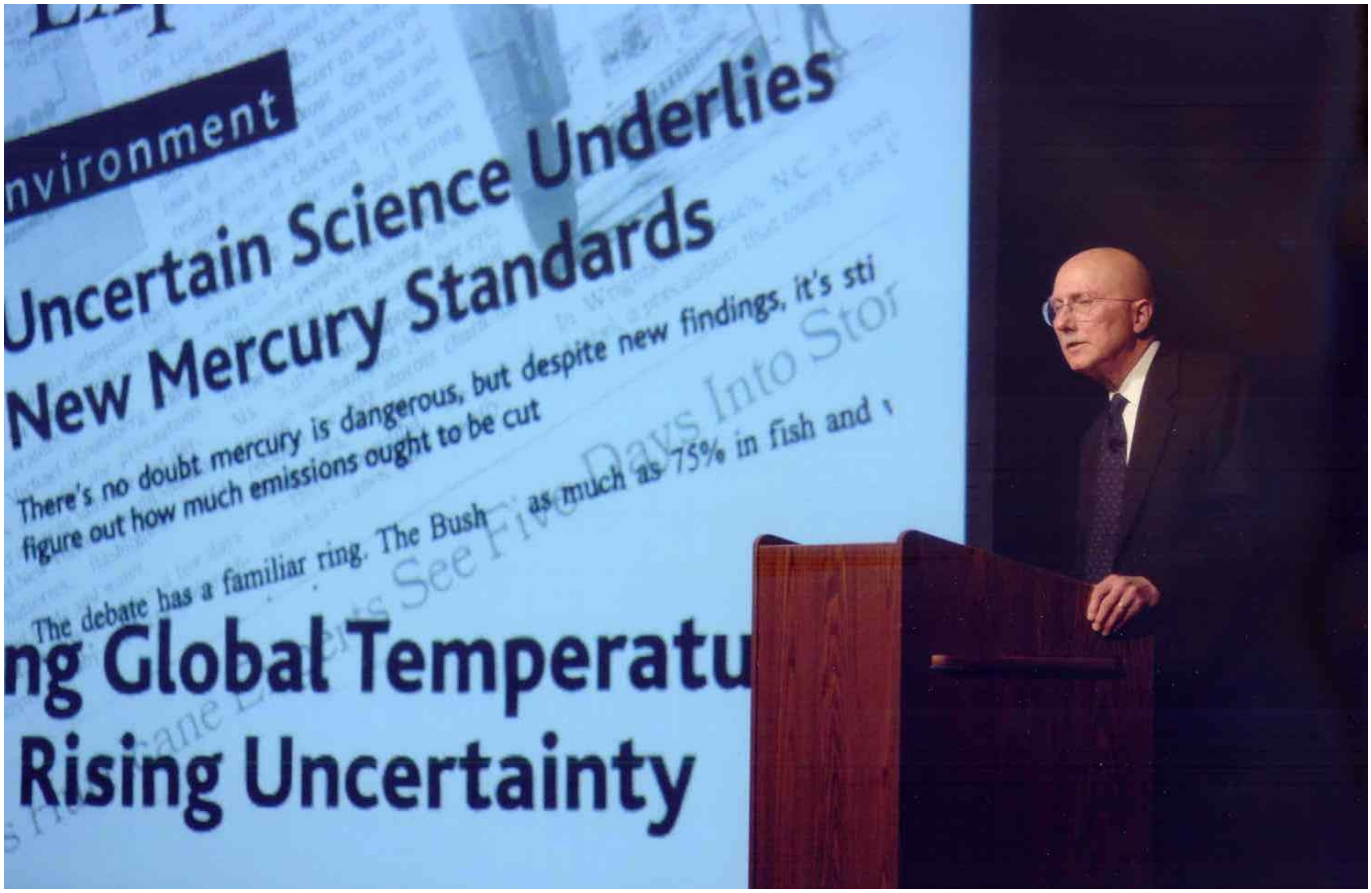
HENRY N. POLLACK, PhD
Professor of Geophysics, Emeritus
Department of Earth & Environmental Sciences
The University of Michigan



OVERVIEW
Henry Pollack is a geophysicist engaged in research on many aspects of Earth's changing climate. As a contributing author to the 2007 Intergovernmental Panel on Climate Change (IPCC) Assessment Report he shared the 2007 Nobel Peace Prize with former Vice-President Al Gore and IPPC colleagues. He created and led an international research consortium that has reconstructed the past 500 years of Earth's climate history, primarily through measurement of subsurface temperatures around the world. Pollack has worked on seven continents, published widely, and earned a reputation as an excellent writer and public speaker who explains complex scientific ideas simply and clearly to general audiences. He currently is a science advisor to Al Gore's Climate Reality Project.

Pollack's public speaking experience is extensive. He speaks frequently (10-15 presentations annually) to professional, business, academic, alumni, civic and community groups throughout the United States and abroad. He is the author of two widely praised general-interest books – *Uncertain Science, Uncertain World* (2003, Cambridge University Press), and *A World Without Ice* (2009, Avery/Penguin). Pollack travels annually to Antarctica as a guide and naturalist, helping eco-tourists gain a better first-hand understanding of Earth's changing climate. At the University of Michigan, he was the originator of the perennially popular general education courses *Earthquakes and Volcanoes*, *Climate and Human History*, and *The Science and Politics of Global Warming*.

EDUCATION
BA, Cornell University, 1958
MS, University of Nebraska, 1960
PhD, University of Michigan, 1963

PROFESSIONAL ASSOCIATIONS
Geological Society of America (elected Fellow 1971)
American Association for the Advancement of Science (elected Fellow 1991)
American Geophysical Union (elected Fellow 2006)

ACADEMIC AND PROFESSIONAL EXPERIENCE

2006-present	Science advisor to former Vice President Al Gore's Climate Reality Project.
2006-2014	Science, Technology and Public Policy Steering Committee, Gerald R. Ford School of Public Policy, University of Michigan (U-M)
2005-present	Professor Emeritus, Department of Geological Sciences, U-M
1974-2005	Professor, Department of Geological Sciences, U-M
1988-1991	Chairman, Department of Geological Sciences, U-M
1985-86	Visiting Scientist, University of Western Ontario, Canada
1982-87	Associate Dean for Research, College of Literature, Science, and the Arts, U-M
1981-88	Director, Seismological Observatory, U-M
1977-78	Visiting Scientist, Universities of Durham and Newcastle-upon-Tyne, England
1972-78	Director, Seismological Observatory, U-M
1970-71	Senior Lecturer, Department of Physics, University of Zambia
1967-74	Associate Professor, Department of Geological Sciences, U-M
1964-67	Assistant Professor, Department of Geological Sciences, U-M
1963-64	Research Fellow in Geophysics, Hoffman Laboratory, Harvard University

MEDIA EXPERIENCE
Provided expertise and commentary on earthquakes and/or climate change for Detroit network television, the Diane Rehm Show, Lou Dobbs CNN News, National Public Radio, Michigan Public Radio, Wisconsin Public Radio, Minnesota Public Radio, Southern California Public Radio, Iowa Public Radio, New Hampshire Public Radio and other regional radio. Perspectives about earthquakes and/or climate change have appeared in *Newsweek*, *U.S. News and World Report*, and *The Economist*. Other quotes and citations have appeared in national and regional print media.

HONORS and AWARDS
Lifetime Achievement Award, Michigan League of Conservation Voters (2015)
Finalist, Royal Society Prize for best science book of 2010
Silver Medal, Living Now 2010 Book Awards
Sierra Club Michigan Chapter Burton V. Barnes Award (2010)
Nobel Peace Prize, shared with Al Gore and IPCC colleagues (2007)
Elected Fellow, Geological Society of America
Elected Fellow, American Association for the Advancement of Science
Elected Fellow, American Geophysical Union
Excellence in Undergraduate Teaching Award, University of Michigan (1992)

SPECIAL LECTURES
Eugene Perrin Memorial Lecture, Wayne State University (2014)
Keynote address, USA-Canada Policy Forum, Ann Arbor, MI (2013)
Keynote address, *Vanishing Ice* exhibit, Whatcom Museum, Bellingham, WA (2013)
Keynote address, Grand Valley State University Scholarship Day, Allendale, MI (2012)
Earth Day Keynote address, The College of New Jersey, Ewing, NJ (2012)
Keynote address, Institute of Religion in the Age of Science, Lake George, NY (2012)
Keynote address, CLSA Japan Forum, Tokyo, Japan (2010)
Detroit Earth Day, Detroit, Michigan (2010)
Authors@Google (2009)
Commonwealth Club of California (2009)
Keynote address, Inter-American Conference on Energy, Environment, and Sustainability, Quito, Ecuador (2008)

Keynote address, NOAA Great Lakes Environmental Research Lab conference on the Great Lakes (2008)
3rd Annual Carolina Climate Lecturer, University of North Carolina-Chapel Hill (2008)
Mary and Richard Holland Lecturer, Omaha, Nebraska (2007)
Purdue Sinai Forum Lecturer, Michigan City, Indiana (2006)
John L. Rich Lecturer, University of Cincinnati (2006)
Geological Society of America Geology and Society Division, Distinguished Lecturer (2005)
Sigma Xi Lecturer, University of Nebraska (2004)
Earl Kuehnast Memorial Lecturer, University of Minnesota (2003)
Thomas Crough Memorial Lecturer, Purdue University (1999)
James Wright Memorial Lecturer, Universities of Edinburgh and Glasgow (1978)

SELECTED PROFESSIONAL SERVICE

2015-2016	Polar Studies Board, National Research Council, Arctic Matters ad-hoc committee
2010-2016	Board of Earth Science and Resources, National Research Council
2007-present	University of Arizona Biosphere 2 Advisory Board (Chair)
2006	University of Minnesota Geology & Geophysics Department Advisory Board
2006	Testimony to National Research Council Committee on Surface Temperature Reconstructions
2005-2008	Geological Society of America Committee on Honorary Fellows
2005	Testimony to National Research Council Board on Radioactive Waste Management
2004-2007	American Association for Advancement of Science Program Committee
2003	American Geophysical Union Program Committee
2002-present	University of Arizona College of Science Advisory Board
1998-2002	International Geological Correlation Project Coordinator
1996-2004	American Geophysical Union Committee for Global Environmental Change
1998-present	University of Nebraska Earth and Atmospheric Sciences Department Alumni Advisory Board
1998-present	Editorial Board, *Acta Geophysica Sinica*
1995-present	Editorial Board, *Revista Brasileira de Geofisica*
1981-2006	Editorial Board, *Tectonophysics*
1997-2000	National Research Council U.S. Geodynamics Committee
1992	Testimony to U.S. Senate Committee on Commerce, Science and Transportation
1991-1995	Chairman, International Heat Flow Commission of the International Association of Seismology and Physics of the Earth's Interior (Vice-chairman 1987-91)
1983-87	Board of Directors, DOSECC, Inc. (Consortium of universities to oversee deep continental drilling program)
1982-1990	Educational Testing Service Graduate Record Examination Board in Geology (Chair, 1988-1990)
1980-84	Editor, *Physics and Chemistry of the Earth*

SELECTED REVIEW PANELS

2014	Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report
2013	National Science Foundation Special Emphasis Panel to review the IRIS SAGE and UNAVCO GAGE proposals
2006-2007	National Research Council Committee to review the U.S. Climate Change Science Program's Report on Scientific Uncertainty in Climate Decision Making
2005	National Science Foundation Special Emphasis Panel to review the Incorporated Research Institutions in Seismology (IRIS)
2002-2003	Chair, National Science Foundation/IRIS Panel for the Global Seismic Network
1998-2000	National Science Foundation Earth Science Instrumentation and Facilities Advisory Panel
1993	National Science Foundation Advisory Panel, San Andreas Fault Borehole Project
1990	Chair, National Science Foundation Advisory Panel for IRIS.
1988-1992	National Science Foundation Continental Dynamics Program Advisory Panel

PUBLICATIONS and CREATIVE WORK

Books:

Pollack, H.N., 2009. *A World Without Ice*, Avery/Penguin Group USA, 287 pp

Pollack, H.N., 2003. *Uncertain Science…Uncertain World*, Cambridge University Press, 243 pp.

Film: prominent role in *Project:Ice*, released 2013.

Multi-Media Installation: *A World Without Ice*, 2014

Articles in professional journals:

Pollack, H.N., 2011. Lands' End to the Arctic (book review), *Nature* 472, 413-414.

Pollack, H.N., 2008. Comment on "Effective thermal expansivity of Maxwellian oceanic lithosphere" by Jun Korenaga, *Earth and Planetary Science Letters* 257, 343-349, 2007, doi:10.1016/j.epsl.2008.09.001.

Huang, S., **Pollack, H.N.,** Shen, P.-Y., 2008. A Late Quaternary climate reconstruction based on borehole heat flux data, borehole temperature data, and the instrumental record. *Geophysical Research Letters,* 35, L13703, doi:10.1029/2008GL034187.

Turney, C., Duncan, R., Nicholls, N., Moberg, A., **Pollack, H.N.**, 2008. Towards an Australian Climate Reconstruction for the Past Two Millennia. *PAGES News* 16 (2) p.34

Pollack, H. N. and Chapman, D. S., 2007. Comment on "Spherical harmonic analysis of Earth's conductive heat flow" by V. M. Hamza, R. R. Cardoso and C. F. Ponte Negro. *International Journal of Earth Sciences doi:10.1007/s00531-007-0255-2.*

Jansen, E., Overpeck, J. (Coordinating Lead Authors), **Pollack, H. N.** and 40 other lead and contributing authors, 2007. Chapter 6: Paleoclimate, in *Climate Change 2007: The Physical Science Basis. Working Group I Contribution to the IPCC Fourth Assessment Report,* Cambridge University Press, 433-497.

Pollack, H.N., 2007. Scientific uncertainty and public policy: moving on without all the answers. *GSA Today*, v.17, n.3, pp. 28-29.

Hegerl, G. C., Crowley, T. J., Allen, M., Hyde, W. T., **Pollack, H. N.**,, Smerdon, J., Zorita, E., 2007. Detection of human influence on a new, validated 1500-year temperature reconstruction, *Journal of Climate* 20, 650-666.

Pollack, H.N., Huang, Shaopeng, Smerdon, Jason, 2006. Five centuries of climate change in Australia: The view from underground, *Journal of Quaternary Science* 21(7), 701-706.

Smerdon, J.E., **Pollack, H.N.,** Cermak, V., Enz, J., Kresl, M., Safanda, J., Wehmiller, J., 2006. Daily, seasonal and annual relationships between air and subsurface temperatures, *Journal of Geophysical Research* (doi:10.1029/2004JD005578).

Von Herzen, R., Davis, E. E., Fisher, A., Stein, C. A., **Pollack, H. N.**, 2005. Comments on "Earth's heat flux revised and linked to chemistry" by A.M. Hoffmeister and R.E. Criss, *Tectonophysics* 409,193-198.

Pollack, H.N., Smerdon, J. van Keken, P., 2005. Variable seasonal coupling between air and ground temperatures: A simple representation in terms of subsurface thermal diffusivity, *Geophysical Research Letters*, *32*, L15405, doi:10.1029/2005GL023869, 4 pp.

Smerdon, J., **Pollack, H. N.**, Cermak, V., Enz, J. W., Kresl, M., Safanda, J., Wehmiller, J. F., 2004. Air-ground temperature coupling and subsurface propagation of annual temperature signals, *Journal of Geophysical Research* 109, D21107, doi:10.1029/2004JD005056, 10 pp.

Pollack, H.N. and Smerdon, J., 2004. Borehole climate reconstructions: spatial structure and hemispheric averages, *Journal of Geophysical Research* 109, D11106, doi:10.1029/2003JD004163, 9 pp.

Smerdon, J., **Pollack, H. N.**, Enz, J., Lewis, M., 2003. Conduction-dominated heat transport of the annual temperature signal in soil, *Journal of Geophysical Research* doi:10.1029/2002JB002351, 6 pp.

Pollack, H.N., Demezhko, D.Yu., Duchkov, A.D., Golovanova, I.V., Huang, S., Shchapov, V.A., Smerdon, J., 2003. Surface temperature trends in Russia over the past five centuries reconstructed from borehole temperatures, *Journal of Geophysical Research* doi:10.1029/2002JB002154, 12 pp.

Lin, X., Smerdon, J., England, A. W., **Pollack, H. N.**, 2003. A model study of the effects of climatic changes on ground temperatures*, Journal of Geophysical Research*, 10.1029/2002JD002878, 12 pp.

Beltrami, H., Smerdon, J.E., **Pollack, H.N**., and Huang, S., 2002. Continental heat gain in the global climate system. *Geophysical Research Letters*, v. 29, n. 8, 10.1029/2001 GL014310.

Duchkov, A.D. and **Pollack, H.N**., 2002. Century-long climate change trends at historical time, reconstructed from borehole temperature. *Cryosphere of the Earth*, v. 6, n. 1, pp. 82-89.

Pollack, H.N., 2002. Earth, heat flow in, McGraw Hill Encyclopedia of Science and Technology, 9th edition, McGraw Hill, New York, pp. 8.

Folland, C.K., T.R. Karl, (Coordinating Lead Authors), and **H.N. Pollack** and 150 other Lead and Contributing Authors, 2001: Chapter 2, Observed Climate Variability and Change. In: *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change* [Houghton, J.T., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881pp.

Pollack, H.N. and Huang, S., 2001. Ground Temperature, in Encyclopedia of Global Environmental Change, v.1, M. McCracken, J. S. Perry, eds., John Wiley & Sons, pp.422-426.

Pollack, H.N. 2001. Geothermal Heat, in Encyclopedia of Global Environmental Change, v.1, M. McCracken, J. S. Perry, eds., John Wiley & Sons, p.402

Pollack, H.N. and Huang, S., **2000.** Climate reconstruction from subsurface temperatures. *Annual Reviews of Earth and Planetary Sciences*, v. 28, pp. 339-365.

Huang, S., **Pollack, H.N.** and Shen, P.-Y., **2000**. Temperature trends over the past five centuries reconstructed from borehole temperatures, *Nature* v. 403, pp. 756-758.

Huang, S., **Pollack, H.N.** and Shen, P.-Y., 1999. Global database of borehole temperatures and climate reconstructions, ***PAGES Past Global Changes***, v. 7, n. 2, pp. 18-19.

Pollack, H.N. , Huang, S. and Shen, P.-Y., 1998. Climate change record in subsurface temperatures: a global perspective. *Science*, v. 282, pp. 279-281.

Pollack, H.N. and Huang, S., 1998. Underground Temperatures Reveal Changing Climate. *Geotimes*, v. 43, n. 8, pp. 16-19. (see also discussions and replies: *Geotimes* v. 43, n. 12, p. 4, 1998; *Geotimes* v. 44, n. 1, p. 4, 1999)

Huang, S., **Pollack, H.N.**, and Shen, P.Y., 1997. Holocene temperature changes seen in worldwide continental heat flow measurements. *Geophysical Research Letters*, v. 24, pp. 1947-1950.

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Hurter, S., and **Pollack, H.N.**, 1996. Terrestrial heat flow in the Paraná Basin, southern Brazil. *Journal of Geophysical Research*, v. 101, pp. 8659-8671.

Shen, P.Y., **Pollack, H.N.**, and Huang, S., 1996. Inference of ground surface temperature history from borehole temperature data: A comparison of two inverse methods. *Global and Planetary Change*, v. 14, pp. 49-57 .

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Huang, S., **Pollack, H.N.**, Shen, P.Y., and Wang, J-Y., 1995. Reading paleoclimate from borehole temperature profiles: principles and examples from North America and Southwest China. *Quaternary Science*, n. 3, pp. 213-222.

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Nyblade, A.A., and **Pollack, H.N.**, 1993. Differences in heat flow between east and southern Africa: implications for regional variability in the thermal structure of the lithosphere. *Tectonophysics*, v. 219, pp. 257-272.

Nyblade, A.A., and **Pollack, H.N.**, 1992. A gravity model for the lithosphere in western Kenya and northeastern Tanzania. *Tectonophysics*, v. 212, pp. 257-267.
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Jackson, M.J., **Pollack, H.N.**, and Sutton, S.T., 1991. On the distribution of anomalous mass within the earth: forward models of the gravitational potential spectrum using ensembles of discrete mass elements. *Geophysical Journal International*, v. 107, pp. 83-94.

Sutton, S.T., **Pollack, H.N.**, and Jackson, M.J., 1991. Spherical harmonic representation of the gravitational potential of discrete spherical mass elements. *Geophysical Journal International*, v. 107, pp. 77-82.

Cercone, K.R., and **Pollack, H.N.**, 1991. Thermal maturity of the Michigan Basin, in Early Sedimentary Evolution of the Michigan Basin. *Geological Society of America Special Paper* 256, pp. 1-12.

Nyblade, A.A., **Pollack, H.N.**, Jones, D.L., Podmore, F., and Mushayandebvu, M., 1990. Terrestrial heat flow in east and southern Africa. *Journal of Geophysical Research*, v. 95, pp. 17371-17384.

Henry, S.G., and **Pollack, H.N.**, 1988. Terrestrial heat flow above the Andean subduction zone, Bolivia and Peru. *Journal of Geophysical Research*, v. 93, pp. 15153-15162.

Ballard, S., and **Pollack, H.N.**, 1988. Modern and ancient geotherms beneath southern Africa. *Earth and Planetary Science Letters*, v. 88, pp. 132-142.

Pollack, H.N., and Sass, J.H., 1988. Thermal regime of the lithosphere. In *Handbook of Terrestrial Heat-Flow Density Determination*: Haenel, R., Rybach, L., and Stegena, L., editors, Kluwer Academic Publishers, pp. 301-308.

Jackson, M.J., and **Pollack, H.N.**, 1987. Mantle devolatilization and convection: implications for the thermal evolution of the earth. *Geophysical Research Letters*, v. 14, pp. 737-740.

Ballard, S., and **Pollack, H.N.**, 1987. Diversion of heat by Archean cratons: a model for southern Africa. *Earth and Planetary Science Letters*, v. 85, pp. 253-264.

Ballard, S., **Pollack, H.N.**, and Skinner, N., 1987. Terrestrial heat flow in Botswana and Namibia. *Journal of Geophysical Research*, v. 92, pp. 6291-6300.

Pollack, H.N., 1986. Cratonization and thermal evolution of the mantle. *Earth and Planetary Science Letters*, v. 80, pp. 175-182.

Pollack, H.N., and Henry, S.G., 1985. Heat flow in the presence of topography: numerical analysis of data ensembles. *Geophysics*, v. 50, n. 8, pp. 1335-1341.

Speece, M.A., Bowen, T.D., Folcik, J.L., and **Pollack, H.N.**, 1985. Analysis of temperatures in sedimentary basins: The Michigan Basin. *Geophysics*, v. 50, n. 8, pp. 1318-1334.

Pollack, H.N., and Murthy, V.R., eds., 1984. Structure and Evolution of the Continental Lithosphere. *Physics and Chemistry of the Earth*, v. 15, 203 pp., Pergamon: Oxford.

Jackson, M.J., and **Pollack, H.N.**, 1984. On the sensitivity of parameterized convection to the rate of decay of internal heat sources. *Journal of Geophysical Research*, v. 89, n. B12, pp. 10,103-10,108.

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Pollack, H.N., 1982. The heat flow from the continents. *Annual Reviews of Earth and Planetary Science*, ed. F. Donath, v. 10, pp. 459-481.

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Sprague, D.L. and **Pollack, H.N.**, 1980. Heat flow in the Mesozoic and Cenozoic. *Nature*, v. 285, pp. 393-395.

Pollack, H.N., 1980. The heat flow from the earth: a review. In *Mechanisms of Continental Drift and Plate Tectonics*, ed. P. A. Davies and S. K. Runcorn, pp. 183-192. London: Academic Press.

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Pollack, H.N., 1980. On the use of the volumetric thermal expansion coefficient in models of ocean floor topography. *Tectonophysics*, v. 64, T45-T47.

Vitorello, I., **Pollack, H.N.**, and Hamza, V.M., 1980. Terrestrial heat flow in the Brazilian highlands. *Journal of Geophysical Research*, v. 85, pp. 3778-3788.

Vitorello, I., and **Pollack, H.N.**, 1980. On the variation of continental heat flow with age and the thermal evolution of continents. *Journal of Geophysical Research*, v. 85, pp. 983-995.

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Van der Voo, R., **Pollack, H.N.**, and Henry, S.G., 1978. On the significance and utilization of secondary magnetizations in red beds. *Physics of the Earth and Planetary Interiors*, v. 16, pp. 12-19.

Pollack, H.N., and Chapman, D.S., 1977. The flow of heat from the earth's interior. *Scientific American*, v. 237, n. 2, pp. 60-76; reprinted in Japanese (1979). Reprinted in *Earthquakes and Volcanoes: Readings from Scientific American*, ed. A. A. Bolt, San Francisco: Freeman (1980).

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Chapman, D.S., and **Pollack, H.N.**, 1974. Cold spot in West Africa: anchoring the African Plate. *Nature*, v. 250, n. 5466, pp. 477-478.

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Pollack, H.N., 1969. A numerical model of the Grand Canyon. In *Geology and Natural History of the Grand Canyon Region*, Four Corners Geological Society, Guidebook Fifth Field Conference, D. L. Baars, ed., pp. 61-62.

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