BIOGRAPHICAL INFORMATION: SEAN CARL SOLOMON

Born: Los Angeles, California; October 24, 1945 Citizenship: U.S.A.

Business Address: Lamont-Doherty Earth Observatory
Columbia University
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EDUCATION

B.S. in geophysics (with honor), California Institute of Technology — June 1966
Ph.D. in geophysics, Massachusetts Institute of Technology — February 1971

EMPLOYMENT

Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology
- Assistant Professor of Geophysics — January 1972-June 1977
- Associate Professor of Geophysics — July 1977-June 1983
- Professor of Geophysics — July 1983-August 1992

Department of Terrestrial Magnetism, Carnegie Institution of Washington
- Director — September 1992-September 2011
- Director Emeritus and Research Staff Member — September 2011-June 2012

Columbia University
- Director, Lamont-Doherty Earth Observatory — July 2012-June 2020
- Associate Director for Earth Systems Science, The Earth Institute — July 2012-June 2020
- William B. Ransford Professor of Earth and Planetary Science — July 2012-June 2020
- Adjunct Senior Research Scientist, Lamont-Doherty Earth Observatory — July 2020-November 2024
- Doherty Senior Scholar, Lamont-Doherty Earth Observatory — December 2024-present

VISITING APPOINTMENTS

Visiting Scientist, Lunar Science Institute — January 1975
Physicist (temporary), Lawrence Livermore Laboratory — July-August 1978
Guest Investigator, Woods Hole Oceanographic Institution — Summers, 1979-1992
Visiting Faculty, Institute of Geophysics and Planetary Physics and Department of Earth and Space Sciences, University of California, Los Angeles — September 1982-June 1983
Visiting Scientist, Jet Propulsion Laboratory — September 1982-June 1983
Roland and Jane Blumberg Visiting Professor of Planetary Sciences, University of Texas at Austin — November 1988
Visiting Associate, Division of Geological and Planetary Sciences, California Institute of Technology — September 1990-May 1991
Japan Society for the Promotion of Science Fellow, University of Tokyo, Hokkaido University, and Kyushu University — September-October 1998

HONORS AND AWARDS

Tau Beta Pi — 1965
National Science Foundation Graduate Fellow — 1966-1968
Fannie and John Hertz Foundation Fellow — 1968-1971
National Science Foundation Postdoctoral Fellow — 1971-1972
Alfred P. Sloan Research Fellow — 1977-1981
Fellow, American Geophysical Union — 1980
Fellow, John Simon Guggenheim Memorial Foundation — 1982-1983
Fellow, American Academy of Arts and Sciences — 1995
Fellow, American Association for the Advancement of Science — 1995
Fellow, Geological Society of America — 1997
Arthur L. Day Prize and Lectureship, National Academy of Sciences — 1999

Grove Karl Gilbert Award, Geological Society of America 1999
Member, National Academy of Sciences 2000
Public Service Medal, National Aeronautics and Space Administration 2004
Harry H. Hess Medal, American Geophysical Union 2005
Distinguished Alumni Award, California Institute of Technology 2006
Nelson P. Jackson Aerospace Award (to the MESSENGER team), National Space Club 2009
Member, International Academy of Astronautics 2010
Asteroid 25137 (1998 SS23) named Seansolomon 2011
Laurels for Team Achievement Award (to the MESSENGER team), International Academy of Astronautics 2012
Space Pioneer Award (to the MESSENGER project), National Space Society 2014
National Medal of Science (for 2012) 2014

HONORARY LECTURESHIPS

Robert H. Lommen Distinguished Lecturer, St. Louis University 1986
W. C. Krumbein Lecturer, Northwestern University and University of Chicago 1992
W. S. Jardetzky Lecturer, Lamont-Doherty Earth Observatory, Columbia University 1994
S. Thomas Crough Memorial Lecturer, Purdue University 1996
J. Tuzo Wilson Lecturer, University of Toronto 1997
Harold Masursky Lecturer, 32nd Lunar and Planetary Science Conference 2001
A. O. C. Nier Memorial Lecturer, University of Minnesota 2003
McDonnell Lecturer, Washington University 2007
Thomas A. Mutch Memorial Lecturer, Brown University 2007
Wilmot Hyde Bradley Lecturer, Geological Society of Washington 2008
Barringer Invitational Lecturer, 73rd Annual Meeting of the Meteoritical Society 2010
Shoemaker Lecturer, American Geophysical Union 2011
Thomas G. Bullen Memorial Lecturer in Science and Technology, Iona College 2013
University Lecturer, Columbia University 2014

OCEANOGRAPHIC EXPEDITIONS

R/V Argo, Nova Expedition (Southwest Pacific Ocean) August-October 1967
R/V Atlantis II, Cruise 93 (Southwest Indian Ocean Ridge) February-March 1976
F/S Meteor, Cruise 45 (Reykjanes Ridge Iceland Seismic Project) June-July 1977
R/V Robert Conrad, Cruise RC 22 (Rivera Ocean Seismic Experiment) January-February 1979
R/V Endeavor, Cruise EN-051 (Oceanographer Fracture Zone) May-June 1980
R/V Knorr, Cruise KN-92 (Mid-Atlantic Ridge, 23°N) January-March 1982
R/V Knorr, Cruise KN-115 (Mid-Atlantic Ridge, 26°N) June-July 1985
R/V Oceanus, Cruise OC-180 (Kane Fracture Zone) December 1986-January 1987
R/V Thomas Washington, RAITT Expedition (East Pacific Rise, 9°30'N) January-February 1988

SPACECRAFT MISSION EXPERIENCE

Co-Investigator, Magellan (previously Venus Orbiting Imaging Radar and Venus Radar Mapper)
Project Science Group 1982-1994
Radar Investigation Group 1982-1994
Mars Global Surveyor (previously Mars Observer)
Co-Investigator, Mars Orbiter Laser Altimeter 1986-2005
Principal Investigator, MESSENGER (MErcury Surface, Space ENvironment, GEochemistry, and Ranging) 1999-2018
Co-Investigator, GRAIL (Gravity Recovery and Interior Laboratory) 2007-2016

EDITORIAL EXPERIENCE

Associate Editor, *Proceedings of the Lunar and Planetary Science Conference* 1976, 1978
Associate Editor, *Journal of Geophysical Research* 1976-1978
Associate Editor, Proceedings of the Conference on Comparisons of Mercury and the Moon, *Physics of the Earth and Planetary Interiors, 15* (2/3) 1977

Associate Editor, *Eos, Transactions of the American Geophysical Union*	1979-1981
Editor, Proceedings of the Symposium on Quantitative Methods of Assessing Plate Motions, *Tectonophysics, 74* (1/2)	1981
Editorial Board, *Physics and Chemistry of the Earth*	1981-1985
Geophysical Monograph Board, American Geophysical Union	1982-1984
Chair	1983-1984
Associate Editor, *Geophysical Research Letters*	1986-1988
Editorial Committee, *Annual Review of Earth and Planetary Sciences*	1993-1997
Board of Advisory Editors, *Earth and Planetary Science Letters*	2001-2007
Editorial Board, *Astrobiology*	2001-2014
Guest Editor, MESSENGER's First Flyby of Mercury, *Earth and Planetary Science Letters*, *285* (3/4), https://www.sciencedirect.com/journal/earth-and-planetary-science-letters/vol/285/issue/3	2009
Managing Guest Editor, Mercury after the MESSENGER Flybys, *Planetary and Space Science*, *59* (15), https://www.sciencedirect.com/journal/planetary-and-space-science/vol/59/issue/15	2011
Guest Editor, MESSENGER Views Mercury from Orbit, *Journal of Geophysical Research*, https://agupubs.onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)2169-9100.MESSENGER1	2012-2014

PROFESSIONAL SOCIETIES

American Geophysical Union	1967-present
American Association for the Advancement of Science	1968-present
Seismological Society of America	1969-present
Geological Society of America	1983-present
Division for Planetary Sciences, American Astronomical Society	1990-present

PROFESSIONAL SERVICE

National Aeronautics and Space Administration

Lunar Sample Analysis Planning Team	1974-1976
Basaltic Volcanism Project, Lunar and Planetary Institute, Team leader for thermal histories of the terrestrial planets	1976-1979
Venus Orbital Imaging Radar Science Working Group	1977-1978
Lunar and Planetary Review Panel	1980-1982
Crustal Dynamics Project Proposal Evaluation Panel	1981
Planetary Geology Working Group	1982-1984
Crustal Dynamics Project Working Group	1982-1991
Geopotential Research Mission Science Steering Group	1982-1987
Planetary Geology Review Panel	1983-1984
Chair, Planetary Geology and Geophysics Working Group	1984-1986
Lunar and Planetary Geosciences Review Panel	1984-1985, 1986-1988
Chair	1986-1988
Space and Earth Science Advisory Committee	1984-1987
Solid Earth Geophysics Working Group, Earth Systems Science Committee	1984-1985
Mars Rover Sample Return Science Working Group	1987-1989
Chair, Project Steering Committee, Mars: Evolution of Volcanism, Tectonics, and Volatiles	1987-1990
Magellan Guest Investigator Review Panel	1990
MESUR (Mars Environmental Survey) Mission Science Definition Team	1991-1993
Chair, Venus Data Analysis Program Review Panel	1992
Planetary Geology and Geophysics Management and Operations Working Group	1992-1997, 2000-2005
Chair	1994-1997
Terrestrial Planetary Bodies Science Working Group	1994-1996
Rosetta Orbiter Review Panel	1995
Mars Microprobe Science Advisory Team, New Millennium Program	1995-1997
Solar System Exploration Roadmap Development Team	1996
Solar System Exploration Subcommittee, Space Science Advisory Committee	1996-2000

Task Force on MO&DA and R&A, Space Science Advisory Committee	1997-1998
Earth System Science and Applications Advisory Committee	1998-2002
Executive Council, NASA Astrobiology Institute	1998-2008
Chair, Solid Earth Science Working Group	2000-2002
Chair, Review Panel for NASA Specialized Centers of Research and Training in Astrobiology	2001-2002
Strategic Roadmap Committee for Earth Science and Applications from Space	2004-2005
Chair, Planetary Science Subcommittee, NASA Advisory Council	2006-2009
Chair, MESSENGER Participating Scientist Review Panel	2006
Chair, Solar System Exploration Research Virtual Institute Review Panel	2013
Chair, Gravity Science Working Group, Europa Multiple Flyby Mission	2015-2016
New Frontiers Review Panel	2017
Chair, Planetary Mission Senior Review	2020, 2025

U. S. Geological Survey

Earthquake Hazards Reduction Program Peer Review Panel	1975, 1985

National Academy of Sciences/National Research Council

Committee on Planetary and Lunar Exploration, Space Science Board	1976-1979
Space Science Board	1978-1982
Chair, Committee on Earth Sciences, Space Science Board	1979-1982
Joint U.S.-European Working Group on Cooperation in Planetary Exploration	1982-1983
Board on Earth Sciences	1985-1988
Steering Committee, RIDGE (Ridge Inter-Disciplinary Global Experiments) Project	1987-1990
Committee on Cooperative Mars Exploration and Sample Return, Space Science Board	1987-1988
Nominating Committee	2002-2003, 2004-2005
Class I Membership Committee	2003, 2006-2008
Chair, Selection Committee, 2005 Arthur L. Day Prize and Lectureship	2004
Chair, Section 16 (Geophysics)	2005-2008
Committee on Grand Research Questions in the Solid-Earth Sciences	2006-2007
Audit Committee	2008-2010, 2022-2025
Secretary, Class I (Physical and Mathematical Sciences)	2009-2012
Chair, Class I (Physical and Mathematical Sciences)	2012-2015
Council	2019-2022
Committee on Budget and Internal Affairs	2019-2022
Committee on Scientific Programs	2019-2022
Executive Committee	2020-2022

Universities Space Research Association

Lunar and Planetary Science Council	1978-1980, 1991-1993
Chair, Lunar and Planetary Institute Science Council	2013-2020
Board of Trustees	2023-2026

International Union of Geodesy and Geophysics

Convener, Interdisciplinary Symposium on Quantitative Methods of Assessing Plate Motions, XVII General Assembly	1979

Inter-Union Commission on the Lithosphere

Working Group 1: Recent Plate Movements and Deformation	1981-1983

Department of Defense

Technical Review Panel on Nuclear Test Ban Treaty Verification, Defense Advanced Research Projects Agency	1981-1986
Geophysics Review Panel, Air Force Office of Scientific Research	1984
Board of Visitors, Ocean Sciences Directorate, Office of Naval Research	1993

Association of American Universities

Steering Committee, Space Science Working Group	1984-91
Chair	1987-89

American Geophysical Union

President-Elect and President, Planetology Section	1984-88
Council	1984-88, 1994-2000
Chair, Editor Search Committee, *Journal of Geophysical Research–Solid Earth and Planets*	1986, 1988
Harry H. Hess Medal Committee	1990-1992
Chair, Edward A. Flinn Award Committee	1990-1992
Fellows Committee	1992-1994
President-Elect	1994-1996
Executive Committee	1994-1998
President	1996-1998
Past-President	1998-2000
Chair, Nominations Committee	2000-2002
William Bowie Medal Committee	2006-2010

National Science Foundation

Review Panel for Incorporated Research Institutions for Seismology Program Plan	1986
Review Panel for Ocean Drilling Program	1988
Screening Panel, Earth Sciences Division Director	1995
Graduate Fellowship Review Panel	1996
Co-Chair, Solid Earth Working Group, Future of Marine Geosciences Workshop	1996-1997
Screening Panel, Ocean Sciences Division Director	2001
Search Committee, Assistant Director for Geosciences	2003
Search Committee, Earth Sciences Division Director	2006
Chair, Review Committee, Ocean Observatories Initiative Scientific Objectives and Network Design	2006, 2007
Advisory Committee for Geosciences	2006-2008
GEO Vision Working Group	2006-2008
Chair, Committee of Visitors, Deep Earth Processes Section	2008
EarthScope Facility Review Panel	2010

Department of Energy

Geosciences Research Council	1986-1987
Physical Sciences Advisory Committee, Lawrence Livermore National Laboratory (LLNL)	1993-1994
Environmental Programs Scientific Advisory Committee, LLNL	1995-1998
Chair, Earth and Environmental Sciences Directorate Advisory Committee, LLNL	1998-2000
Energy and Environment Directorate Scientific Advisory Committee, LLNL	2001

Incorporated Research Institutions for Seismology

Standing Committee for the Global Seismic Network	1987-1990
Chair	1988-1990
Science Task Force	1995

Geological Society of America

G. K. Gilbert Award Committee	2002-2003
Arthur L. Day Medal Committee	2003-2004

Canadian Institute for Advanced Research

Earth System Evolution Program Review Panel	2013

Connecticut Academy of Science and Engineering

Connecticut Medal of Science Selection Committee 2015

Academic and Institutional Review Committees

Committee to Visit the Department of Earth and Planetary Sciences, Harvard University 1993-1999, 2002-2005, 2020
Review Team, Laboratory for Terrestrial Physics, NASA Goddard Space Flight Center 1993
Visiting Committee, National Astronomy and Ionosphere Center, Arecibo Observatory, Cornell University 1995-1998
Visiting Committee, School of Earth and Atmospheric Sciences, Georgia Institute of Technology 1996, 2003
Geoscience Evaluation Panel, Danish National Research Foundation 1997
Chair, Academic Review Committee, Department of Geosciences, Princeton University 1998
External Review Committee, MIT/Woods Hole Oceanographic Institution Joint Program in Oceanography and Applied Ocean Science and Engineering 1998, 2004, 2009
Chair 1998
Institutional Review Committee, Scripps Institution of Oceanography 1999
Physical and Mathematical Sciences and Environmental Studies Cluster Review Committee, Brown University 1999
Chair, External Advisory Committee for Geology and Geophysics, Rice University 2000
Advisory Committee, Institute of Earth Sciences, Academia Sinica, Taiwan 2000-2005
Chair 2002-2005
Academic Program Review Committee, Department of Geosciences, University of Arizona 2001
External Assessment Team, Department of Earth and Environmental Sciences, Columbia University 2001
Scientific Advisory Board (Fachbeirat), Max Planck Institute for Chemistry 2001-2009
Advisory Committee, Center for Integrative Planetary Science, University of California, Berkeley 2003-2006
Advisory Council, Southern California Earthquake Center 2003-2007
Chair 2004-2007
Visiting Committee, Earth Sciences Directorate, NASA Goddard Space Flight Center 2003
External Review Committee, Department of Geology, University of Maryland 2003
Visiting Committee, Harvard-Smithsonian Center for Astrophysics 2004, 2007
External Advisory Board, The Earth Institute, Columbia University 2004-2011
External Review Committee, School of Earth and Environmental Sciences, Seoul National University 2005
Visiting Committee, Berkeley Geochronology Center 2005
Chair, External Review Committee, Department of the Geophysical Sciences, University of Chicago 2005
Chair, External Advisory Committee, Department of Earth Science, Rice University 2005
Chair, External Review Committee, Department of Earth and Planetary Sciences, Washington University 2007
Visiting Committee, Division of Geological and Planetary Sciences, California Institute of Technology 2010, 2017
Co-chair 2017
External Review Committee, Department of Geology, University of Kansas 2011
Academic Senate Program Review Committee, Department of Earth and Space Sciences, UCLA 2013
Chair, Academic Program Review Committee, Department of Planetary Sciences/Lunar and Planetary Laboratory, University of Arizona 2014
External Review Committee, Department of Earth, Atmospheric, and Planetary Sciences, Purdue University 2014
External Review Committee, Jackson School of Geosciences, University of Texas, Austin 2016
Chair, Visiting Committee, Department of Geophysics, Stanford University 2019
External Review Committee, Department of Earth and Planetary Science, University of California, Berkeley 2022

PUBLICATIONS

Refereed Journal Articles

Solomon, S. C., and M. N. Toksöz, On the density distribution in the Moon, *Phys. Earth Planet. Inter., 1*, 475-484, doi:10.1016/0031-9201(68)90016-2, 1968.

Solomon, S. C., and S. Biehler, Crustal structure from gravity anomalies in the southwest Pacific, *J. Geophys. Res., 74*, 6696-6701, doi:10.1029/JB074i027p06696, 1969.

Solomon, S. C., and M. N. Toksöz, Lateral variation of attenuation of P and S waves beneath the United States, *Bull. Seismol. Soc. Am., 60*, 819-838, doi:10.1785/BSSA0600030819, 1970.

Solomon, S. C., Seismic-wave attenuation and partial melting in the upper mantle of North America, *J. Geophys. Res., 77*, 1483-1502, doi:10.1029/JB077i008p01483, 1972.

Toksöz, M. N., S. C. Solomon, J. W. Minear, and D. H. Johnston, Thermal evolution of the Moon, *The Moon, 4,* 190-213, doi:10.1007/BF00562926, 1972.

Solomon, S. C., On Q and seismic discrimination, *Geophys. J. Roy. Astron. Soc., 31*, 163-177, doi:10.1111/j.1365-246X.1972.tb02365.x, 1972.

Solomon, S. C., and M. N. Toksöz, Internal constitution and evolution of the Moon, *Phys. Earth Planet. Inter., 7*, 15-38, doi:10.1016/0031-9201(73)90037-X, 1973.

Toksöz, M. N., and S. C. Solomon, Thermal history and evolution of the Moon, *The Moon, 7,* 251-278, doi:10.1007/BF00564634, 1973.

Solomon, S. C., Shear-wave attenuation and melting beneath the Mid-Atlantic Ridge, *J. Geophys. Res., 78*, 6044-6059, doi:10.1029/JB078i026p06044, 1973.

Toksöz, M. N., A. M. Dainty, S. C. Solomon, and K. R. Anderson, Velocity structure and evolution of the Moon, *Proc. Lunar Sci. Conf. 4th, Geochim. Cosmochim. Acta, Suppl. 4*, 2529-2547, 1973.

Solomon, S. C., Density within the Moon and implications for lunar composition, *The Moon, 9*, 147-166, doi:10.1007/BF00565401, 1974.

Solomon, S. C., and R. G. Butler, Prospecting for dead slabs, *Earth Planet. Sci. Lett., 21,* 421-430, doi:10.1016/0012-821X(74)90182-4, 1974.

Solomon, S. C., and N. H. Sleep, Some simple physical models for absolute plate motions, *J. Geophys. Res., 79*, 2557-2567, doi:10.1029/JB079i017p02557, 1974.

Ambuter, B. P., and S. C. Solomon, An event recording system for monitoring small earthquakes, *Bull. Seismol. Soc. Am., 64*, 1181-1188, doi:10.1785/BSSA0640041181, 1974.

Solomon, S. C., and B. R. Julian, Seismic constraints on ocean-ridge mantle structure: Anomalous fault-plane solutions from first motions, *Geophys. J. Roy. Astron. Soc., 38,* 265-285, doi:10.1111/j.1365-246X.1974.tb04120.x, 1974.

Siegfried, R. W., II, and S. C. Solomon, Mercury: Internal structure and thermal evolution, *Icarus, 23*, 192-205, doi:10.1016/0019-1035(74)90005-0, 1974.

Toksöz, M. N., A. M. Dainty, S. C. Solomon, and K. R. Anderson, Structure of the Moon, *Rev. Geophys. Space Phys., 12*, 539-567, doi:10.1029/RG012i004p00539, 1974.

Dainty, A. M., M. N. Toksöz, S. C. Solomon, K. R. Anderson, and N. R. Goins, Constraints on lunar structure, *Proc. Lunar Sci. Conf. 5th, Geochim. Cosmochim. Acta, Suppl. 5*, 3091-3114, 1974.

Solomon, S. C., N. H. Sleep, and R. M. Richardson, On the forces driving plate tectonics: Inferences from absolute plate velocities and intraplate stress, *Geophys. J. Roy. Astron. Soc., 42*, 769-801, doi:10.1111/j.1365-246X.1975.tb05891.x, 1975.

Lee, W. B., and S. C. Solomon, Inversion schemes for surface wave attenuation and Q in the crust and the mantle, *Geophys. J. Roy. Astron. Soc., 43*, 47-71, doi:10.1111/j.1365-246X.1975.tb00627.x, 1975.

Solomon, S. C., Mare volcanism and lunar crustal structure, *Proc. Lunar Sci. Conf. 6th, Geochim. Cosmochim. Acta, Suppl. 6,* 1021-1042, 1975.

Solomon, S. C., and K. T. Paw U, Elevation of the olivine-spinel transition in subducted lithosphere: Seismic evidence, *Phys. Earth Planet. Inter., 11*, 97-108, doi:10.1016/0031-9201(75)90003-5, 1975.

Chapman, M. E., and S. C. Solomon, North American-Eurasian plate boundary in northeast Asia, *J. Geophys. Res., 81*, 921-930, doi:10.1029/JB081i005p00921, 1976.

Richardson, R. M., S. C. Solomon, and N. H. Sleep, Intraplate stress as an indicator of plate tectonic driving forces, *J. Geophys. Res., 81*, 1847-1856, doi:10.1029/JB081i011p01847, 1976.

Solomon, S. C., Some aspects of core formation in Mercury, *Icarus, 28,* 509-521, doi:10.1016/0019-1035(76)90124-X, 1976.

Solomon, S. C., Geophysical constraints on radial and lateral temperature variations in the upper mantle, *Amer. Mineral., 61,* 788-803, 1976.

Solomon, S. C., and J. Chaiken, Thermal expansion and thermal stress in the Moon and terrestrial planets: Clues to early thermal history, *Proc. Lunar Sci. Conf. 7th, Geochim. Cosmochim. Acta, Suppl. 7*, 3229-3243, 1976.

Solomon, S. C., N. H. Sleep, and R. M. Richardson, Implications of absolute plate motions and intraplate stress for mantle rheology, *Tectonophysics, 37*, 219-231, doi:10.1016/0040-1951(77)90049-X, 1977.

Mattaboni, P. J., and S. C. Solomon, MITOBS: A seismometer system for ocean-bottom earthquake studies, *Mar. Geophys. Res., 3*, 87-102, doi:10.1007/BF00309795, 1977.

Solomon, S. C., N. H. Sleep, and D. M. Jurdy, Mechanical models for absolute plate motions in the early Tertiary, *J. Geophys. Res., 82,* 203-212, doi:10.1029/JB082i002p00203, 1977.

Richardson, R. M., and S. C. Solomon, Apparent stress and stress drop for intraplate earthquakes and tectonic stress in the plates, *Pure Appl. Geophys., 115*, 317-331, doi:10.1007/BF01637112, 1977.

Duschenes, J. D., and S. C. Solomon, Shear wave travel time residuals from oceanic earthquakes and the evolution of oceanic lithosphere, *J. Geophys. Res., 82*, 1985-2000, doi:10.1029/JB082i014p01985, 1977.

Solomon, S. C., The relationship between crustal tectonics and internal evolution in the Moon and Mercury, *Phys. Earth Planet. Inter., 15*, 135-145, doi:10.1016/0031-9201(77)90026-7, 1977.

Solomon, S. C., and J. Longhi, Magma oceanography: 1. Thermal evolution, *Proc. Lunar Sci. Conf. 8th, Geochim. Cosmochim. Acta, Suppl. 8*, 583-599, 1977.

Solomon, S. C., P. J. Mattaboni, and R. J. Hester, Microseismicity near the Indian Ocean triple junction, *Geophys. Res. Lett., 4*, 597-600, doi:10.1029/GL004i012p00597, 1977.

Burr, N. C., and S. C. Solomon, The relationship of source parameters of oceanic transform earthquakes to plate velocity and transform length, *J. Geophys. Res., 83*, 1193-1205, doi:10.1029/JB083iB03p01193, 1978.

Lee, W. B., and S. C. Solomon, Simultaneous inversion of surface wave phase velocity and attenuation: Love waves in western North America, *J. Geophys. Res., 83*, 3389-3400, doi:10.1029/JB083iB07p03389, 1978.

Solomon, S. C., On volcanism and thermal tectonics on one-plate planets, *Geophys. Res. Lett., 5*, 461-464, doi:10.1029/GL005i006p00461, 1978.

Thurber, C. H., and S. C. Solomon, An assessment of crustal thickness variations on the lunar nearside: Models, uncertainties, and implications for crustal differentiation, *Proc. Lunar Planet. Sci. Conf. 9th, Geochim. Cosmochim. Acta, Suppl. 9*, 3481-3497, 1978.

Solomon, S. C., The nature of isostasy on the Moon: How big a Pratt-fall for Airy models?, *Proc. Lunar Planet. Sci. Conf. 9th, Geochim. Cosmochim. Acta, Suppl. 9*, 3499-3511, 1978.

Solomon, S. C., and N. C. Burr, The relationship of source parameters of ridge-crest and transform earthquakes to the thermal structure of oceanic lithosphere, *Tectonophysics, 55*, 107-126, doi:10.1016/0040-1951(79)90337-8, 1979.

Lee, W. B., and S. C. Solomon, Simultaneous inversion of surface wave phase velocity and attenuation: Rayleigh and Love waves over continental and oceanic paths, *Bull. Seismol. Soc. Am., 69,* 65-95, doi:10.1785/BSSA0690010065, 1979.

Solomon, S. C., Formation, history and energetics of cores in the terrestrial planets, *Phys. Earth Planet. Inter., 19,* 168-182, doi:10.1016/0031-9201(79)90081-5, 1979.

Solomon, S. C., and J. W. Head, Vertical movement in mare basins: Relation to mare emplacement, basin tectonics, and lunar thermal history, *J. Geophys. Res., 84*, 1667-1682, doi:10.1029/JB084iB04p01667, 1979.

Angenheister, G., H. Gebrande, H. Miller, W. Weigel, P. Goldflam, W. Jacoby, G. Palmason, S. Bjornsson, P. Einarsson, S. Zverev, B. Loncarevic, and S. C. Solomon, First results from the Reykjanes Ridge Iceland Seismic Project 1977, *Nature, 279*, 56-60, doi:10.1038/279056a0, 1979.

Richardson, R. M., S. C. Solomon, and N. H. Sleep, Tectonic stress in the plates, *Rev. Geophys. Space Phys., 17,* 981-1019, doi:10.1029/RG017i005p00981, 1979.

Comer, R. P., S. C. Solomon, and J. W. Head, Elastic lithosphere thickness on the Moon from mare tectonic features: A formal inversion, *Proc. Lunar Planet. Sci. Conf. 10th, Geochim. Cosmochim. Acta, Suppl. 11*, 2441-2463, 1979.

Solomon, S. C., Differentiation of crusts and cores of the terrestrial planets: Lessons for the early Earth?, *Precambrian Res., 10*, 177-194, doi:10.1016/0301-9268(80)90011-X, 1980.

Solomon, S. C., and J. W. Head, Lunar mascon basins: Lava filling, tectonics, and evolution of the lithosphere, *Rev. Geophys. Space Phys., 18*, 107-141, doi:10.1029/RG018i001p00107, 1980.

RRISP Working Group (Angenheister, G., H. Gebrande, H. Miller, P. Goldflam, W. Weigel, W. R. Jacoby, G. Palmason, S. Bjornsson, P. Einarsson, N. I. Pavlenkova, S. M. Zverev, I. V. Litvinenko, B. Loncarevic, and S. C. Solomon), Reykjanes Ridge Iceland Seismic Experiment (RRISP 77), *J. Geophys., 47*, 228-238, 1980.

Bergman, E. A., and S. C. Solomon, Oceanic intraplate earthquakes: Implications for local and regional intraplate stress, *J. Geophys. Res., 85*, 5389-5410, doi:10.1029/JB085iB10p05389, 1980.

Solomon, S. C., R. M. Richardson, and E. A. Bergman, Tectonic stress: Models and magnitudes, *J. Geophys. Res., 85*, 6086-6092, doi:10.1029/JB085iB11p06086, 1980.

Tréhu, A. M., J. L. Nabelek, and S. C. Solomon, Source characterization of two Reykjanes Ridge earthquakes: Surface waves and moment tensors; P waveforms and non-orthogonal nodal planes, *J. Geophys. Res., 86*, 1701-1724, doi:10.1029/JB086iB03p01701, 1981.

Davis, D. M., and S. C. Solomon, Variations in the velocities of the major plates since the late Cretaceous, *Tectonophysics, 74*, 189-208, doi:10.1016/0040-1951(81)90135-9, 1981.

Duschenes, J. D., T. W. Barash, P. J. Mattaboni, and S. C. Solomon, On the use of an externally deployed geophone package on an ocean bottom seismometer, *Mar. Geophys. Res., 4,* 437-450, doi:10.1007/BF00286038, 1981.

Project ROSE Scientists (J. I. Ewing, G. M. Purdy, A. M. Tréhu, S. C. Solomon, T. Ouchi, A. K. Ibrahim, J. F. Gettrust, K. Furukawa, S. P. Nishenko, P. W. Pomeroy, W. A. Prothero, J. D. Garmany, B. T. R. Lewis, S. H. Johnson, and L. D. Bibee), Microearthquake activity on the Orozco Fracture Zone: Preliminary results from Project ROSE, *J. Geophys. Res., 86*, 3783-3790, doi:10.1029/JB086iB05p03783, 1981.

Head, J. W., and S. C. Solomon, Tectonic evolution of the terrestrial planets, *Science, 213*, 62-76, doi:10.1126/science.213.4503.62, 1981.

Hall, J. L., S. C. Solomon, and J. W. Head, Lunar floor-fractured craters: Evidence for viscous relaxation of crater topography, *J. Geophys. Res., 86*, 9537-9552, doi:10.1029/JB086iB10p09537, 1981.

Tréhu, A. M., and S. C. Solomon, Coupling parameters of the MIT OBS at two nearshore sites, *Mar. Geophys. Res., 5*, 69-78, doi:10.1007/BF00310312, 1981.

Solomon, S. C., R. P. Comer, and J. W. Head, The evolution of impact basins: Viscous relaxation of topographic relief, *J. Geophys. Res., 87*, 3975-3992, doi:10.1029/JB087iB05p03975, 1982.

Solomon, S. C., S. K. Stephens, and J. W. Head, On Venus impact basins: Viscous relaxation of topographic relief, *J. Geophys. Res., 87*, 7763-7771, doi:10.1029/JB087iB09p07763, 1982.

Solomon, S. C., and J. W. Head, Mechanisms for lithospheric heat transport on Venus: Implications for tectonic style and volcanism, *J. Geophys. Res., 87*, 9236-9246, doi:10.1029/JB087iB11p09236, 1982.

Solomon, S. C., and J. W. Head, Evolution of the Tharsis province of Mars: The importance of heterogeneous lithospheric thickness and volcanic construction, *J. Geophys. Res., 87*, 9755-9774, doi:10.1029/JB087iB12p09755, 1982.

Tréhu, A. M., and S. C. Solomon, Earthquakes in the Orozco transform zone: Seismicity, source mechanisms, and tectonics, *J. Geophys. Res., 88*, 8203-8225, doi:10.1029/JB088iB10p08203, 1983.

Bergman, E. A., J. L. Nabelek, and S. C. Solomon, An extensive region of off-ridge normal-faulting earthquakes in the southern Indian Ocean, *J. Geophys. Res., 89,* 2425-2443, doi:10.1029/JB089iB04p02425, 1984.

Bratt, S. R., and S. C. Solomon, Compressional and shear-wave structure of the East Pacific Rise at 11˚20'N: Constraints from three-component ocean-bottom seismometer data, *J. Geophys. Res., 89,* 6095-6110, doi:10.1029/JB089iB07p06095, 1984.

Solomon, S. C., and J. W. Head, Venus banded terrain: Tectonic models for band formation and their relationship to lithospheric thermal structure, *J. Geophys. Res., 89,* 6885-6897, doi:10.1029/JB089iB08p06885, 1984.

Bergman, E. A., and S. C. Solomon, Source mechanisms of earthquakes near mid-ocean ridges from body waveform inversion: Implications for the early evolution of oceanic lithosphere, *J. Geophys. Res., 89,* 11,415-11,441, doi:10.1029/JB089iB13p11415, 1984.

Davis, D. M., and S. C. Solomon, True polar wander and plate-driving forces, *J. Geophys. Res., 90*, 1837-1841, doi:10.1029/JB090iB02p01837, 1985.

Bratt, S. R., S. C. Solomon, J. W. Head, and C. H. Thurber, The deep structure of lunar basins: Implications for basin formation and modification, *J. Geophys. Res., 90*, 3049-3064, doi:10.1029/JB090iB04p03049, 1985.

Comer, R. P., S. C. Solomon, and J. W. Head, Mars: Thickness of the lithosphere from the tectonic response to volcanic loads, *Rev. Geophys., 23,* 61-92, doi:10.1029/RG023i001p00061, 1985.

Toomey, D. R., S. C. Solomon, G. M. Purdy, and M. H. Murray, Microearthquakes beneath the median valley of the Mid-Atlantic Ridge near 23˚N: Hypocenters and focal mechanisms, *J. Geophys. Res., 90,* 5443-5458, doi:10.1029/JB090iB07p05443, 1985.

Bergman, E. A., and S. C. Solomon, Earthquake source mechanisms from body waveform inversion and intraplate tectonics in the northern Indian Ocean, *Phys. Earth Planet. Inter., 40,* 1-23, doi:10.1016/0031-9201(85)90002-0, 1985.

Bratt, S. R., E. A. Bergman, and S. C. Solomon, Thermoelastic stress: How important as a cause of earthquakes in young oceanic lithosphere?, *J. Geophys. Res., 90,* 10,249-10,260, doi:10.1029/JB090iB12p10249, 1985.

Bratt, S. R., S. C. Solomon, and J. W. Head, The evolution of impact basins: Cooling, subsidence and thermal stress, *J. Geophys. Res., 90,* 12,415-12,433, doi:10.1029/JB090iB14p12415, 1985.

Huang, P. Y., S. C. Solomon, E. A. Bergman, and J. L. Nabelek, Focal depths and mechanisms of Mid-Atlantic Ridge earthquakes from body waveform inversion, *J. Geophys. Res., 91,* 579-598, doi:10.1029/JB091iB01p00579, 1986.

Grimm, R. E. and S. C. Solomon, Tectonic tests of proposed polar wander paths for Mars and the Moon, *Icarus, 65,* 110-121, doi:10.1016/0019-1035(86)90066-7, 1986.

Hall, J. L., S. C. Solomon, and J. W. Head, Elysium region, Mars: Tests of lithospheric loading models for the formation of tectonic features, *J. Geophys. Res., 91,* 11,377-11,392, 10.1029/JB091iB11p11377, 1986.

Sauber, J., W. Thatcher, and S. C. Solomon, Geodetic measurement of deformation in the central Mojave Desert, California, *J. Geophys. Res., 91,* 12,683-12,693, doi:10.1029/JB091iB12p12683, 1986.

Jemsek, J. P., E. A. Bergman, J. L. Nabelek, and S. C. Solomon, Focal depths and mechanisms of large earthquakes on the Arctic mid-ocean ridge system, *J. Geophys. Res., 91,* 13,993-14,005, doi:10.1029/JB091iB14p13993, 1986.

Huang, P. Y., and S. C. Solomon, Centroid depths and mechanisms of mid-ocean ridge earthquakes in the Indian Ocean, Gulf of Aden, and Red Sea, *J. Geophys. Res., 92,* 1361-1382, doi:10.1029/JB091iB02p01361, 1987.

Solomon, S. C., and E. D. Duxbury, A test of the longevity of impact-induced faults as preferred sites for later tectonic activity, *Proc. Lunar Planet. Sci. Conf. 17th, J. Geophys. Res., 92*, E759-E768, doi:10.1029JB092iB04p0E759, 1987.

Solomon, S. C., Secular cooling of the Earth as a source of intraplate stress, *Earth Planet. Sci. Lett., 83*, 153-158, doi:10.1016/0012-821X(87)90058-6, 1987.

Grimm, R. E., and S. C. Solomon, Limits on modes of lithospheric heat transport on Venus from impact crater density, *Geophys. Res. Lett., 14*, 538-541, doi:10.1029/GL1987.014i005p00538, 1987.

Goff, J. A., E. A. Bergman, and S. C. Solomon, Earthquake source mechanisms and transform fault tectonics in the Gulf of California, *J. Geophys. Res., 92*, 10,485-10,510, doi:10.1029/JB092iB10p10485, 1987.

Solomon, S. C., P. Y. Huang, and L. Meinke, The seismic moment budget of slowly spreading ridges, *Nature, 334*, 58-61, doi:10.1038/334058a0, 1988.

Bergman, E. A., and S. C. Solomon, Transform fault earthquakes in the north Atlantic: Source mechanisms and depth of faulting, *J. Geophys. Res*., *93,* 9027-9057, doi:10.1029/JB093iB08p09027, 1988.

Toomey, D. R., S. C. Solomon, and G. M. Purdy, Microearthquakes beneath the median valley of the Mid-Atlantic Ridge near 23°N: Tomography and tectonics, *J. Geophys. Res.*, *93*, 9093-9112, doi:10.1029/JB093iB08p09093, 1988.

Grimm, R. E., and S. C. Solomon, Viscous relaxation of impact crater relief on Venus: Constraints on crustal thickness and thermal gradient, *J. Geophys. Res., 93*, 11,911-11,929, doi:10.1029/JB093iB10p11911, 1988.

Huang, P. Y., and S. C. Solomon, Centroid depths of mid-ocean ridge earthquakes: Dependence on spreading rate, *J. Geophys. Res., 93*, 13,445-13,477, doi:10.1029/JB093iB11p13445, 1988.

Grimm, R. E., and S. C. Solomon, Tests of crustal divergence models for Aphrodite Terra, Venus, *J. Geophys. Res., 94,* 12,103-12,131, doi:10.1029/JB094iB09p12103, 1989.

Bergman, E. A., and S. C. Solomon, Earthquake swarms on the Mid-Atlantic Ridge: Products of magmatism or extensional tectonics?, *J. Geophys. Res., 95,* 4943-4965, doi:10.1029/JB095iB04p04943, 1990.

Solomon, S. C., and J. W. Head, Heterogeneities in the thickness of the elastic lithosphere of Mars: Constraints on heat flow and internal dynamics, *J. Geophys. Res., 95,* 11,073-11,083, doi:10.1029/JB095iB07p11073, 1990.

Solomon, S. C., and J. W. Head, Lithospheric flexure beneath the Freyja Montes foredeep, Venus: Constraints on lithospheric thermal gradient and heat flow, *Geophys. Res. Lett., 17,* 1393-1396, doi:10.1029/GL017i009p01393, 1990.

Wilcock, W. S. D., G. M. Purdy, and S. C. Solomon, Microearthquake evidence for extension across the Kane transform fault, *J. Geophys. Res., 95,* 15,439-15,462, doi:10.1029/JB095iB10p15439, 1990.

Toomey, D. R., G. M. Purdy, S. C. Solomon, and W. S. D. Wilcock, The three-dimensional seismic velocity structure of the East Pacific Rise near latitude 9°30'N, *Nature, 347,* 639-645, doi:10.1038/347639a0, 1990.

Zimbelman, J. R., S. C. Solomon, and V. L. Sharpton, The evolution of volcanism, tectonics, and volatiles on Mars: An overview of recent progress, *Proc. Lunar Planet. Sci., 21,* 613-626, 1991.

Saunders, R. S., R. E. Arvidson, J. W. Head, III, G. G. Schaber, E. R. Stofan, and S. C. Solomon, An overview of Venus geology, *Science*, *252*, 249-252, doi:10.1126/science.252.5003.249, 1991.

Solomon, S. C., and J. W. Head, Fundamental issues in the geology and geophysics of Venus, *Science*, *252*, 252-260, doi:10.1126/science.252.5003.252, 1991.

Solomon, S. C., J. W. Head, W. M. Kaula, D. McKenzie, B. Parsons, R. J. Phillips, G. Schubert, and M. Talwani, Venus tectonics: Initial analysis from Magellan, *Science*, *252*, 297-312, doi:10.1126/science.252.5003.297, 1991.

Sheehan, A. F., and S. C. Solomon, Joint inversion of shear wave travel time residuals and geoid and depth anomalies for long-wavelength variations in upper mantle temperature and composition along the Mid-Atlantic Ridge, *J. Geophys. Res.*, *96*, 19,981-20,009, doi:10.1029/91JB01988, 1991.

Kong, L. S. L., S. C. Solomon, and G. M. Purdy, Microearthquake characteristics of a mid-ocean ridge along-axis high, *J. Geophys. Res., 97*, 1659-1685, doi:10.1029/91JB02566, 1992.

Purdy, G. M., L. S. L. Kong, G. L. Christeson, and S. C. Solomon, Relationship between spreading rate and the seismic structure of mid-ocean ridges, *Nature*, *355*, 815-817, doi:10.1038/355815a0, 1992.

Solomon, S. C., and D. R. Toomey, The structure of mid-ocean ridges, *Ann. Rev. Earth Planet. Sci., 20*, 329-364, doi:10.1146/annurev.ea.20.050192.001553, 1992.

Zuber, M. T., D. E. Smith, S. C. Solomon, D. O. Muhleman, J. W. Head, J. B. Garvin, J. B. Abshire, and J. L. Bufton, The Mars Observer laser altimeter investigation, *J. Geophys. Res.*, *97*, 7781-7797, doi:10.1029/92JE00341, 1992.

Solomon, S. C., S. E. Smrekar, D. L. Bindschadler, R. E. Grimm, W. M. Kaula, G. E. McGill, R. J. Phillips, R. S. Saunders, G. Schubert, S. W. Squyres, and E. R. Stofan, Venus tectonics: An overview of Magellan observations, *J. Geophys. Res.*, *97*, 13,199-13,255, doi:10.1029/92JE01418, 1992.

McKenzie, D., P. G. Ford, C. Johnson, B. Parsons, G. H. Pettengill, D. Sandwell, S. Saunders, and S. C. Solomon, Features on Venus generated by plate boundary processes, *J. Geophys. Res., 97*, 13,533-13,544, doi:10.1029/92JE01350, 1992.

Squyres, S. W., D. G. Jankowski, M. Simons, S. C. Solomon, B. H. Hager, and G. E. McGill, Plains tectonism on Venus: The deformation belts of Lavinia Planitia, *J. Geophys. Res.*, *97*, 13,579-13,599, doi:10.1029/92JE00481, 1992.

Sheehan, A. F., and S. C. Solomon, Differential shear wave attenuation and its lateral variation in the North Atlantic region, *J. Geophys. Res.*, *97,* 15,339-15,350, doi:10.1029/92JB01093, 1992.

Bergman, E. A., and S. C. Solomon, On the strength of oceanic fracture zones and their influence on the intraplate stress field, *J. Geophys. Res.*, *97*, 15,365-15,377, doi:10.1029/92JB01076, 1992.

Smrekar, S. E., and S. C. Solomon, Gravitational spreading of high terrain in Ishtar Terra, Venus, *J. Geophys. Res.*, *97*, 16,121-16,148, doi:10.1029/92JE01315, 1992.

Wilcock, W. S. D., G. M. Purdy, S. C. Solomon, D. L. DuBois, and D. R. Toomey, Microearthquakes on and near the East Pacific Rise, 9°-10°N, *Geophys. Res. Lett.*, *19*, 2131-2134, doi:10.1029/92GL02208, 1992.

Wilcock, W. S. D., S. C. Solomon, G. M. Purdy, and D. R. Toomey, The seismic attenuation structure of a fast-spreading mid-ocean ridge, *Science*, *258*, 1470-1474, doi:10.1126/science.258.5087.1470, 1992.

Wilcock, W. S. D., D. R. Toomey, G. M. Purdy, and S. C. Solomon, The renavigation of Sea Beam bathymetric data between 9°N and 10°N on the East Pacific Rise, *Mar. Geophys. Res.*, *15*, 1-12, doi:10.1007/BF01204148, 1993.

Solomon, S. C., The geophysics of Venus, *Physics Today*, *46* (7), 48-55, doi:10.1063/1.881359, 1993.

Namiki, N., and S. C. Solomon, The gabbro–eclogite phase transition and the elevation of mountain belts on Venus, *J. Geophys. Res.*, *98*, 15,025-15,031, doi:10.1029/93JE01626, 1993.

Wolfe, C. J., E. A. Bergman, and S. C. Solomon, Oceanic transform earthquakes with unusual mechanisms or locations: Relation to fault geometry and state of stress in the adjacent lithosphere, *J. Geophys. Res.*, *98*, 16,187-16,211, doi:10.1029/93JB00887, 1993.

Wilcock, W. S. D., M. E. Dougherty, S. C. Solomon, G. M. Purdy, and D. R. Toomey, Seismic propagation across the East Pacific Rise: Finite-difference experiments and implications for seismic tomography, *J. Geophys. Res.*, *98*, 19,913-19,932, doi:10.1029/93JB01820, 1993.

McGovern, P. J., and S. C. Solomon, State of stress, faulting, and eruption characteristics of large volcanoes on Mars, *J. Geophys. Res.*, *98*, 23,553-23,579, doi:10.1029/93JE03093, 1993.

Sauber, J., W. Thatcher, S. C. Solomon, and M. Lisowski, Geodetic slip rate for the eastern California shear zone and the recurrence time of Mojave Desert earthquakes, *Nature*, *367*, 284-286, doi:10.1038/367264a0, 1994.

Simons, M., B. H. Hager, and S. C. Solomon, Global variations in the geoid/topography admittance of Venus, *Science*, *264*, 798-803, doi:10.1126/science.264.5160.798, 1994.

Namiki, N., and S. C. Solomon, Impact crater densities on volcanoes and coronae on Venus: Implications for volcanic resurfacing, *Science*, *265*, 929-933, doi:10.1126/science.265.5174.929, 1994.

Barash, T. W., C. G. Doll, Jr., J. A. Collins, G. H. Sutton, and S. C. Solomon, Quantitative evaluation of passively leveled ocean bottom seismometers, *Mar. Geophys. Res.*, *16*, 347-363, doi:10.1007/BF01203972, 1994.

Toomey, D. R., S. C. Solomon, and G. M. Purdy, Tomographic imaging of the shallow crustal structure of the East Pacific Rise at 9°30'N, *J. Geophys. Res.*, *99*, 24,135-24,157, doi:10.1029/94JB01942, 1994.

Wilcock, W. S. D., S. C. Solomon, G. M. Purdy, and D. R. Toomey, Seismic attenuation structure of the East Pacific Rise near 9°30'N, *J. Geophys. Res.*, *100*, 24,147-24,165, doi:10.1029/95JB02280, 1995.

Wolfe, C. J., G. M. Purdy, D. R. Toomey, and S. C. Solomon, Microearthquake characteristics and crustal velocity structure at 29°N on the Mid-Atlantic Ridge: The architecture of a slow-spreading segment, *J. Geophys. Res.*, *100*, 24,449-24,472, doi:10.1029/95JB02399, 1995.

Lee, S.-M., and S. C. Solomon, Constraints from Sea Beam bathymetry on the development of normal faults on the East Pacific Rise, *Geophys. Res. Lett.*, *22*, 3135-3138, doi:10.1029/95GL03329, 1995.

Bjarnason, I. Th., C. J. Wolfe, S. C. Solomon, and G. Gudmundson, Initial results from the ICEMELT experiment: Body-wave delay times and shear-wave splitting across Iceland, *Geophys. Res. Lett.*, *23*, 459-462, doi:10.1029/96GL00420, 1996. Correction, *Geophys. Res. Lett*., *23*, 903, doi:10.1029/96GL01045,1996.

Lee, S.-M., S. C. Solomon, and M. A. Tivey, Fine-scale crustal magnetization variations and segmentation of the East Pacific Rise, 9°10'-9°50'N, *J. Geophys. Res.*, *101*, 22,033-22,050, doi:10.1029/96JB02114, 1996.

Shen, Y., S. C. Solomon, I. Th. Bjarnason, and G. M. Purdy, Hot mantle transition zone beneath Iceland and the adjacent Mid-Atlantic Ridge inferred from P-to-S conversions at the 410- and 660-km discontinuities, *Geophys. Res. Lett.*, *23*, 3527-3530, doi:10.1029/96GL03371, 1996.

Wolfe, C. J., I. Th. Bjarnason, J. C. VanDecar, and S. C. Solomon, Seismic structure of the Iceland mantle plume, *Nature*, *385*, 245-247, doi:10.1038/385245a0, 1997.

McGovern, P. J., and S. C. Solomon, Filling of flexural moats around large volcanoes on Venus: Implications for volcano structure and global magmatic flux, *J. Geophys. Res.*, *102*, 16,303-16,318, doi:10.1029/97JE01318, 1997.

Simons, M., S. C. Solomon, and B. H. Hager, Localization of gravity and topography: Constraints on the tectonics and mantle dynamics of Venus, *Geophys. J. Int., 131*, 24-44, doi:10.1111/j.1365-246X.1997.tb00593.x, 1997.

Namiki, N., and S. C. Solomon, Volcanic degassing of argon and helium and the history of crustal production on Venus, *J. Geophys. Res.*, *103*, 3655-3677, doi:10.1029/97JE03032, 1998.

Smith, D. E., M. T. Zuber, H. V. Frey, J. B. Garvin, J. W. Head, D. O. Muhleman, G. H. Pettengill, R. J. Phillips, S. C. Solomon, H. J. Zwally, W. B. Banerdt, and T. C. Duxbury, Topography of the northern hemisphere of Mars from the Mars Orbiter Laser Altimeter, *Science*, 279, 1686-1692, doi:10.1126/science.279.5357.1686, 1998.

McGovern, P. J., and S. C. Solomon, Growth of large volcanoes on Venus: Mechanical models and implications for structural evolution, *J. Geophys. Res.*, *103*, 11,071-11,101, doi:10.102998JE01046, 1998.

MELT Seismic Team (D. W. Forsyth, D. S. Scheirer, S. C. Webb, L. M. Dorman, J. A. Orcutt, A. J. Harding, D. K. Blackman, J. Phipps Morgan, R. S. Detrick, Y. Shen, C. J. Wolfe, J. P. Canales, D. R. Toomey, A. F. Sheehan, S. C. Solomon, and W. S. D. Wilcock), Imaging the deep structure beneath a mid-ocean ridge: The MELT experiment, *Science*, *280*, 1215-1218, doi:10.1126/science.280.5367.1215, 1998.

Toomey, D. R., W. S. D. Wilcock, S. C. Solomon, W. C. Hammond, and J. A. Orcutt, Mantle seismic structure beneath the MELT region of the East Pacific Rise from P and S wave tomography, *Science*, *280*, 1224-1227, doi:10.1126/science.280.5367.1224, 1998.

Wolfe, C. J., and S. C. Solomon, Shear-wave splitting and implications for mantle flow beneath the MELT region of the East Pacific Rise, *Science*, *280*, 1230-1232, doi:10.1126/science.280.5367.1230, 1998.

Barclay, A. H., D. R. Toomey, and S. C. Solomon, Seismic structure and crustal magmatism at the Mid-Atlantic Ridge, 35°N, *J. Geophys. Res.*, *103*, 17,827-17,844, doi:10.1029/98JB01275, 1998.

Shen, Y., S. C. Solomon, I. Th. Bjarnason, and C. J. Wolfe, Seismic evidence for a lower-mantle origin of the Iceland plume, *Nature*, *395*, 62-65, doi:10.1038/25714, 1998.

Zuber, M. T., D. E. Smith, S. C. Solomon, J. B. Abshire, R. S. Afzal, O. Aharonson, K. Fishbaugh, P. G. Ford, H. V. Frey, J. B. Garvin, J. W. Head, A. B. Ivanov, C. L. Johnson, D. O. Muhleman, G. A. Neumann, G. H. Pettengill, R. J. Phillips, X. Sun, H. J. Zwally, W. B. Banerdt, and T. C. Duxbury, Observations of the north polar region of Mars from the Mars Orbiter Laser Altimeter, *Science*, *282*, 2053-2060, doi:10.1126/science.282.5396.2053, 1998.

Zuber, M. T., D. E. Smith, R. J. Phillips, S. C. Solomon, W. B. Banerdt, G. A. Neumann, and O. Aharonson, Shape of the northern hemisphere of Mars from the Mars Orbiter Laser Altimeter (MOLA), *Geophys. Res. Lett.*, *25*, 4393-4396, doi:10.1029/1998GL900129, 1998.

Smith, D. E., M. T. Zuber, S. C. Solomon, R. J. Phillips, J. W. Head, J. B. Garvin, W. B. Banerdt, D. O. Muhleman, G. H. Pettengill, G. A. Neumann, F. G. Lemoine, J. B. Abshire, O. Aharonson, C. D. Brown, S. A. Hauck, A. B. Ivanov, P. J. McGovern, H. J. Zwally, and T. C. Duxbury, The global topography of Mars and implications for surface evolution, *Science*, *284*, 1495-1503, doi:10.1126/science.284.5419.1495, 1999.

Solomon, S. C., M. A. Bullock, and D. H. Grinspoon, Climate change as a regulator of tectonics on Venus, *Science*, *286*, 87-90, doi:10.1126/science.286.5437.87, 1999.

Zuber, M. T., S. C. Solomon, R. J. Phillips, D. E. Smith, G. L. Tyler, O. Aharonson, G. Balmino, W. B. Banerdt, J. W. Head, C. L. Johnson, F. G. Lemoine, P. J. McGovern, G. A. Neumann, D. D. Rowlands, and S. Zhong, Internal structure and early thermal evolution of Mars from Mars Global Surveyor topography and gravity, *Science*, *287*, 1788-1793, doi:10.1126/science.287.5459.1788, 2000.

Johnson, C. L., S. C. Solomon, J. W. Head III, R. J. Phillips, D. E. Smith, and M. T. Zuber, Lithospheric loading by the northern polar cap on Mars, *Icarus*, *144*, 313-328, doi:10.1006/icar.1999.6310, 2000.

Dunn, R. A., D. R. Toomey, and S. C. Solomon, Three-dimensional seismic structure and physical properties of the crust and shallow mantle beneath the East Pacific Rise at 9°30'N, *J. Geophys. Res.*, 105, 23,537-23,555, doi:10.1029/2000JB900210, 2000.

Barclay, A. H., D. R. Toomey, and S. C. Solomon, Microearthquake characteristics and crustal V_P/V_S structure at the Mid-Atlantic Ridge, 35°N, *J. Geophys. Res.*, *106*, 2017-2034, doi:10.1029/2000JB900371, 2001.

Phillips, R. J., M. T. Zuber, S. C. Solomon, M. P. Golombek, B. M Jakosky, W. B. Banerdt, D. E. Smith, R. M. E. Williams, B. M. Hynek, O. Aharonson, and S. A. Hauck, II, Ancient geodynamics and global-scale hydrology on Mars, *Science, 291*, 2587-2591, doi:10.1126/science.1058701, 2001.

Freed, A. M., H. J. Melosh, and S. C. Solomon, Tectonics of mascon loading: Resolution of the strike-slip faulting paradox, *J. Geophys. Res*., *106*, 20,603-20,620, doi:10.1029/2000JE001347, 2001.

Smith, D. E., M. T. Zuber, H. V. Frey, J. B. Garvin, J. W. Head, D. O. Muhleman, G. H. Pettengill, R. J. Phillips, S. C. Solomon, H. J. Zwally, W. B. Banerdt, T. C. Duxbury, M. P. Golombek, F. G. Lemoine, G. A. Neumann, D. D. Rowlands, O. Aharonson, P. G. Ford, A. B. Ivanov, C. L. Johnson, P. J. McGovern, J. B. Abshire, R. S. Afzal, and X. Sun, Mars Orbiter Laser Altimeter: Experiment summary after the first year of global mapping of Mars, *J. Geophys. Res*., *106*, 23,689-23,722, doi:10.1029/2000JE001364, 2001.

McGovern, P. J., S. C. Solomon, J. W. Head, III, D. E. Smith, and M. T. Zuber, Extension and uplift at Alba Patera, Mars: Insights from MOLA observations and loading models, *J. Geophys. Res*., *106*, 23,769-23,809, doi:10.1029/2000JE001314, 2001.

Solomon, S. C., R. L. McNutt, Jr., R. E. Gold, M. H. Acuña, D. N. Baker, W. V. Boynton, C. R. Chapman, A. F. Cheng, G. Gloeckler, J. W. Head, III, S. M. Krimigis, W. E. McClintock, S. L. Murchie, S. J. Peale, R. J. Phillips, M. S. Robinson, J. A. Slavin, D. E. Smith, R. G. Strom, J. I. Trombka, and M. T. Zuber, The MESSENGER mission to Mercury: Scientific objectives and implementation, *Planet. Space Sci*., *49*, 1445-1465, doi:10.1016/S0032-0633(01)00085-X, 2001.

Gold, R. E., S. C. Solomon, R. L. McNutt, Jr., A. G. Santo, J. B. Abshire, M. H. Acuña, R. S. Afzal, B. J. Anderson, G. B. Andrews, P. D. Bedini, J. Cain, A. F. Cheng, L. G. Evans, W. C. Feldman, R. B. Follas, G. Gloeckler, J. O. Goldsten, S. E. Hawkins III, N. R. Izenberg, S. E. Jaskulek, E. A. Ketchum, M. R. Lankton, D. A. Lohr, B. H. Mauk, W. E. McClintock, S. L. Murchie, C. E. Schlemm II, D. E. Smith, R. D. Starr, and T. H. Zurbuchen, The MESSENGER mission to Mercury: Scientific payload, *Planet. Space Sci*., *49*, 1467-1479, doi:10.1016/S0032-0633(01)00086-1, 2001.

Santo, A. G., R. E. Gold, R. L. McNutt, Jr., S. C. Solomon, C. J. Ercol, R. W. Farquhar, T. J. Hartka, J. E. Jenkins, J. V. McAdams, L. E. Mosher, D. F. Persons, D. A. Artis, R. S. Bokulic, R. F. Conde, G. Dakermanji, M. E. Goss, Jr., D. R. Haley, K. J. Heeres, R. H. Maurer, R. C. Moore, E. H. Rodberg, T. G. Stern, S. R. Wiley, B. G. Williams, C. L. Yen, and M. R. Peterson, The MESSENGER mission to Mercury: Spacecraft and mission design*, Planet. Space Sci*., *49*, 1481-1500, doi:10.1016/S0032-0633(01)00087-3, 2001.

Wolfe, C. J., I. Th. Bjarnason, J. C. VanDecar, and S. C. Solomon, Assessing the depth resolution of tomographic models of upper mantle structure beneath Iceland, *Geophys. Res. Lett*., *29* (2), 1015, doi:10.1029/2001GL013657, 2002.

Shen, Y., S. C. Solomon, I. Th. Bjarnason, G. Nolet, W. J. Morgan, R. M. Allen, K. Vogfjörd, S. Jakobsdóttir, R. Stefánsson, B. R. Julian, and G. R. Foulger, Seismic evidence for a tilted mantle plume and north-south mantle flow beneath Iceland, *Earth Planet. Sci. Lett*., *197*, 261-272, doi;10.1016/S0012-821X(02)00494-6, 2002.

Wolfe, C. J., S. C. Solomon, P. G. Silver, J. C. VanDecar, and R. M. Russo, Inversion of body-wave delay times for mantle structure beneath the Hawaiian Islands: Results from the PELENET experiment, *Earth Planet. Sci. Lett*., *198*, 129-145, doi:10.1016/S0012-821X(02)00493-4, 2002.

Niu, F., S. C. Solomon, P. G. Silver, D. Suetsugu, and H. Inoue, Mantle transition-zone structure beneath the South Pacific Superswell and evidence for a mantle plume underlying the Society hotspot, *Earth Planet. Sci. Lett*., *198*, 371-380, doi:10.1016/S0012-821X(02)00523-X, 2002.

Peale, S. J., R. J. Phillips, S. C. Solomon, D. E. Smith, and M. T. Zuber, A procedure for determining the nature of Mercury's core, *Meteorit. Planet. Sci*., *37*, 1269-1283, doi:10.1111/j.1945-5100.2002.tb00895.x, 2002.

Bjarnason, I. Th., P. G. Silver, G. Rümpker, and S. C. Solomon, Shear wave splitting across the Iceland hot spot: Results from the ICEMELT experiment, *J. Geophys. Res*., *107* (B12), 2382, doi:10.1029/2001JB000916, 2002.

McGovern, P. J., S. C. Solomon, D. E. Smith, M. T. Zuber, M. Simons, M. A. Wieczorek, R. J. Phillips, G. A. Neumann, O. Aharonson, and J. W. Head, Localized gravity/topography admittance and correlation spectra on Mars: Implications for regional and global evolution*, J. Geophys. Res*., *107* (E12), 5136, doi:10.1029/2002JE001854, 2002.

Shen, Y., C. J. Wolfe, and S. C. Solomon, Seismological evidence for a mid-mantle discontinuity beneath Hawaii and Iceland, *Earth Planet Sci. Lett., 214,* 143-151, doi:10.1016/S0012-821X(03)00349-2, 2003.

Hooft, E. E. E., D. R. Toomey, and S. C. Solomon, Anomalously thin transition zone beneath the Galápagos hotspot, *Earth Planet. Sci. Lett*., *216*, 55-64, doi:10.1016/S0012-821X(03)00517-X, 2003.

Solomon, S. C., Mercury: The enigmatic innermost planet, *Earth Planet. Sci. Lett*., *216*, 441-455, doi:10.1016/S0012-821X(03)00546-6, 2003.

Aharonson, O., M. T. Zuber, and S. C. Solomon, Crustal remanence in an internally magnetized non-uniform shell: A possible source for Mercury's magnetic field?, *Earth Planet. Sci. Lett., 218*, 261-268, doi:10.1016/S0012-821X(03)00682-4, 2004.

Korth, H., B. J. Anderson, R. L. McNutt, Jr., M. H. Acuña, J. A. Slavin, N. A. Tsyganenko, and S. C. Solomon, Determination of the properties of Mercury's magnetic field by the MESSENGER mission, *Planet. Space Sci.*, *52*, 733-746, doi:10.1016/j.pss.2003.12.008, 2004.

Hauck, S. A., II, A. J. Dombard, R. J. Phillips, and S. C. Solomon, Internal and tectonic evolution of Mercury, *Earth Planet. Sci. Lett*., *222*, 713-728, doi:10.1016/j.epsl.2004.03.037, 2004.

McNutt, R. L., Jr., S. C. Solomon, R. Grard, M. Novara, and T. Mukai, An international program for Mercury exploration: Synergy of MESSENGER and BepiColombo, *Adv. Space Res*., *33*, 2126-2132, doi:10.1016/S0273-1177(03)00439-3, 2004.

McGovern, P. J., S. C. Solomon, D. E. Smith, M. T. Zuber, M. Simons, M. A. Wieczorek, R. J. Phillips, G. A. Neumann, O. Aharonson, and J. W. Head, Correction to "Localized gravity/topography admittance and correlation spectra on Mars: Implications for regional and global evolution," *J. Geophys. Res., 109* (E7), E07007, doi:10.1029/2004JE002286, 2004.

Solomon, S. C., O. Aharonson, J. M. Aurnou, W. B. Banerdt, M. H. Carr, A. J. Dombard, H. V. Frey, M. P. Golombek, S. A. Hauck, II, J. W. Head, III, B. M. Jakosky, C. L. Johnson, P. J. McGovern, G. A. Neumann, R. J. Phillips, D. E. Smith, and M. T. Zuber, New perspectives on ancient Mars, *Science*, *307*, 1214-1220, doi:10.1126/science.1101812, 2005.

Fontaine, F. R., E. E. E. Hooft, P. G. Burkett, D. R. Toomey, S. C. Solomon, and P. G. Silver, Shear-wave splitting beneath the Galápagos archipelago, *Geophys. Res. Lett*., *32*, L21308, doi:10.1029/2005GL024014, 2005.

McNutt, R. L., Jr., S. C. Solomon, R. E. Gold, J. C. Leary, and the MESSENGER team, The MESSENGER mission to Mercury: Development history and early mission status, *Adv. Space Res*., *38*, 564-571, doi:10.1016/j.asr.2005.05.044, 2006.

Yang, T., Y. Shen, S. van der Lee, S. C. Solomon, and S.-H. Hung, Upper mantle structure beneath the Azores hotspot from finite-frequency seismic tomography, *Earth Planet. Sci. Lett*., *250*, 11-26, doi:10.1016/j.epsl.2006.07.031, 2006.

Dombard, A. J., C. L. Johnson, M. A. Richards, and S. C. Solomon, A magmatic loading model for coronae on Venus, *J. Geophys. Res*., *112*, E04006, doi:10.1029/2006JE002731, 2007.

Villagómez, D. R., D. R. Toomey, E. E. E. Hooft, and S. C. Solomon, Upper mantle structure beneath the Galápagos Archipelago from surface wave tomography, *J. Geophys. Res*., *112*, B07303, doi:10.1029/2006JB004672, 2007.

Hauck, S. A., II, S. C. Solomon, and D. A. Smith, Predicted recovery of Mercury's internal structure by MESSENGER, *Geophys. Res. Lett*., *34*, L18201, doi:10.1029/2007GL030793, 2007.

Solomon, S. C., R. L. McNutt, Jr., R. E. Gold, and D. L. Domingue, MESSENGER mission overview, *Space Sci. Rev*., *131*, 3-39, doi:10.1007/s11214-007-9247-6, 2007.

Boynton, W. V., A. L. Sprague, S. C. Solomon, R. D. Starr, L. G. Evans, W. C. Feldman, J. I. Trombka, and E. A. Rhodes, MESSENGER and the chemistry of Mercury's surface, *Space Sci. Rev*., *131*, 85-104, doi:10.1007/s11214-007-9258-3, 2007.

Zuber, M. T., O. Aharonson, J. M. Aurnou, A. F. Cheng, S. A. Hauck, II, M. H. Heimpel, G. A. Neumann, S. J. Peale, R. J. Phillips, D. E. Smith, S. C. Solomon, and S. Stanley, The geophysics of Mercury: Current status and anticipated insights from the MESSENGER mission, *Space Sci. Rev*., *131*, 105-132, doi:10.1007/s11214-007-9265-4, 2007.

Slavin, J. A., S. M. Krimigis, M. H. Acuña, B. J. Anderson, D. N. Baker, P. L. Koehn, H. Korth, S. Livi, B. H. Mauk, S. C. Solomon, and T. H. Zurbuchen, MESSENGER: Exploring Mercury's magnetosphere, *Space Sci. Rev.*, *131*, 133-160, doi:10.1007/s11214-007-9154-x, 2007.

Balogh, A., R. Grard, S. C. Solomon, R. Schulz, Y. Langevin, Y. Kasaba, and M. Fujimoto, Missions to Mercury, *Space Sci. Rev.*, *132*, 611-645, doi:10.1007/s11214-007-9212-4, 2007.

McNutt, R. L., Jr., S. C. Solomon, D. G. Grant, E. J. Finnegan, P. D. Bedini, and the MESSENGER Team, The MESSENGER mission to Mercury: Status after the Venus flybys, *Acta Astronautica*, 63, 68-73, doi:10.1016/j.actaastro.2007.12.062, 2008.

Solomon, S. C., R. L. McNutt, Jr., T. R. Watters, D. J. Lawrence, W. C. Feldman, J. W. Head, S. M. Krimigis, S. L. Murchie, R. J. Phillips, J. A. Slavin, and M. T. Zuber, Return to Mercury: A global perspective on MESSENGER's first Mercury flyby, *Science*, *321*, 59-62, doi:10.1126/science.1159706, 2008.

McClintock, W. E., N. R. Izenberg, G. M. Holsclaw, D. T. Blewett, D. L. Domingue, J. W. Head, III, J. Helbert, T. J. McCoy, S. L. Murchie, M. S. Robinson, S. C. Solomon, A. L. Sprague, and F. Vilas, Spectroscopic observations of Mercury's surface reflectance during MESSENGER's first Mercury flyby, *Science*, *321*, 62-65, doi:10.1126/science.1159933, 2008.

Robinson, M. S., S. L. Murchie, D. T. Blewett, D. L. Domingue, S. E. Hawkins, III, J. W. Head, G. M. Holsclaw, W. E. McClintock, T. J. McCoy, R. L. McNutt, Jr., L. M. Prockter, S. C. Solomon, and T. R. Watters, Reflectance and color variations on Mercury: Regolith processes and compositional heterogeneity, *Science*, *321*, 66-69, doi:10.1126/science.1160080, 2008.

Head, J. W., S. L. Murchie, L. M. Prockter, M. S. Robinson, S. C. Solomon, R. G. Strom, C. R. Chapman, T. R. Watters, W. E. McClintock, D. T. Blewett, and J. J. Gillis-Davis, Volcanism on Mercury: Evidence from the first MESSENGER flyby, *Science*, *321*, 69-72, doi:10.1126/science.1159256, 2008.

Murchie, S. L., T. R. Watters, M. S. Robinson, J. W. Head, R. G. Strom, C. R. Chapman, S. C. Solomon, W. E. McClintock, L. M. Prockter, D. L. Domingue, and D. T. Blewett, Geology of the Caloris basin, Mercury: A view from MESSENGER, *Science*, *321*, 73-76, doi:10.1126/science.1159261, 2008.

Zuber, M. T., D. E. Smith, S. C. Solomon, R. J. Phillips, S. J. Peale, J. W. Head, III, S. A. Hauck, II, R. L. McNutt, Jr., J. Oberst, G. A. Neumann, F. G. Lemoine, X. Sun, O. Barnouin-Jha, and J. K. Harmon, Laser altimeter observations from MESSENGER's first Mercury flyby, *Science*, *321*, 77-79, doi:10.1126/science.1159086, 2008.

Strom, R. G., C. R. Chapman, W. J. Merline, S. C. Solomon, and J. W. Head, III, Mercury cratering record viewed from MESSENGER's first flyby, *Science*, *321*, 79-81, doi:10.1126/science.1159317, 2008.

Anderson, B. J., M. H. Acuña, H. Korth, M. E. Purucker, C. L. Johnson, J. A. Slavin, S. C. Solomon, and R. L. McNutt, Jr., The structure of Mercury's magnetic field from MESSENGER's first flyby, *Science*, *321*, 82-85, doi:10.1126/science.1159081, 2008.

Slavin, J. A., M. H. Acuña, B. J. Anderson, D. N. Baker, M. Benna, G. Gloeckler, R. E. Gold, G. C. Ho, R. M. Killen, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., L. R. Nittler, J. M. Raines, D. Schriver, S. C. Solomon, R. D. Starr, P. Trávníček, and T. H. Zurbuchen, Mercury's magnetosphere after MESSENGER's first flyby, *Science*, *321*, 85-89, doi:10.1126/science.1159040, 2008.

Zurbuchen, T. H., J. M. Raines, G. Gloeckler, S. M. Krimigis, J. A. Slavin, P. L. Koehn, R. M. Killen, A. L. Sprague, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of the composition of Mercury's ionized exosphere and plasma environment, *Science*, *321*, 90-92, doi:10.1126/science.1159314, 2008.

McClintock, W. E., E. T. Bradley, R. J. Vervack, Jr., R. M. Killen, A. L. Sprague, N. R. Izenberg, and S. C. Solomon, Mercury's exosphere: Observations during MESSENGER's first Mercury flyby, *Science*, *321*, 92-94, doi:10.1126/science.1159467, 2008.

Kennedy, P. J., A. M. Freed, and S. C. Solomon, Mechanisms of faulting in and around Caloris basin, Mercury, *J. Geophys. Res*., *113*, E08004, doi:10.1029/2007JE002992, 2008.

Boardsen, S. A., B. J. Anderson, M. H. Acuña, J. A. Slavin, H. Korth, and S. C. Solomon, Narrow-band ultra-low-frequency wave observations by MESSENGER during its January 2008 flyby through Mercury's magnetosphere, *Geophys. Res. Lett.*, *36*, L01104, doi:10.1029/2008GL036034, 2009.

Slavin, J. A., B. J. Anderson, T. H. Zurbuchen, D. N. Baker, S. M. Krimigis, M. H. Acuña, M. Benna, S. A. Boardsen, G. Gloeckler, R. E. Gold, G. C. Ho, H. Korth, R. L. McNutt, Jr., J. M. Raines, M. Sarantos, D. Schriver, S. C. Solomon, P. Trávníček, MESSENGER observations of Mercury's magnetosphere during northward IMF, *Geophys. Res. Lett*., *36*, L02101, doi:10.1029/2008GL036158, 2009.

Benna, M., M. H. Acuña, B. J. Anderson, S. Barabash, S. A. Boardsen, G. Gloeckler, R. E. Gold, G. C. Ho, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., J. M. Raines, M. Sarantos, J. A. Slavin, S. C. Solomon, T.-L. Zhang, and T. H. Zurbuchen, Modeling the response of the induced magnetosphere of Venus to changing IMF direction using MESSENGER and Venus Express observations, *Geophys. Res. Lett.*, *36*, L04109, doi:10.1029/2008GL036718, 2009.

Slavin, J. A., M. H. Acuña, B. J. Anderson, D. N. Baker, M. Benna, S. A. Boardsen, G. Gloeckler, R. E. Gold, G. C. Ho, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., J. M. Raines, M. Sarantos, D. Schriver, S. C. Solomon, P. Trávníček, and T. H. Zurbuchen, MESSENGER observations of magnetic reconnection in Mercury's magnetosphere, *Science*, *324*, 606-610, doi:10.1126/science.1172011, 2009.

McClintock, W. E., R. J. Vervack, Jr., E. T. Bradley, R. M. Killen, N. Mouawad, A. L. Sprague, M. H. Burger, S. C. Solomon, and N. R. Izenberg, MESSENGER observations of Mercury's exosphere: Detection of magnesium and distribution of constituents, *Science*, *324*, 610-613, doi:10.1126/science.1172525, 2009.

Denevi, B. W., M. S. Robinson, S. C. Solomon, S. L. Murchie, D. T. Blewett, D. L. Domingue, T. J. McCoy, C. M. Ernst, J. W. Head, T. R. Watters, and N. L. Chabot, The evolution of Mercury's crust: A global perspective from MESSENGER, *Science*, *324*, 613-618, doi:10.1126/science.1172226, 2009.

Watters, T. R., J. W. Head, S. C. Solomon, M. S. Robinson, C. R. Chapman, B. W. Denevi, C. I. Fassett, S. L. Murchie, and R. G. Strom, Evolution of the Rembrandt impact basin on Mercury, *Science*, *324*, 618-621, doi:10.1126/science.1172109, 2009.

Slavin, J. A., M. H. Acuña, B. J. Anderson, S. Barabash, M. Benna, S. A. Boardsen, M. Fraenz, G. Gloeckler, R. E. Gold, G. C. Ho, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., J. M. Raines, M. Sarantos, S. C. Solomon, T.-L. Zhang, and T. H. Zurbuchen, MESSENGER and Venus Express observations of the solar wind interaction with Venus, *Geophys. Res. Lett.*, *36*, L09106, doi:10.1019/GL2009037876, 2009.

Solomon, S. C., L. M. Prockter, and D. T. Blewett, MESSENGER at Mercury: An introduction to the special issue of Earth and Planetary Science Letters, *Earth Planet. Sci. Lett*., *285*, 225-226, doi:10.1016/j.epsl.2009.03.042, 2009.

Head, J. W., S. L. Murchie, L. M. Prockter, S. C. Solomon, C. R. Chapman, R. G. Strom, T. R. Watters, D. T. Blewett, J. J. Gillis-Davis, C. I. Fassett, J. L. Dickson, G. A. Morgan, and L. Kerber, Volcanism on Mercury: Evidence from the first MESSENGER flyby for extrusive and explosive activity and the volcanic origin of plains, *Earth Planet. Sci. Lett.*, *285*, 227-242, doi:10.1016/j.epsl.2009.03.007, 2009.

Gillis-Davis, J. J., D. T. Blewett, R. W. Gaskell, B. W. Denevi, M. S. Robinson, R. G. Strom, S. C. Solomon, and A. L. Sprague, Pit-floor craters on Mercury: Evidence of near-surface igneous activity, *Earth Planet. Sci. Lett.*, *285*, 243-250, doi:10.1016/j.epsl.2009.05.023, 2009.

Head, J. W., S. L. Murchie, L. M. Prockter, S. C. Solomon, R. G. Strom, C. R. Chapman, T. R. Watters, David T. Blewett, J. J. Gillis-Davis, C. I. Fassett, J. L. Dickson, D. M. Hurwitz, and L. R. Ostrach, Evidence for intrusive activity on Mercury from the first MESSENGER flyby, *Earth Planet. Sci. Lett.*, *285*, 251-262, doi:10.1016/j.epsl.2009.03.008, 2009.

Kerber, L., J. W. Head, S. C. Solomon, S. L. Murchie, D. T. Blewett, and L. Wilson, Explosive volcanic eruptions on Mercury: Eruption conditions, magma volatile content, and implications for interior volatile abundances, *Earth Planet. Sci. Lett.*, *285*, 263-271, doi:10.1016/j.epsl.2009.04.037, 2009.

Blewett, D. T., M. S. Robinson, B. W. Denevi, J. J. Gillis-Davis, J. W. Head, S. C. Solomon, G. M. Holsclaw, and W. E. McClintock, Multispectral imaging of Mercury from the first MESSENGER flyby: Analysis of global and regional color trends, *Earth Planet. Sci. Lett.*, *285*, 272-282, doi:10.1016/j.epsl.2009.02.021, 2009.

Watters, T. R., S. C. Solomon, M. S. Robinson, J. W. Head, S. L. André, S. A. Hauck, II, and S. L. Murchie, The tectonics of Mercury: The view after MESSENGER's first flyby, *Earth Planet. Sci. Lett*., *285*, 283-296, doi:10.1016/j.epsl.2009.01.025, 2009.

Fassett, C. I., J. W. Head, D. T. Blewett, C. R. Chapman, J. L Dickson, S. L. Murchie, S. C. Solomon, and T. R. Watters, Caloris impact basin: Exterior geomorphology, stratigraphy, morphometry, radial sculpture, and smooth plains deposits, *Earth Planet. Sci. Lett*., *285*, *285*, 297-308, doi:10.1016/j.epsl.2009.05.022, 2009.

Watters, T. R., S. M. Murchie, M. S. Robinson, S. C. Solomon, B. W. Denevi, S. L. André, and J. W. Head, Emplacement and tectonic deformation of smooth plains in the Caloris basin, Mercury, *Earth Planet. Sci. Lett*., *285*, 309-319, doi:10.1016/j.epsl.2009.03.040, 2009.

Freed, A. M., S. C. Solomon, T. R. Watters, R. J. Phillips, and M. T. Zuber, Could Pantheon Fossae be the result of the Apollodorus crater-forming impact within the Caloris basin, Mercury?, *Earth Planet. Sci. Lett*., *285*, 320-327, doi:10.1016/j.epsl.2009.02.038, 2009.

Uno, H., C. L. Johnson, B. J. Anderson, H. Korth, and S. C. Solomon, Modeling Mercury's internal magnetic field with smooth inversions, *Earth Planet. Sci. Lett*., *285*, 328-339, doi:10.1016/j.epsl.2009.02.032, 2009.

Purucker, M. E., T. J. Sabaka, S. C. Solomon, B. J. Anderson, H. Korth, M. T. Zuber, and G. A. Neumann, Mercury's internal magnetic field: Constraints on large- and small-scale fields of crustal origin, *Earth Planet. Sci. Lett.*, *285*, 340-346, doi:10.1016/j.epsl.2008.12.017, 2009.

Mohit, P. S., C. L. Johnson, O. Barnouin-Jha, M. T. Zuber, and S. C. Solomon, Shallow basins on Mercury: Evidence of relaxation?, *Earth Planet. Sci. Lett*., *285*, 355-363, doi:10.1016/j.epsl.2009.04.023, 2009.

Boardsen, S. A., J. A. Slavin, B. J. Anderson, H. Korth, and S. C. Solomon, Comparison of ultra-low-frequency waves at Mercury under northward and southward IMF, *Geophys. Res. Lett*., *36*, L18106, doi:10.1029/2009GL039525, 2009.

Baker, D. N., D. Odstrcil, B. J. Anderson, C. N. Arge, M. Benna, G. Gloeckler, J. M. Raines, D. Schriver, J. A. Slavin, S. C. Solomon, R. M. Killen, and T. H. Zurbuchen, Space environment of Mercury at the time of the first MESSENGER flyby: Solar wind and interplanetary magnetic field modeling of upstream conditions, *J. Geophys. Res*., *114*, A10101, doi:10.1029/2009JA014287, 2009.

Laske, G., J. A. Collins, C. J. Wolfe, S. C. Solomon, R. S. Detrick, J. A. Orcutt, D. Bercovici, and E. H. Hauri, Probing the Hawaiian hotspot with new broadband ocean bottom instruments, *Eos Trans. Amer. Geophys. Un*., *90*, 362-363, doi:10.1029/2009EO410002, 2009.

Wolfe, C. J., S. C. Solomon, G. Laske, J. A. Collins, R. S. Detrick, J. A. Orcutt, D. Bercovici, and E. H. Hauri, Mantle shear-wave velocity structure beneath the Hawaiian hot spot, *Science*, 326, 1388-1390, doi:10.1126/science.1180165, 2009.

Feldman, W. C., D. J. Lawrence, J. O. Goldsten, R. E. Gold, D. N. Baker, D. K. Haggerty, G. C. Ho, S. Krucker, R. P. Lin, R. A. Mewaldt, R. J. Murphy, L. R. Nittler, E. A. Rhodes, J. A. Slavin, S. C. Solomon, R. D. Starr, F. Vilas, and A. Vourlidas, Evidence for extended acceleration of solar-flare ions from 1–8 MeV solar neutrons detected with the MESSENGER Neutron Spectrometer, *J. Geophys. Res*., *115*, A01102, doi:10.1029/2009JA014535, 2010.

Slavin, J. A., R. P. Lepping, C.-C. Wu, B. J. Anderson, D. N. Baker, M. Benna, S. A. Boardsen, R, M. Killen, H. Korth, S. M. Krimigis, W. E. McClintock, R. L. McNutt, Jr., M. Sarantos, D. Schriver, S. C. Solomon, P. Trávníček, and T. H. Zurbuchen, MESSENGER observations of large flux transfer events at Mercury, *Geophys. Res. Lett*., *37*, L02105, doi:10.1029/2009/GL041485, 2010.

Boardsen, S. A., T. Sundberg, J. A. Slavin, B. J. Anderson, H. Korth, S. C. Solomon, and L. G. Blomberg, Observations of Kelvin-Helmholtz waves along the dusk-side boundary of Mercury's magnetosphere during MESSENGER's third flyby, *Geophys. Res. Lett*., *37*, L12101, doi:10.1029/2010GL043606, 2010.

Anderson, B. J., M. H. Acuña, H. Korth, J. A. Slavin, H. Uno, C. L. Johnson, M. E. Purucker, S. C. Solomon, J. M Raines, T. H. Zurbuchen, G. Gloeckler, and R. L. McNutt, Jr., The magnetic field of Mercury, *Space Sci. Rev., 152*, 307-339, doi:10.1007/s11214-009-9544-3, 2010.

Slavin, J. A., B. J. Anderson, D. N. Baker, M. Benna, S. A. Boardsen, G. Gloeckler, R. E. Gold, G. C. Ho, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., L. R. Nittler, J. M. Raines, M. Sarantos, D. Schriver, S. C. Solomon, R. D. Starr, P. Trávníček, and T. H. Zurbuchen, MESSENGER observations of extreme loading and unloading of Mercury's magnetic tail, *Science*, *329*, 665-668, doi:10.1126/science.1188067, 2010.

Prockter, L. M., C. M. Ernst, B. W. Denevi, C. R. Chapman, J. W. Head III, C. I. Fassett, W. J. Merline, S. C. Solomon, T. R. Watters, R. G. Strom, G. Cremonese, S. Marchi, and M. Massironi, Evidence for young volcanism on Mercury from the third MESSENGER flyby, *Science*, *329*, 668-671, doi:10.1126/science.1188186, 2010.

Vervack, R. J., Jr., W. E. McClintock, R. M. Killen, A. L. Sprague, B. J. Anderson, M. H. Burger, E. T. Bradley, N. Mouawad, S. C. Solomon, and N. R. Izenberg, Mercury's complex exosphere: Results from MESSENGER's third flyby, *Science*, *329*, 672-675, doi:10.1126/science.1188572, 2010.

Benna, M., B. J. Anderson, D. N. Baker, S. A. Boardsen, G. Gloeckler, R. E. Gold, G. C. Ho, R. M. Killen, H. Korth, S. M. Krimigis, M. E. Purucker, R. L. McNutt, Jr., J. M. Raines, W. E. McClintock, M. Sarantos, J. A. Slavin, S. C. Solomon, and T. H. Zurbuchen, Modeling of the magnetosphere of Mercury at the time of the first MESSENGER flyby, *Icarus*, *209*, 3-10, doi:10.1016/j.icarus.2009.11.036, 2010.

Alexeev, I. I., E. S. Belenkaya, J. A. Slavin, H. Korth, B. J. Anderson, D. N. Baker, S. A. Boardsen, C. L. Johnson, M. E. Purucker, M. Sarantos, and S. C. Solomon, Mercury's magnetospheric magnetic field after the first two MESSENGER flybys, *Icarus*, *209*, 25-39, doi:10.1016/j.icarus.2010.01.024, 2010.

Smith, D. E., M. T. Zuber, R. J. Phillips, S. C. Solomon, G. A. Neumann, F. G. Lemoine, S. J. Peale, J.-L. Margot, M. J. Talpe, J. W. Head III, S. A. Hauck II, M. H. Torrence, C. L. Johnson, M. E. Perry, O. S. Barnouin, R. L. McNutt, Jr., and J. Oberst, The equatorial shape and gravity field of Mercury from MESSENGER flybys 1 and 2, *Icarus*, *209*, 88-100, doi:10.1016/j.icarus.2010.04.007, 2010.

Lawrence, D. J., W. C. Feldman, J. O. Goldsten, T. J. McCoy, D. T. Blewett, W. V. Boynton, L. G. Evans, L. R. Nittler, E. A. Rhodes, and S. C. Solomon, Identification and measurement of neutron-absorbing elements on Mercury's surface, *Icarus*, *209*, 195-209, doi:10.1016/j.icarus.2010.04.005, 2010.

Ernst, C. M., S. L. Murchie, O. S. Barnouin, M. S. Robinson, B. W. Denevi, D. T. Blewett, J. W. Head, N. R. Izenberg, S. C. Solomon, and J. H. Roberts, Exposure of spectrally distinct material by impact craters on Mercury: Implications for global stratigraphy, *Icarus*, *209*, 210-223, doi:10.1016/j.icarus.2010.05.022, 2010.

Oberst, J., F. Preusker, R. J. Phillips, T. R. Watters, J. W. Head, M. T. Zuber, and S. C. Solomon, The morphology of Mercury's Caloris basin as seen in MESSENGER stereo topographic models, *Icarus*, *209*, 230-238, doi:10.1016/j.icarus.2010.03.009, 2010.

Blewett, D. T., B. W. Denevi, M. S. Robinson, C. M. Ernst, M. E. Purucker, and S. C. Solomon, The apparent lack of lunar-like swirls on Mercury: Implications for the formation of lunar swirls and for the agent of space weathering, *Icarus, 209*, 238-246, doi:10.1016/j.icarus.2010.03.008, 2010.

Zuber, M. T., L. G. J. Montési, G. T. Farmer, S. A. Hauck II, J. A. Ritzer, R. J. Phillips, S. C. Solomon, D. E. Smith, M. J. Talpe, J. W. Head III, G. A. Neumann, T. R. Watters, and C. L. Johnson, Lithospheric strain accommodation on Mercury from altimetric profiles of rides and lobate scarps measured during MESSENGER flybys 1 and 2, *Icarus*, *209*, 247-255, doi:10.1016/j.icarus.2010.02.026, 2010.

McNutt, R. L., Jr., S. C. Solomon, P. D. Bedini, E. J. Finnegan, D. G. Grant, and the MESSENGER Team, The MESSENGER mission: Results from the first two Mercury flybys, *Acta Astronautica*, *67*, 681-687, doi:10.1016/j.actaastro.2010.05.020, 2010.

Leahy, G. M., J. A. Collins, C. J. Wolfe, G. Laske, and S. C. Solomon, Underplating of the Hawaiian Swell: Evidence from teleseismic receiver functions, *Geophys. J. Int*., *183*, 313-329, doi:10.1111/j.1365-246X.2010.04720.x, 2010.

Gómez-Pérez, N., and S. C. Solomon, Mercury's weak magnetic field: A result of magnetospheric feedback?, *Geophys. Res. Lett*., *37*, L20204, doi:10.1029/2010GL044533, 2010.

Solomon, S. C., A new look at the planet Mercury, *Physics Tod*ay, *64* (1), 50-55, doi:10.1063/1.3541945, 2011.

Wolfe, C. J., S. C. Solomon, G. Laske, J. A. Collins, R. S. Detrick, J. A. Orcutt, D. Bercovici, and E. H. Hauri, Mantle P-wave velocity structure beneath the Hawaiian hotspot, *Earth Planet. Sci. Lett.*, *303*, 267-280, doi:10.1016/j.epsl.2011.01.004, 2011.

Villagómez, D. R., D. R. Toomey, E. E. E. Hooft, and S. C. Solomon, Crustal structure beneath the Galápagos Archipelago from ambient noise tomography and its implications for plume-lithosphere interactions, *J. Geophys. Res*., *116*, B04310, doi:10.1029/2010JB007764, 2011.

Fassett, C. I., S. J. Kadish, J. W. Head, S. C. Solomon, and R. G. Strom, The global population of large craters on Mercury and comparison with the Moon, *Geophys. Res. Lett*., *38*, L10202, doi:10.1029/2011GL047294, 2011.

Anchieta, M. C., C. J. Wolfe, G. L. Pavlis, F. L. Vernon, J. A. Eakins, S. C. Solomon, G. Laske, and J. A. Collins, Seismicity around the Hawaiian Islands recorded by the PLUME seismometer networks: Insight into faulting near Maui, Molokai, and Oahu, *Bull. Seismol. Soc. Am.*, *101*, 1742-1758, doi:10.1785/0120100271, 2011.

Peplowski, P. N., D. T. Blewett, B. W. Denevi, L. G. Evans, D. J. Lawrence, L. N. Nittler, E. A. Rhodes, C. M. Selby, and S. C. Solomon, Mapping iron abundances on the surface of Mercury: Predicted spatial resolution of the MESSENGER Gamma-Ray Spectrometer, *Planet. Space Sci.*, *59*, 1654-1658, doi:10.1016/j.pss.2011.06.001, 2011.

Lawrence, D. J., J. K. Harmon, W. C. Feldman, J. O. Goldsten, D. A. Paige, P. N. Peplowski, E. A. Rhodes, C. M. Selby, and S. C. Solomon, Predictions of MESSENGER Neutron Spectrometer measurements for Mercury's north polar region, *Planet. Space Sci.*, *59*, 1665-1669, doi:10.1016/j.pss.2011.07.001, 2011.

Nittler, L. R., R. D. Starr, S. Z. Weider, T. J. McCoy, W. V. Boynton, D. S. Ebel, C. M. Ernst, L. G. Evans, J. O. Goldsten, D. K. Hamara, D. J. Lawrence, R. L. McNutt, Jr., C. E. Schlemm II, S. C. Solomon, and A. L. Sprague, The major-element composition of Mercury's surface from MESSENGER X-ray spectrometry, *Science*, *333*, 1847-1850, doi:10.1126/science.1211567, 2011.

Peplowski, P. N., L. G. Evans, S. A. Hauck, II, T. J. McCoy, W. V. Boynton, J. J. Gillis-Davis, D. S. Ebel, J. O. Goldsten, D. K. Hamara, D. J. Lawrence, R. L. McNutt, Jr., L. R. Nittler, S. C. Solomon, E. A. Rhodes, A. L. Sprague, R. D. Starr, and K. R. Stockstill-Cahill, Radioactive elements on Mercury's surface from MESSENGER: Implications for the planet's formation and evolution, *Science*, *333*, 1850-1852, doi:10.1126/science.1211576, 2011.

Head, J. W., C. R. Chapman, R. G. Strom, C. I. Fassett, B. W. Denevi, D. T. Blewett, C. M. Ernst, T. R. Watters, S. C. Solomon, S. L. Murchie, L. M. Prockter, N. L. Chabot, J. J. Gillis-Davis, J. L. Whitten, T. A. Goudge, D. M. H. Baker, D. M. Hurwitz, L. R. Ostrach, Z. Xiao, W. J. Merline, L. Kerber, J. L. Dickson, J. Oberst, P. K. Byrne, C. Klimczak, and L. R. Nittler, Flood volcanism in the high northern latitudes of Mercury revealed by MESSENGER, *Science*, *333*, 1853-1856, doi:10.1126/science.1211997, 2011.

Blewett, D. T., N. L. Chabot, B. W. Denevi, C. M. Ernst, J. W. Head, N. R. Izenberg, S. L. Murchie, S. C. Solomon, L. R. Nittler, T. J. McCoy, Z. Xiao, D. M. H. Baker, C. I. Fassett, S. E. Braden, J. Oberst, F. Scholten, F. Preusker, and D. M. Hurwitz, Hollows on Mercury: MESSENGER evidence for geologically recent volatile-related activity, *Science*, *333*, 1856-1859, doi:10.1126/science.1211681, 2011.

Anderson, B. J., C. L. Johnson, H. Korth, M. E. Purucker, R. M. Winslow, J. A. Slavin, S. C. Solomon, R. L. McNutt, Jr., J. M. Raines, and T. H. Zurbuchen, The global magnetic field of Mercury from MESSENGER orbital observations, *Science*, *333*, 1859-1862, doi:10.1126/science.1211001, 2011.

Zurbuchen, T. H., J. M. Raines, J. A. Slavin, D. J. Gershman, J. A. Gilbert, G. Gloeckler, B. J. Anderson, D. N. Baker, H. Korth, S. M. Krimigis, M. Sarantos, D. Schriver, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of the spatial distribution of planetary ions near Mercury, *Science*, *333*, 1862-1865, doi:10.1126/science.1211302, 2011.

Ho, G. C., S. M. Krimigis, R. E. Gold, D. N. Baker, J. A. Slavin, B. J. Anderson, H. Korth, R. D. Starr, D. J. Lawrence, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of transient bursts of energetic electrons in Mercury's magnetosphere, *Science*, *333*, 1865-1868, doi:10.1126/science.1211141, 2011.

Korth, H., B. J. Anderson, J. M. Raines, J. A. Slavin, T. H. Zurbuchen, C. L. Johnson, M. E. Purucker, R. M. Winslow, S. C. Solomon, and R. L. McNutt, Jr., Plasma pressure in Mercury's equatorial magnetosphere derived from MESSENGER Magnetometer observations, *Geophys. Res. Lett.*, *38*, L22201, doi:10.1029/2011GL049451, 2011.

Laske, G., A. Markee, J. A. Orcutt, C. J. Wolfe, J. A. Collins, S. C. Solomon, R. S. Detrick, D. Bercovici, and E. H. Hauri, Asymmetric shallow mantle structure beneath the Hawaiian Swell – Evidence from Rayleigh waves recorded by the PLUME network, *Geophys. J. Int*., *187*, 1725-1742, doi:10.1111/j.1365-246X.2011.05238.x, 2011.

Solomon, S. C., R. L. McNutt, Jr., and L. M. Prockter, Mercury after the MESSENGER flybys: An introduction to the special issue of Planetary and Space Science, *Planet. Space Sci.*, *59*, 1827-1828, doi:10.1016/j.pss.2011.08.004, 2011.

Rhodes, E. A., L. G. Evans, L. R. Nittler, R. D. Starr, A. L. Sprague, D. J. Lawrence, T. J. McCoy, K. R. Stockstill-Cahill, J. O. Goldsten, P. N. Peplowski, D. K. Hamara, W. V. Boynton, and S. C. Solomon, Analysis of MESSENGER Gamma-Ray Spectrometer data from Mercury flybys, *Planet. Space Sci.*, *59*, 1829-1841, doi:10.1016/j.pss.2011.07.018, 2011.

Kerber, L., J. W. Head, D. T. Blewett, S. C. Solomon, L. Wilson, S. L. Murchie, M. S. Robinson, B. W. Denevi, L. M. Prockter, and D. L. Domingue, The global distribution of pyroclastic deposits on Mercury: The view from MESSENGER flybys 1-3, *Planet. Space Sci*., *59*, 1895-1909, doi:10.1016/j.pss.2011.03.020, 2011.

Preusker, F., J. Oberst, J. W. Head, T. R. Watters, M. S. Robinson, M. T. Zuber, and S. C. Solomon, Stereo topographic models of Mercury after three MESSENGER flybys, *Planet. Space Sci*., *59*, 1910-1917, doi:10.1016/j.pss.2011.07.005, 2011.

Oberst, J., S. Elgner, F. S. Turner, M. E. Perry, R. W. Gaskell, M. T. Zuber, M. S. Robinson, and S. C. Solomon, Radius and limb topography of Mercury obtained from images acquired during the MESSENGER flybys, *Planet. Space Sci*., *59*, 1918-1924, doi:10.1016/j.pss.2011.07.003, 2011.

Perry, M. E., D. S. Kahan, O. S. Barnouin, C. M. Ernst, S. C. Solomon, M. T. Zuber, D. E. Smith, R. J. Phillips, D. K. Srinivasan, J. Oberst, and S. W. Asmar, Measurement of the radius of Mercury by radio occultation during the MESSENGER flybys, *Planet. Space Sci*., *59*, 1925-1931, doi:10.1016/j.pss.2011.07.022, 2011.

Baker, D. M. H., J. W. Head, S. C. Schon, C. M. Ernst, L. M. Prockter, S. L. Murchie, M. S. Robinson, B. W. Denevi, S. C. Solomon, C. R. Chapman, and R. G. Strom, The transition from complex crater to peak-ring basin on Mercury: New observations from MESSENGER flyby data and constraints on basin formation models, *Planet. Space Sci.*, *59*, 1932-1948, doi:10.1016/j.pss.2011.05.010, 2011.

Schon, S. C., J. W. Head, D. M. H. Baker, C. M. Ernst, L. M. Prockter, S. L. Murchie, and S. C. Solomon, Eminescu impact structure: Insight into the transition from complex crater to peak-ring basin on Mercury, *Planet. Space Sci*., *59*, 1949-1959, doi:10.1016/j.pss.2011.02.003, 2011.

Strom, R. G., M. E. Banks, C. R. Chapman, C. I. Fassett, J. A. Forde, J. W. Head III, W. J. Merline, L. M. Prockter, and S. C. Solomon, Mercury crater statistics from MESSENGER flybys: Implications for stratigraphy and resurfacing history, *Planet. Space Sci.*, *59*, 1960-1967, doi:10.1016/j.pss.2011.03.018, 2011.

Ho, G. C., R. D. Starr, R. E. Gold, S. M. Krimigis, J. A. Slavin, D. N. Baker, B. J. Anderson, R. J. McNutt, Jr., L. R. Nittler, and S. C. Solomon, Observations of suprathermal electrons in Mercury's magnetosphere during the three MESSENGER flybys, *Planet. Space Sci.*, *59*, 2016-2025, doi:10.1016/j.pss.2011.01.011, 2011.

Anderson, B. J., J. A. Slavin, H. Korth, S. A. Boardsen, T. H. Zurbuchen, J. M. Raines, G. Gloeckler, R. L. McNutt, Jr., and S. C. Solomon, The dayside magnetospheric boundary layer at Mercury, *Planet. Space Sci.*, *59*, 2037-2050, doi:10.1016/j.pss.2011.01.010, 2011.

Sundberg, T., S. A. Boardsen, J. A. Slavin, L. G. Blomberg, J. A. Cumnock, S. C. Solomon, B. J. Anderson, and H. Korth, Reconstruction of propagating Kelvin-Helmholtz vortices at Mercury's magnetopause, *Planet. Space Sci.*, *59*, 2051-2057, doi:10.1016/j.pss.2011.05.008, 2011.

Baker, D. N., D. Odstrcil, B. J. Anderson, C. N. Arge, M. Benna, G. Gloeckler, H. Korth, L. R. Mayer, J. M. Raines, D. Schriver, J. A. Slavin, S. C. Solomon, P. Trávníček, and T. H. Zurbuchen, The space environment of Mercury at the times of the second and third MESSENGER flybys, *Planet. Space Sci.*, *59*, 2058-2065, doi:10.1016/j.pss.2011.01.018, 2011.

Korth, H., B. J. Anderson, T. H. Zurbuchen, J. A. Slavin, S. Perri, S. A. Boardsen, D. N. Baker, S. C. Solomon, and R. L. McNutt, Jr., The interplanetary magnetic field environment at Mercury's orbit, *Planet. Space Sci.*, *59*, 2075-2085, doi:10.1016/j.pss.2010.10.014, 2011.

Schriver, D., P. M. Trávníček, B. J. Anderson, M. Ashour-Abdalla, D. N. Baker, M. Benna, S. A. Boardsen, R. E. Gold, P. Hellinger, G. C. Ho, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., J. M. Raines, R. L. Richard, J. A. Slavin, S. C. Solomon, R. D. Starr, and T. H. Zurbuchen, Quasi-trapped ion and electron populations at Mercury, *Geophys. Res. Lett.*, *38*, L23103, doi:10.1029/2011GL049629, 2011.

Slavin, J. A., B. J. Anderson, D. N. Baker, M. Benna, S. A. Boardsen, R. E. Gold, G. C. Ho, S. M. Imber, H. Korth, S. M. Krimigis, R. L. McNutt, Jr., J. M. Raines, M. Sarantos, D. Schriver, S. C. Solomon, P. Trávníček, and T. H. Zurbuchen, MESSENGER and Mariner 10 flyby observations of magnetotail structure and dynamics at Mercury, *J. Geophys. Res*., *117*, A01215, doi:10.1029/2011JA016900, 2012.

Smith, D. E., M. T. Zuber, R. J. Phillips, S. C. Solomon, S. A. Hauck, II, F. G. Lemoine, E. Mazarico, G. A. Neumann, S. J. Peale, J.-L. Margot, C. L. Johnson, M. H. Torrence, M. E. Perry, D. D. Rowlands, S. Goossens, J. W. Head, and A. H. Taylor, Gravity field and internal structure of Mercury from MESSENGER, *Science*, *336*, 214-217, doi:10.1126/science1218809, 2012.

Zuber, M. T., D. E. Smith, R. J. Phillips, S. C. Solomon, G. A. Neumann, S. A. Hauck, II, S. J. Peale, O. S. Barnouin, J. W. Head, C. L. Johnson, F. G. Lemoine, E. Mazarico, X. Sun, M. H. Torrence, A. M. Freed, C. Klimczak, J.-L. Margot, J. Oberst, M. E. Perry, C. M. Ernst, R. J. McNutt, Jr., J. A. Balcerski, N. Michel, M. J. Talpe, and D. Yang, Topography of the northern hemisphere of Mercury from MESSENGER laser altimetry, *Science*, *336*, 217-220, doi:1126/science.1218805, 2012.

Sundberg, T., S. A. Boardsen, J. A. Slavin, B. J. Anderson, H. Korth, T. H. Zurbuchen, J. M. Raines, and S. C. Solomon, MESSENGER orbital observations of large-amplitude Kelvin-Helmholtz waves at Mercury's magnetopause, *J. Geophys. Res*., *117*, A04216, doi:10.1029/2011JA017268, 2012.

Winslow, R. M., C. L. Johnson, B. J. Anderson, H. Korth, J. A. Slavin, M. E. Purucker, and S. C. Solomon, Observations of Mercury's northern cusp region with MESSENGER's Magnetometer, *Geophys. Res. Lett.*, *39*, L08112, doi:10.1029/2012GL051472, 2012.

Chabot, N. L., C. M. Ernst, B. W. Denevi, J. K. Harmon, S. L. Murchie, D. T. Blewett, S. C. Solomon, and E. D. Zhong, Areas in permanent shadow in Mercury's south polar region ascertained by MESSENGER orbital imaging, *Geophys. Res. Lett*., *39*, L09204, doi:10.1029/2012GL051526, 2012.

Starr, R. D., D. Schriver, L. R. Nittler, S. Z. Weider, P. K. Byrne, G. C. Ho, E. A. Rhodes, C. E. Schlemm II, S. C. Solomon, and P. M. Trávníček, MESSENGER detection of electron-induced X-ray fluorescence from Mercury's surface, *J. Geophys. Res*., *117*, E00L02, doi:10.1029/2012JE004118, 2012.

Sundberg, T., J. A. Slavin, S. A. Boardsen, B. J. Anderson, H. Korth, G. C. Ho, D. Schriver, V. M. Uritsky, T. H. Zurbuchen, J. M. Raines, D. N. Baker, S. M. Krimigis, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of depolarization events in Mercury's magnetotail, *J. Geophys. Res*., *117*, A00M03, doi:10.1029/20012JA017756, 2012.

Ho, G. C., S. M. Krimigis, R. E. Gold, D. N. Baker, B. J. Anderson, H. Korth, J. A. Slavin, R. L. McNutt, Jr., R. M. Winslow, and S. C. Solomon, Spatial distribution and spectral characteristics of energetic electrons in Mercury's magnetosphere, *J. Geophys. Res*., *117*, A00M04, doi:10.1029/2012JA017983, 2012.

Klimczak, C., T. R. Watters, C. M. Ernst, A. M. Freed, P. K. Byrne, S. C. Solomon, D. M. Blair, and J. W. Head, Deformation associated with ghost craters and basins in volcanic smooth plains on Mercury: Strain analysis and implications for plains evolution, *J. Geophys. Res.*, *117*, E00L03, doi:10.1029/2012JE004100, 2012.

Gershman, D. J., T. H. Zurbuchen, L. A. Fisk, J. A. Gilbert, J. M. Raines, B. J. Anderson, C. W. Smith, H. Korth, and S. C. Solomon, Solar wind alpha particles and heavy ions in the inner heliosphere, *J. Geophys. Res.*, *117*, A00M02, doi:10.1029/2012JA017829, 2012.

Boardsen, S. A., J. A. Slavin, B. J. Anderson, H. Korth, D. Schriver, and S. C. Solomon, Survey of coherent ~1 Hz waves in Mercury's inner magnetosphere, *J. Geophys. Res.*, *117*, A00M05, doi:10.1029/2012JA017822, 2012.

Bedini, P. D., S. C. Solomon, E. J. Finnegan, A. B. Calloway, S. L. Ensor, R. L. McNutt, Jr., B. J. Anderson, and L. M. Prockter, MESSENGER at Mercury: A mid-term report, *Acta Astronautica*, *81*, 369-379, doi:10.1016/j.actaastro.2012.07.011, 2012.

Peplowski, P. N., D. J. Lawrence, E. A. Rhodes, A. L. Sprague, T. J. McCoy, B. W. Denevi, L. G. Evans, J. W. Head, L. R. Nittler, S. C. Solomon, K. R. Stockstill-Cahill, and S. Z. Weider, Variations in the abundances of potassium and thorium on the surface of Mercury: Results from the MESSENGER Gamma-Ray Spectrometer, *J. Geophys. Res.*, *117*, E00L04, doi:10.1029/2012JE004141, 2012.

Weider, S. Z., L. R. Nittler, R. D. Starr, T. J. McCoy, K. R. Stockstill-Cahill, P. K. Byrne, B. W. Denevi, J. W. Head, and S. C. Solomon, Chemical heterogeneity on Mercury's surface revealed by the MESSENGER X-Ray Spectrometer, *J. Geophys. Res*., *117*, E00L05, doi:10.1029/2012JE004153, 2012.

Freed, A. M., D. M. Blair, T. R. Watters, C. Klimczak, P. K. Byrne, S. C. Solomon, M. T. Zuber, and H. J. Melosh, On the origin of graben and ridges within and hear volcanically buried craters and basins in Mercury's northern plains, *J. Geophys. Res*., *117*, E00L06, doi:10.1029/2012JE004119, 2012.

Fassett, C. I., J. W. Head, D. M. H. Baker, M. T. Zuber, D. E. Smith, G. A. Neumann, S. C. Solomon, C. Klimczak, R. G. Strom, C. R. Chapman, L. M. Prockter, R. J. Phillips, J. Oberst, and F. Preusker, Large impact basins on Mercury: Global distribution, characteristics, and modification history from MESSENGER orbital data, *J. Geophys. Res*., *117*, E00L08, doi:10.1029/2012JE004154, 2012.

Margot, J.-L., S. J. Peale, S. C. Solomon, S. A. Hauck II, F. D. Ghigo, R. F. Jurgens, M. Yseboodt, J. D. Giorgini, S. Padovan, and D. B. Campbell, Mercury's moment of inertia from spin and gravity data, *J. Geophys. Res*., *117*, E00L09, doi:10.1029/2012JE004161, 2012.

Slavin, J. A., S. M. Imber, S. A. Boardsen, G. A. DiBraccio, T. Sundberg, M. Sarantos, T. Nieves-Chinchilla, A. Szabo, B. J. Anderson, H. Korth, T. H. Zurbuchen, J. M. Raines, C. L. Johnson, R. M. Winslow, R. M. Killen, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of a flux-transfer-event shower at Mercury, *J. Geophys. Res*., 117, A00M06, doi:10.1029/2012JA017926, 2012.

Evans, L. G., P. N. Peplowski, E. A. Rhodes, D. J. Lawrence, T. J. McCoy, L. R. Nittler, S. C. Solomon, A. L. Sprague, K. R. Stockstill-Cahill, R. D. Starr, S. Z. Weider, W. V. Boynton, D. K. Hamara, and J. O. Goldsten, Major-element abundances on the surface of Mercury: Results from the MESSENGER Gamma-Ray Spectrometer, *J. Geophys. Res*., *117*, E00L07, doi:10.1029/2012JE004178, 2012.

Watters, T. R., S. C. Solomon, C. Klimczak, A. M. Freed, J. W. Head, C. M. Ernst, M. S. Robinson, D. M. Blair, T. A. Goudge, and P. K. Byrne, Extension and contraction within volcanically buried impact craters and basins on Mercury, *Geology*, 40, 1123-1126, doi:10.1130/G33725.1, 2012.

Peplowski, P. N., E. A. Rhodes, D. K. Hamara, D. J. Lawrence, L. G. Evans, L. R. Nittler, and S. C. Solomon, Aluminum abundance on the surface of Mercury: Application of a new background-reduction technique for the analysis of gamma-ray spectroscopy data, *J. Geophys. Res*., *117*, E00L10, doi:10.1029/2012JE004181, 2012.

Anderson, B. J., C. L. Johnson, H. Korth, R. M. Winslow, J. E. Borovsky, M. E. Purucker, J. A. Slavin, S. C. Solomon, M. T. Zuber, and R. L. McNutt, Jr., Low-degree structure in Mercury's planetary magnetic field, *J. Geophys. Res*., *117*, E00L12, doi:10.1029/2012JE004159, 2012.

Talpe, M., M. T. Zuber, D. Yang, G. A. Neumann, S. C. Solomon, E. Mazarico, and F. Vilas, Characterization of the morphometry of impact craters hosting polar deposits in Mercury's north polar region, *J. Geophys. Res*., 117, E00L13, doi:10.1029/2012JE004155, 2012.

Johnson, C. L., M. E. Purucker, H. Korth, B. J. Anderson, R. M. Winslow, M. M. H. Al Asad, J. A. Slavin, I. I. Alexeev, R. J. Phillips, M. T. Zuber, and S. C. Solomon, MESSENGER observations of Mercury's magnetic field structure, *J. Geophys. Res*., *117*, E00L14, doi:10.1029/2012JE004217, 2012.

Korth, H., B. J. Anderson, C. L. Johnson, R. M. Winslow, J. A. Slavin, M. E. Purucker, S. C. Solomon, and R. L. McNutt, Jr., Characteristics of the plasma distribution in Mercury's equatorial magnetosphere derived from MESSENGER Magnetometer observations, *J. Geophys. Res*., *117*, A00M07, doi:10.1029/2012JA018052, 2012.

Lawrence, D. J., W. C. Feldman, J. O. Goldsten, S. Maurice, P. N. Peplowski, B. J. Anderson, D. Bazell, R. L. McNutt, Jr., L. R. Nittler, T. H. Prettyman, D. J. Rodgers, S. C. Solomon, and S. Z. Weider, Evidence for water ice near Mercury's north pole from MESSENGER Neutron Spectrometer measurements, *Science*, *339*, 292-296, doi:10.1126/science.1229953, 2013.

Neumann, G. A., J. F. Cavanaugh, X. Sun, E. M. Mazarico, D. E. Smith, M. T. Zuber, D. Mao, D. A. Paige, S. C. Solomon, C. M. Ernst, and O. S. Barnouin, Bright and dark polar deposits on Mercury, *Science*, *339*, 296-300, doi:10.1126/science.1229764, 2013.

Paige, D. A., M. A. Siegler, J. K. Harmon, G. A. Neumann, E. M. Mazarico, D. E. Smith, M. T. Zuber, E. Harju, M. L. Delitsky, and S. C. Solomon, Thermal stability of volatiles in the north polar region of Mercury, *Science*, *339*, 300-303, doi:10.1126/science.1231106, 2013.

Ruedas, T., P. J. Tackley, and S. C. Solomon, Thermal and compositional evolution of the martian mantle: Effects of phase transitions and melting, *Phys. Earth Planet. Inter*., *216*, 32-58, doi:10.1016/j.pepi.2012.12.002, 2013.

Zuber, M. T., D. E. Smith, M. M. Watkins, S. W. Asmar, A. S. Konopliv, F. G. Lemoine, H. J. Melosh, G. A. Neumann, R. J. Phillips, S. C. Solomon, M. A. Wieczorek, J. G. Williams, S. J. Goossens, G. Kruizinga, E. Mazarico, R. S. Park, and D.-N. Yuan, Gravity field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) mission, *Science*, *338*, 668-671, doi:10.1126/science.1231507, 2013.

Wieczorek, M. A., G. A. Neumann, F. Nimmo, W. S. Kiefer, G. J. Taylor, H. J. Melosh, R. J. Phillips S. C. Solomon, J. C. Andrews-Hanna, S. W. Asmar, A. S. Konopliv, F. G. Lemoine, D. E. Smith, M. M. Watkins, J. G. Williams, and M. T. Zuber, The crust of the Moon as seen by GRAIL, *Science*, *338*, 671-675, doi:10.1126/science.1231530, 2013.

Andrews-Hanna, J. C., S. W. Asmar, J. W. Head III, W. S. Kiefer, A. S. Konopliv, F. G. Lemoine, I. Matsuyama, E. Mazarico, P. J. McGovern, H. J. Melosh, G. A. Neumann, F. Nimmo, R. J. Phillips, D. E. Smith, S. C. Solomon, G. J. Taylor, M. A. Wieczorek, J. G. Williams, and M. T. Zuber, Ancient igneous intrusions and the early expansion of the Moon revealed by GRAIL gravity gradiometry, *Science*, *338*, 675-678, doi:10.1126/science.1231753, 2013.

Chabot, N. L., C. M. Ernst, J. K. Harmon, S. L. Murchie, S. C. Solomon, D. T. Blewett, and B. W. Denevi, Craters hosting radar-bright deposits in Mercury's north polar region: Areas of persistent shadow determined from MESSENGER images, *J. Geophys. Res*. *Planets*, *118*, 26-36, doi:10.1029/2012JE004172, 2013.

Blair, D. M., A. F. Freed, P. K. Byrne, C. Klimczak, L. M. Prockter, C. M. Ernst, S. C. Solomon, H. J. Melosh, and M. T. Zuber, The origin of graben and ridges in Rachmaninoff, Raditladi, and Mozart basins, Mercury, *J. Geophys. Res*. *Planets*, *118*, 47-58, doi:10.1029/2012JE004198, 2013.

Zolotov, M. Yu., A. L. Sprague, S. A. Hauck, II, L. R. Nittler, S. C. Solomon, and S. Z. Weider, The redox state, FeO content and origin of sulfur-rich magmas on Mercury, *J. Geophys. Res*. *Planets*, *118*, 138-146, doi:10.1029/2012JE004274, 2013.

Baker, D. N., G. Poh, D. Odstrcil, C. N. Arge, M. Benna, C. L. Johnson, H. Korth, D. J. Gershman, G. C. Ho, W. E. McClintock, T. A. Cassidy, A. Merkel, J. M Raines, D. Schriver, J. A. Slavin, S. C. Solomon, P. M. Trávníček, R. M. Winslow, and T. H. Zurbuchen, Solar wind forcing at Mercury: WSA-ENLIL model results, *J. Geophys. Res*. *Space Physics, 118*, 45-57, doi:10.1029/2012JA018064, 2013.

Hurwitz, D. M., J. W. Head, P. K. Byrne, Z. Xiao, S. C. Solomon, M. T. Zuber, D. E. Smith, and G. A. Neumann, Investigating the origin of candidate lava channels on Mercury with MESSENGER data: Theory and observations, *J. Geophys. Res*. *Planets*, 118, 471-486, doi:10.1029/2012JE004103, 2013.

DiBraccio, G. A., J. A. Slavin, S. A. Boardsen, B. J. Anderson, H. Korth, T. H. Zurbuchen, J. M. Raines, D. N. Baker, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of magnetopause structure and dynamics at Mercury, *J. Geophys. Res*. *Space Physics*, *118*, 997-1008, doi:10.1002/jgra.50123, 2013.

Gershman, D. J., G. Gloeckler, J. A. Gilbert, J. M. Raines, L. A. Fisk, S. C. Solomon, E. C. Stone, and T. H. Zurbuchen, Observations of interstellar helium pickup ions in the inner heliosphere, *J. Geophys. Res*. *Space Physics*, *18*, 1389-1402, doi:10.1002/jgra.50227, 2013.

Raines, J. M., D. J. Gershman, T. H. Zurbuchen, M. Sarantos, J. A. Slavin, J. A. Gilbert, H. Korth, B. J. Anderson, G. Gloeckler, S. M. Krimigis, D. N. Baker, R. L. McNutt, Jr., and S. C. Solomon, Distribution and compositional variations of plasma ions in Mercury's space environment: The first three Mercury years of MESSENGER observations, *J. Geophys. Res*. *Space Physics*, *118*, 1604-1619, doi:10.1029/2012JA018073, 2013.

Ruedas, T., P. J. Tackley, and S. C. Solomon, Thermal and compositional evolution of the martian mantle: Effects of water, *Phys. Earth Planet. Inter*., *220*, 50-72, doi:10.1016/j.pepi.2013.04.006, 2013.

Denevi, B. W., C. M. Ernst, H. M. Meyer, M. S. Robinson, S. L. Murchie, J. L. Whitten, J. W. Head, T. R. Watters, S. C. Solomon, L. R. Ostrach, C. R. Chapman, P. K. Byrne, C. Klimczak, and P. N. Peplowski, The distribution and origin of smooth plains on Mercury, *J. Geophys. Res*. *Planets*, *118*, 891-907, doi:10.1002/jgre.20075, 2013.

Blewett, D. T., W. V. Vaughan, Z. Xiao, N. L. Chabot, B. W. Denevi, C. M. Ernst, J. Helbert, M. D'Amore, A. Maturilli, J. W. Head, and S. C. Solomon, Mercury's hollows: Constraints on formation and composition from analysis of geological setting and spectral reflectance, *J. Geophys. Res*. *Planets*, *118*, 1013-1032, doi:10.1029/2012JE004174, 2013.

Michel, N. C., S. A. Hauck, II, S. C. Solomon, R. J. Phillips, J. H. Roberts, and M. T. Zuber, Thermal evolution of Mercury as constrained by MESSENGER observations, *J. Geophys. Res*. *Planets*, *118*, 1033-1044, doi:10.1002/jgre.20049, 2013.

Winslow, R. M., B. J. Anderson, C. L. Johnson, J. A. Slavin, H. Korth, M. E. Purucker, D. N. Baker, and S. C. Solomon, Mercury's magnetopause and bow shock from MESSENGER Magnetometer observations, *J. Geophys. Res*. *Space Physics*, *118*, 2213-2227, doi:10.1002/jgra.50237, 2013.

Hauck, S. A., II, J.-L. Margot, S. C. Solomon, R. J. Phillips C. L. Johnson, F. G. Lemoine, E. Mazarico, T. J. McCoy, S. Padovan, S. J. Peale, M. E. Perry, D. E. Smith, and M. T. Zuber, The curious case of Mercury's internal structure, *J. Geophys. Res*. *Planets*, 118, 1204-1220, doi:10.1002/jgre.20091, 2013.

Byrne, P. K., C. Klimczak, D. A. Williams, D. M. Hurwitz, S. C. Solomon, J. W. Head, F. Preusker, and J. Oberst, An assemblage of lava flow features on Mercury, *J. Geophys. Res*. *Planets*, *118*, 1303-1322, doi:10.1002/jgre.20052, 2013.

Melosh, H. J., A. M. Freed, B. C. Johnson, D. M. Blair, J. C. Andrews-Hanna, G. A. Neumann, Ro. J. Phillips, D. E. Smith, S. C. Solomon, M. A. Wieczorek, and M. T. Zuber, The origin of lunar mascon basins, *Science*, *340*, 1552-1555, doi:10.1126/science.1235768, 2013.

Ballmer, M. D., G. Ito, C. J. Wolfe, and S. C. Solomon, Double layering of a thermochemical plume in the upper mantle beneath Hawaii, *Earth Planet. Sci. Lett*., *376*, 155-164, doi:10.1016/j.epsl.2013.06.022, 2013.

Xiao, Z., R. G. Strom, D. T. Blewett, P. K. Byrne, S. C. Solomon, S. L. Murchie, A. L. Sprague, D. L. Domingue, and J. Helbert, Dark spots on Mercury: A distinctive low-reflectance material and its relation to hollows, *J. Geophys. Res*. *Planets*, *118*, 1752-1765, doi:10.1002/jgre.20015, 2013.

Miljković, K., M. A. Wieczorek, G. S. Collins, M. Laneuville, G. A. Neumann, H. J. Melosh, S. C. Solomon, R. J. Phillips, D. E. Smith, and M. T. Zuber, Asymmetric distribution of lunar impact basins caused by variations in target properties, *Science*, 342, 724-726, doi:10.1126/science.1243224, 2013.

Klimczak, C., C. M. Ernst, P. K. Byrne, S. C. Solomon, T. R. Watters, S. L. Murchie, F. Preusker, and J. A. Balcerski, Insights into the subsurface structure of Caloris basin, Mercury, from assessments of mechanical layering and changes in long-wavelength topography, *J. Geophys. Res. Planets*, *118*, 2030-2044, doi:10.1002/jgre.20157, 2013.

Sundberg, T., S. A. Boardsen, J. A. Slavin, V. M. Uritsky, B. J. Anderson, H, Korth, and S. C. Solomon, Cyclic reformation of a quasi-parallel bow shock at Mercury: MESSENGER observations*, J. Geophys. Res*. *Space Physics*, *118*, 6457-6464, doi:10.1002/jgra.50602, 2013.

Gershman, D. J., J. A. Slavin, J. M. Raines, T. H. Zurbuchen, B. J. Anderson, H. Korth, D. N. Baker, and S. C. Solomon, Magnetic flux pile-up and plasma depletion in Mercury's subsolar magnetosheath, *J. Geophys. Res. Space Physics*, *118*, 7181-7199, doi:10.1002/2013JA019244, 2013.

McNutt, R. L., Jr., S. C. Solomon, P. D. Bedini, B. J. Anderson, D. T. Blewett, L. G. Evans, R. E. Gold, S. M. Krimigis, S. L. Murchie, L. R. Nittler, R. J. Phillips, L. M. Prockter, J. A. Slavin, M. T. Zuber, E. J. Finnegan, D. G. Grant, and the MESSENGER Team, MESSENGER at Mercury: Early orbital operations, *Acta Astronautica*, *93*, 509-515, doi:10.1016/j.actaastro.2012.08.012, 2014.

Peplowski, P. N., L. G. Evans, K. R. Stockstill-Cahill, D. J. Lawrence, J. O. Goldsten, T. J. McCoy, L. R. Nittler, S. C. Solomon, A. L. Sprague, R. D. Starr, and S. Z. Weider, Enhanced sodium abundance in Mercury's north polar region revealed by the MESSENGER Gamma-Ray Spectrometer, *Icarus*, *228*, 86-95, doi:10.1016/j.icarus.2013.09.007, 2014.

Izenberg, N. R., R. L. Klima, S. L. Murchie, D. T. Blewett, G. M. Holsclaw, W. E. McClintock, E. Malaret, C. Mauceri, F. Vilas, A. L. Sprague, J. Helbert, D. L. Domingue, J. W. Head III, T. A. Goudge, S. C. Solomon, C. A. Hibbitts, and M. D. Dyar, The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER, *Icarus*, *228*, 364-374, doi:10.1016/j.icarus.2013.10.023, 2014.

Peale, S. J., J.-L. Margot, S. A. Hauck, II, and S. C. Solomon, Effect of core–mantle and tidal torques on Mercury's spin axis orientation, *Icarus*, *231*, 206-220, doi:10.1016/j.icarus.2013.12.007, 2014.

Villagómez, D. R., D. T. Toomey, D. J. Geist, E. E. E. Hooft, and S. C. Solomon, Seismic imaging reveals mantle flow and multistage melting beneath the Galápagos, *Nature Geosci*., *7*, 151-156, doi:10.1038/NGEO2062, 2014.

Byrne, P. K., C. Klimczak, A. M. C. Şengör, S. C. Solomon, T. R. Watters, and S. A. Hauck, II, Mercury's global contraction much greater than earlier estimates, *Nature Geosci.*, *7*, 301-307, doi:10.1038/NGEO2097, 2014.

Goudge, T. A., J. W. Head, L. Kerber, D. T. Blewett, B. W. Denevi, D. L. Domingue, J. J. Gillis-Davis, K. Gwinner, J. Helbert, G. M. Holsclaw, N. R. Izenberg, R. L. Klima, W. E. McClintock, S. L. Murchie, G. A. Neumann, D. E. Smith, R. G. Strom, Z. Xiao, M. T. Zuber, and S. C. Solomon, Global inventory and characterization of pyroclastic deposits on Mercury: New insights into pyroclastic activity from MESSENGER orbital data, *J. Geophys. Res. Planets*, *119*, 635-658, doi:10.1002/2013JE004480, 2014.

Weider, S. Z., L. R. Nittler, R. D. Starr. T. J. McCoy, and S. C. Solomon, Variations in the abundance of iron on the surface of Mercury from MESSENGER X-Ray Spectrometer observations, *Icarus*, *235*, 170-186, doi:10.1016/j.icarus.2014.03.022, 2014.

Domingue, D. L., C. R. Chapman, R. M. Killen, T. H. Zurbuchen, J. A. Gilbert, M. Sarantos, M. Benna, J. A. Slavin, D. Schriver, P. M. Trávníček, T. M. Orlando, A. L. Sprague, D. T. Blewett, J. J. Gillis-Davis, W. C. Feldman, D. J. Lawrence, G. C. Ho, D. S. Ebel, L. R. Nittler, F. Vilas, C. M. Pieters, S. C. Solomon, C. L. Johnson, R. M. Winslow, J. Helbert, P. N. Peplowski, S. Z. Weider, N. Mouawad, N. R. Izenberg, and W. E. McClintock, Mercury's weather-beaten surface: Understanding Mercury in the context of lunar and asteroidal space weathering studies, *Space Sci. Rev*., *181*, 121-214, doi:10.1007/s11214-014-0039-5, 2014.

Padovan, S., J.-L. Margot, S. A. Hauck, II, W. B. Moore, S. C. Solomon, The tides of Mercury and possible implications for its interior structure, *J. Geophys. Res. Planets*, *119*, 850-866, doi:10.1002/2013JE004459, 2014.

Korth, H., B. J. Anderson, D. J. Gershman, J. M. Raines, J. A. Slavin, T. H. Zurbuchen, S. C. Solomon, and R. L. McNutt, Jr., Plasma distribution in Mercury's magnetosphere derived from MESSENGER Magnetometer and Fast Imaging Plasma Spectrometer observations, *J. Geophys. Res. Space Physics*, 119, 2917-2932, doi:10.1002/2013JA019567, 2014.

Gershman, D. J., L. A. Fisk, G. Gloeckler, J. M. Raines, J. A. Slavin, T. H. Zurbuchen, and S. C. Solomon, The velocity distribution of pickup He^{+} measured at 0.3 AU by MESSENGER, *Astrophys. J*., *788*, 124, doi:10.1088/0004-637X/788/2/124, 2014.

Whitten, J. L., J. W. Head, B. W. Denevi, and S. C. Solomon, Intercrater plains on Mercury: Insights into unit definition, characterization, and origin from MESSENGER datasets, *Icarus*, *241*, 97-113, doi:10.1016/j.icarus.2014.06.013, 2014.

Winslow, R. M., C. L. Johnson, B. J. Anderson, D. J. Gershman, J. M. Raines, R. J. Lillis, H. Korth, J. A. Slavin, S. C. Solomon, T. H. Zurbuchen, and M. T. Zuber, Mercury's surface magnetic field determined from proton-reflection magnetometry, *Geophys. Res. Lett*., *41*, 4463-4470, doi:10.1002/2014GL060258, 2014.

Lawrence, D. J., W. C. Feldman, J. O. Goldsten, P. N. Peplowski, D. J. Rodgers, and S. C. Solomon, Detection and characterization of 0.5–8 MeV neutrons near Mercury: Evidence of a solar origin, *J. Geophys. Res*. *Space Physics*, *119*, 5150-5171, doi:10.1002/2013JA019037, 2014.

Williams, J. G., A. S. Konopliv, D. H. Boggs, R. S. Park, D.-N. Yuan, F. G. Lemoine, S. Goossens, E. Mazarico, F. Nimmo, R. C. Weber, S. W. Asmar, H. J. Melosh, G. A. Neumann, R. J. Phillips, D. E. Smith, S. C. Solomon, M. M. Watkins, M. A. Wieczorek, J. C. Andrews-Hanna, J. W. Head, W. S. Kiefer, I. Matsuyama, P. J. McGovern, G. J. Taylor, and M. T. Zuber, Lunar interior properties from the GRAIL mission, *J. Geophys. Res. Planets*, *119*, 1546-1578, doi:10.1002/2013JE004559, 2014.

Imber, S. M., J. A. Slavin, S. A. Boardsen, B. J. Anderson, H. Korth, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of large dayside flux transfer events: Do they drive Mercury's substorm cycle?, *J. Geophys. Res. Space Physics*, *119*, 5613-5623, doi:10.1002/2014JA019884, 2014.

Raines, J. M., D. J. Gershman, J. A. Slavin, T. H. Zurbuchen, H. Korth, B. J. Anderson, and S. C. Solomon, Structure and dynamics of Mercury's magnetospheric cusp: MESSENGER measurements of protons and planetary ions, *J. Geophys. Res. Space Physics*, *119*, 6587-6602, doi:10.1002/2014JA020120, 2014.

Gershman, D. J., J. A. Slavin, J. M. Raines, T. H. Zurbuchen, B. J. Anderson, H. Korth, D. N. Baker, and S. C. Solomon, Ion kinetic properties in Mercury's pre-midnight plasma sheet, *Geophys. Res. Lett*., *41*, 5740- 5747, doi:10.1002/2014GL060468, 2014.

Andrews-Hanna, J. C., J. Besserer, J. W. Head III, C. J. A. Howett, W. S. Kiefer, P. J. Lucey, P. J. McGovern, H. J. Melosh, G. A. Neumann, R. J. Phillips, P. M Schenk, D. E. Smith, S. C. Solomon, and M. T. Zuber, Structure and evolution of the lunar Procellarum region as revealed by GRAIL gravity data, *Nature*, *514*, 68-71, doi:10.1038/nature13697, 2014.

Elgner, S., A. Stark, J. Oberst, M. E. Perry, M. T. Zuber, M. S. Robinson, and S. C. Solomon, Mercury's global shape and topography from MESSENGER limb images, *Planet. Space Sci*., *103*, 299-308, doi:10.1016/j.pss.2014.07.019, 2014.

Philpott, L. C., C. L. Johnson, R. M. Winslow, B. J. Anderson, H. Korth, M. E. Purucker, and S. C. Solomon, Constraints on the secular variation of Mercury's magnetic field from the combined analysis of MESSENGER and Mariner 10 data, *Geophys. Res. Lett*., *41*, 6627-6634, doi:10.1002/2014GL061401, 2014.

Slavin, J. A., G. A. DiBraccio, D. J. Gershman, S. M. Imber, G. K. Poh, J. M Raines, T. H. Zurbuchen, X. Jia, D. N. Baker, K.-H. Glassmeier, S. A. Livi, S. A. Boardsen, T. A. Cassidy, M. Sarantos, T. Sundberg, A. Masters, C. L. Johnson, R. M. Winslow, B. J. Anderson, H. Korth, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of Mercury dayside magnetosphere under extreme solar wind conditions, *J. Geophys. Res. Space Physics*, *119*, 8087-8116, doi:10.1002/2014JA020319, 2014.

Anderson, B. J., C. L. Johnson, H. Korth, J. A. Slavin, R. M. Winslow, R. J. Phillips, R. L. McNutt, Jr., and S. C. Solomon, Steady-state field-aligned currents at Mercury, *Geophys. Res. Lett*., *41*, 7444-7452, doi:10.1002/2014GL061677, 2014.

Chabot, N. L., C. M. Ernst, B. W. Denevi, H. Nair, A. N. Deutsch, D. T. Blewett, S. L. Murchie, G. A. Neumann, E. Mazarico, D. A. Paige, J. K. Harmon, J. W. Head, and S. C. Solomon, Images of surface volatiles in Mercury's polar craters acquired by the MESSENGER spacecraft, *Geology*, *42*, 1951-1054, doi:10.1130/G35916.1, 2014.

Freed, A. M., B. C. Johnson, D. M. Blair, H. J. Melosh, G. A. Neumann, R. J. Phillips, S. C. Solomon, M. A. Wieczorek, and M. T. Zuber, The formation of lunar mascon basins from impact to contemporary form, *J. Geophys. Res. Planets*, *119*, 2378-2397, doi:10.1002/2014JE004657, 2014.

Mazarico, E., A, Genova, S. Goossens, F. G. Lemoine, G. A. Neumann, M. T. Zuber, D. E. Smith, and S. C. Solomon, The gravity field, orientation, and ephemeris of Mercury from MESSENGER observations after three years in orbit, *J. Geophys. Res. Planets*, *119*, 2417-2436, doi:10.1002/2014JE004675, 2014.

Miljković, K., M. A. Wieczorek, G. S. Collins, S. C. Solomon, D. E. Smith, and M. T. Zuber, Excavation of the lunar mantle by basin-forming impact events on the Moon, *Earth Planet. Sci. Lett*., *409*, 243-251, doi:10.1016/j.epsl.2014.10.041, 2015.

Ernst, C. M., B. W. Denevi, O. S. Barnouin, C. Klimczak, N. L. Chabot, J. W. Head, S. L. Murchie, G. A. Neumann, L. M. Prockter, M. S. Robinson, S. C. Solomon, and T. R. Watters, Stratigraphy of the Caloris basin, Mercury: Implications for volcanic history and basin impact melt, *Icarus*, *250*, 413-429, doi:10.1016/j.icarus.2014.11.003, 2015.

Ostrach, L. R., M. S. Robinson, J. L. Whitten, C. I. Fassett, R. G. Strom, J. W. Head, and S. C. Solomon, Extent, age, and resurfacing history of the northern smooth plains on Mercury from MESSENGER observations, *Icarus*, *250*, 602-622, doi:10.1016/j.icarus.2014.11.010, 2015.

Klimczak, C., P. K. Byrne, and S. C. Solomon, A rock-mechanical assessment of Mercury's global tectonic fabric, *Earth Planet. Sci. Lett*., *416*, 82-90, doi:10.1016/j.epsl.2015.02.003, 2015.

Weider, S. Z., L. R. Nittler, R. D. Starr, E. J. Crapster-Pregont, P. N. Peplowski, B. W. Denevi, J. W. Head, P. K. Byrne, S. A. Hauck, II, D. S. Ebel, and S. C. Solomon, Evidence for geochemical terranes on Mercury: Global mapping of major elements with MESSENGER's X-Ray Spectrometer, *Earth Planet. Sci. Lett*., *416*, 109-120, doi:10.1016/j.epsl.2015.01.023, 2015.

James, P. B., M. T. Zuber, R. J. Phillips, and S. C. Solomon, Support of long-wavelength topography on Mercury inferred from MESSENGER measurements of gravity and topography, *J. Geophys. Res. Planets*, *120*, 287-310, doi:10.1002/2014JE004713, 2015.

Padovan, S., M. A. Wieczorek, J.-L. Margot, N. Tosi, and S. C. Solomon, Thickness of the crust of Mercury from geoid-to-topography ratios*, Geophys. Res. Lett*., 42, 1029-1038, doi:10.1002/2014GL062487, 2015.

Peplowski, P. N., D. J. Lawrence, L. G. Evans, R. L. Klima, D. T. Blewett, J. O. Goldsten, S. L. Murchie, T. J. McCoy, L. R. Nittler, S. C. Solomon, R. D. Starr, and S. Z. Weider, Constraints on the abundance of carbon in near-surface materials on Mercury: Results from the MESSENGER Gamma-Ray Spectrometer, *Planet. Space Sci*., *108*, 98-107, doi:10.1016/j.pss.2015.01.008, 2015.

Peplowski, P. N., D. J. Lawrence, W. C. Feldman, J. O. Goldsten, D. Bazell, L. G. Evans, J. W. Head, L. R. Nittler, S. C. Solomon, and S. Z. Weider, Geochemical terranes of Mercury's northern hemisphere as revealed by MESSENGER neutron measurements, *Icarus*, *253*, 346-353, doi:10.1016/j.icarus.2015.02.002, 2015.

Murchie, S. L., R. L. Klima, B. W. Denevi, C. M. Ernst, M. R. Keller, D. L. Domingue, D. T. Blewett, N. L. Chabot, C. D. Hash, E. Malaret, N. R. Izenberg, F. Vilas, L. R. Nittler, J. J. Gillis-Davis, J. W. Head, and S. C. Solomon, Orbital multispectral mapping of Mercury with the MESSENGER Mercury Dual Imaging System: Evidence for the origins of plains units and low-reflectance material, *Icarus*, *254*, 287-305, doi:10.1016/j.icarus.2015.03.027, 2015.

Byrnes, J. S., E. E. E. Hooft, D. R. Toomey, D. R. Villagómez, D. J. Geist, and S. C. Solomon, An upper mantle seismic discontinuity beneath the Galápagos Archipelago and its implications for studies of the lithosphere-asthenosphere boundary, *Geochem. Geophys. Geosyst*., *16*, 1070-1088, doi:10.1002/2014GC005694, 2015.

Johnson, C. L., R. J. Phillips, M. E. Purucker, B. J. Anderson, P. K. Byrne, B. W. Denevi, J. M. Feinberg, S. A. Hauck II, J. W. Head III, H. Korth, P. B. James, E. Mazarico, G. A. Neumann, L. C. Philpott, M. A. Siegler, N. A. Tsyganenko, and S. C. Solomon, Low-altitude magnetic field measurements by MESSENGER reveal Mercury's ancient crustal field, *Science*, *348*, 892-895, doi:10.1126/science.aaa8720, 2015.

Lawrence, D. J., B. J. Anderson, D. N. Baker, W. C. Feldman, G. C. Ho, H. Korth, R. L. McNutt, Jr., P. N. Peplowski, S. C. Solomon, R. D. Starr, J. D. Vandegriff, and R. M. Winslow, Comprehensive survey of energetic electron events in Mercury's magnetosphere with data from the MESSENGER Gamma-Ray and Neutron Spectrometer, *J. Geophys. Res. Space Physics*, *120*, 2851-2876, doi:10.1002/2014JA020792, 2015.

Evans, L. G., P. N. Peplowski, F. M. McCubbin, T. J. McCoy, L. R. Nittler, M. Yu. Zolotov, D. S. Ebel, D. J. Lawrence, R. D. Starr, S. Z. Weider, and S. C. Solomon, Chlorine on the surface of Mercury: MESSENGER gamma-ray measurements and implications for the planet's formation and evolution, *Icarus*, *257*, 417-427, doi:10.1016/j.icarus.2015.04.039, 2015.

Gershman, D. J., J. M Raines, J. A. Slavin, T. H. Zurbuchen, T. Sundberg, S. A. Boardsen, B. J. Anderson, H. Korth, and S. C. Solomon, MESSENGER observations of multi-scale Kelvin-Helmholtz vortices at Mercury, *J. Geophys. Res. Space Physics*, *120*, 4354-4368, doi:10.1002/2014JA020903, 2015.

Korth, H., N. A. Tsyganenko, C. L. Johnson, L. C. Philpott, B. J. Anderson, M. M. Al Asad, S. C. Solomon, and R. L. McNutt, Jr., Modular model for Mercury's magnetospheric magnetic field confined within the average observed magnetopause, *J. Geophys. Res. Space Physics*, *120*, 4503-4518, doi:10.1002/2015JA021022, 2015.

Byrne, P. K., C. Klimczak, P. J. McGovern, E. Mazarico, P. B. James, G. A. Neumann, M. T. Zuber, and S. C. Solomon, Deep-seated thrust faults bound the Mare Crisium lunar mascon, *Earth Planet. Sci. Lett*., *427*, 183-190, doi:10.1016/j.epsl2015.06.022, 2015.

DiBraccio, G. A., J. A. Slavin, S. M. Imber, D. J. Gershman, J. M. Raines, C. M. Jackman, S. A. Boardsen, B. J. Anderson, H. Korth, T. H. Zurbuchen, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of flux ropes in Mercury's magnetotail, *Planet. Space Sci*., *115*, 77-89, doi:10.1016/j.pss.2014.12.016, 2015.

Lawrence, D. J., W. C. Feldman, P. N. Peplowski, and S. C. Solomon, The 4 June 2011 neutron event at Mercury: A defense of the solar origin hypothesis, *J. Geophys. Res. Space Physics*, *120*, 5284-5289, doi:10.1002/2015JA021069, 2015.

Dewey, R. M., D. N. Baker, B. J. Anderson, M. Benna, C. L. Johnson, H. Korth, D. J. Gershman, G. C. Ho, W. E. McClintock, D. Odstrcil, L. C. Philpott, J. M. Raines, D. Schriver, J. A. Slavin, S. C. Solomon, R. M. Winslow, and T. H. Zurbuchen, Improving solar wind modeling at Mercury: Incorporating transient solar phenomena into the WSA-ENLIL model with the Cone extension, *J. Geophys. Res. Space Physics*, *120*, 5667-5685, doi:10.1002/2015JA021194, 2015.

Soderblom, J. M., A. J. Evans, B. C. Johnson, H. J. Melosh, K. Miljković, R. J. Phillips, J. C. Andrews-Hanna, J. W. Head III, C. Milbury, G. A. Neumann, F. Nimmo, D. E. Smith, S. C. Solomon, M. M. Sori, C. J. Thomason, M. A. Wieczorek, and M. T. Zuber, The fractured Moon: Production and saturation of porosity in the lunar highlands from impact cratering, *Geophys. Res. Lett*., *42*, 6939-6944, doi:10.1002/2015GL065022, 2015.

Perry, M. E., G. A. Neumann, R. J. Phillips, O. S. Barnouin, C. M. Ernst, D. S. Kahan, S. C. Solomon, M. T. Zuber, D. E. Smith, S. A. Hauck, II, S. J. Peale, J.-L. Margot, E. Mazarico, C. L. Johnson, R. W. Gaskell, J. H. Roberts, R. L. McNutt, Jr., and J. Oberst, The low-degree shape of Mercury, *Geophys. Res. Lett*., *42*, 6951-6958, doi:10.1002/2015GL065101, 2015.

Stark, A., J. Oberst, F. Preusker, K. Gwinner, S. J. Peale, J.-L. Margot, R. J. Phillips, M. T. Zuber, and S. C. Solomon, Mercury's rotational parameters from MESSENGER image and laser altimetry data: A feasibility study, *Planet. Space Sci*., *117*, 64-72, doi:10.1016/j.pss.2015.05.006, 2015.

Stark, A., J. Oberst, F. Preusker, S. J. Peale, J.-L. Margot, R. J. Phillips, G. A. Neumann, D. E. Smith, M. T. Zuber, and S. C. Solomon, First MESSENGER orbital observations of Mercury's librations, *Geophys. Res. Lett*., *42*, 7881-7889, doi:10.1002/2015GL065152, 2015.

Neumann, G. A., M. T. Zuber, M. A. Wieczorek, J. W. Head, D. M. H. Baker, S. C. Solomon, D. E. Smith, F. G. Lemoine, E. Mazarico, T. J. Sabaka, S. J. Goossens, H. J. Melosh, R. J. Phillips, S. W. Asmar, A. S. Konopliv, J. G. Williams, M. M. Sori, J. M. Soderblom, K. Miljković, J. C. Andrews-Hanna, F. Nimmo, and W. S Kiefer, Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements, *Sci. Adv.*, *1*, e1500852, doi:10.1126/sciadv.1500852, 2015.

Gershman, D. J., J. M. Raines, J. A. Slavin, T. H. Zurbuchen, B. J. Anderson, H. Korth, G. C. Ho, S. A. Boardsen, T. A. Cassidy, B. M. Walsh, and S. C. Solomon, MESSENGER observations of solar energetic electrons within Mercury's magnetosphere, *J. Geophys. Res. Space Physics*, 120, 8559-8571, doi:10.1002/2015JA021610, 2015.

Banks, M. E., Z. Xiao, T. R. Watters, R. G. Strom, S. E. Braden, C. R. Chapman, S. C. Solomon, C. Klimczak, and P. K. Byrne, Duration of activity on lobate-scarp thrust faults on Mercury, *J. Geophys. Res. Planets*, *120*, 1751-1762, doi:10.1002/2015JE004828, 2015.

DiBraccio, G. A., J. A. Slavin, J. M. Raines, D. J. Gershman, P. J. Tracy, S. A. Boardsen, T. H. Zurbuchen, B. J. Anderson, H. Korth, R. L. McNutt Jr., and S. C. Solomon, First observations of Mercury's plasma mantle by MESSENGER, *Geophys. Res. Lett*., *42*, 9666-9675, doi:10.1002/2015GL065805, 2015.

Peale, S. J., J.-L. Margot, S. A. Hauck, II, and S. C. Solomon, Consequences of a solid inner core on Mercury's spin configuration, *Icarus*, *264*, 443-455, doi:10.1016/j.icarus.2015.09.024, 2016.

Ho, G. C., R. D. Starr, S. M. Krimigis, J. D. Vandegriff, D. N. Baker, R. E. Gold, B. J. Anderson, H. Korth, D. Schriver, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of suprathermal electrons in Mercury's magnetosphere, *Geophys. Res. Lett*., *43*, 550-555, doi:10.1002/2015GL066850, 2016.

Starr, R. D., C. E. Schlemm II, G. C. Ho, L. R. Nittler, R. E. Gold, and S. C. Solomon, Calibration of the MESSENGER X-Ray Spectrometer, *Planet. Space Sci*., 122, 13-25, doi:10.1016/j.pss.2016.01.003, 2016.

Peplowski, P. N., R. L. Klima, D. J. Lawrence, C. M. Ernst, B. W. Denevi, E. A. Frank, J. O. Goldsten, S. L. Murchie, L. R. Nittler, and S. C. Solomon, Remote sensing evidence for an ancient carbon-bearing crust on Mercury, *Nature Geosci*., *9*, 273-276, doi:10.1038/ngeo2669, 2016.

Baker, D. N., R. M. Dewey, D. J. Lawrence, J. O. Goldsten, P. N. Peplowski, H. Korth, J. A. Slavin, S. M. Krimigis, B. J. Anderson, G. C. Ho, R. L. McNutt, Jr., J. M. Raines, D. Schriver, and S. C. Solomon, Intense energetic electron flux enhancements in Mercury's magnetosphere: An integrated view with high-resolution observations from MESSENGER, *J. Geophys. Res. Space Physics*, *121*, 2171-2184, doi:10.1002/2015JA021778, 2016.

Johnson, C. L., L. C. Philpott, B. J. Anderson, H. Korth, S. A. Hauck, II, D. Heyner, R. J. Phillips, R. M. Winslow, and S. C. Solomon, MESSENGER observations of induced magnetic fields in Mercury's core, *Geophys. Res. Lett*., *43*, 2436-2444, doi:10.1002/2015GL067370, 2016.

Evans, A. J., J. M. Soderblom, J. C. Andrews-Hanna, S. C. Solomon, and M. T. Zuber, Identification of buried lunar impact craters from GRAIL data and implications for the nearside maria, *Geophys. Res. Lett*., *43*, 2445-2455, doi:10.1002/2015GL067394, 2016.

Weider, S. Z., L. R. Nittler, S. L. Murchie, P. N. Peplowski, T. J. McCoy, L. Kerber, C. Klimczak, C. M. Ernst, T. A. Goudge, R. D. Starr, N. R. Izenberg, R. L. Klima, and S. C. Solomon, Evidence from MESSENGER for sulfur- and carbon-driven explosive volcanism on Mercury, *Geophys. Res. Lett*., *43*, 3653-3661, doi:10.1002/2016GL068325, 2016.

Byrne, P. K., L. R. Ostrach, C. I. Fassett, C. R. Chapman, B. W. Denevi, A. J. Evans, C. Klimczak, M. E. Banks, J. W. Head, and S. C. Solomon, Widespread effusive volcanism on Mercury likely ended by about 3.5 Ga, *Geophys. Res. Lett*., *43*, 7408-7416, doi:10.1002/2016GL069412, 2016.

Deutsch, A. N., N. L. Chabot, E. Mazarico, C. M. Ernst, J. W. Head, G. A. Neumann, and S. C. Solomon, Comparison of areas in shadow from imaging and altimetry in the north polar region of Mercury and implications for polar ice deposits, *Icarus*, *280*, 158-171, doi:10.1016/j.icarus.2016.06.015, 2016.

Blewett, D. T., A. C. Stadermann, H. C. Susorney, C. M. Ernst, Z. Xiao, N. L. Chabot, B. W. Denevi, S. L. Murchie, F. M. McCubbin, M. J. Kinczyk, J. J. Gillis-Davis, and S. C. Solomon, Analysis of MESSENGER high-resolution images of Mercury's hollows and implications for hollow formation, *J. Geophys. Res. Planets*, *121*, 1798-1813, doi:10.1002/2016JE005070, 2016.

Poh, G., J. A. Slavin, X. Jia, G. A. DiBraccio, J. M. Raines, S. M. Imber, D. J. Gershman, W.-J. Sun, B. J. Anderson, H. Korth, T. H. Zurbuchen, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER observations of cusp plasma filaments at Mercury, *J. Geophys. Res. Space Physics*, *121*, 8260–8285, doi:10.1002/2016JA022552, 2016.

Chabot, N. L., C. M. Ernst, D. A. Paige, H. Nair, B. W. Denevi, D. T. Blewett, S. L. Murchie, A. N. Deutsch, J. W. Head and S. C. Solomon, Imaging Mercury's polar deposits during MESSENGER's low-altitude campaign, *Geophys. Res. Lett*., *43*, 9461-9468, doi:10.1002/2016GL070403, 2016.

Zuber, M. T., D. E. Smith, G. A. Neumann, S. Goossens, J. C. Andrews-Hanna, J. W. Head, W. S. Kieffer, S. W. Asmar, A. S. Konopliv, F. G. Lemoine, I. Matsuyama, H. J. Melosh, P. J. McGovern, F. Nimmo, R. J. Phillips, S. C. Solomon, G. J. Taylor, M. M. Watkins, M. A. Wieczorek, J. G. Williams, J. C. Jansen, B. C. Johnson, J. T. Keane, E. Mazarico, K. Milkjović, R. S. Park, J. M. Soderblom, and D.-N. Yuan, Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory mission, *Science*, *354*, 438-441, doi:10.1126/science.aag0519, 2016.

Lawrence, D. J., P. N. Peplowski, A. W. Beck, W. C. Feldman, E. A. Frank, T. J. McCoy, L. R. Nittler, and S. C. Solomon, Compositional terranes on Mercury: Information from fast neutrons, *Icarus*, *281*, 32-45, doi:10.1016/j.icarus.2016.07.018, 2017.

Evans, L. G., P. N. Peplowski, E. A. Rhodes, J. O. Goldsten, R. D. Starr, and S. C. Solomon, The MESSENGER Gamma-Ray Spectrometer: Calibration and operations, *Icarus*, *288*, 186-200, doi:10.1016/j.icarus.2017.01.022, 2017.

Denevi, B. W., N. L. Chabot, S. L. Murchie, K. J. Becker, D. T. Blewett, D. L. Domingue, C. L. Ernst, C. D. Hash, S. E. Hawkins, III, M. R. Keller, N. R. Laslo, H. Nair, M. S. Robinson, F. P. Seelos, G. K. Stephens, F. S. Turner, and S. C. Solomon, Calibration, projection, and final image products of MESSENGER's Mercury Dual Imaging System, *Space Sci. Rev*., *214*, 2, 52 pp., doi:10.1007/s11214-017-0440-y, 2018.

Sori, M. M., P. B. James, B. C. Johnson, J. M. Soderblom, S. C. Solomon, M. A. Wieczorek, and M. T. Zuber, Isostatic compensation of the lunar highlands, *J. Geophys. Res. Planets*, *123*, 646-665, doi:10.1002/2017JE005362, 2018.

Evans, A. J., J. C. Andrews-Hanna, J. W. Head III, J. M. Soderblom, S. C. Solomon, and M. T. Zuber, Re-examination of early lunar chronology with GRAIL data: Terranes, basins, and impact fluxes, *J. Geophys. Res. Planets*, *123*, 1596-1617, doi:10.1002/2017JE005421, 2018.

Solomon, S. C., and P. K. Byrne, The exploration of Mercury by spacecraft, *Elements*, *15*, 15-20, doi:10.2138/gselements.15.1.15, 2019.

Genova, A., S. Goossens, E. Mazarico, F. G. Lemoine, G. A. Neumann, W. Kuang, T. J. Sabaka, S. A. Hauck, II, D. E. Smith, S. C. Solomon, and M. T. Zuber, Geodetic evidence that Mercury has a solid inner core, *Geophys. Res. Lett.*, *4*, 3625-3633, doi:10.1029/2018GL081135, 2019.

Klimczak, C., P. K. Byrne, A. M. C. Şengör, and S. C. Solomon, Principles of structural geology on rocky planets, *Can. J. Earth. Sci*., *56*, 1437-1457, doi:10.1139/cjes-2019-0065, 2019.

Nittler, L. R., E. A. Frank, S. Z. Weider, E. Crapster-Pregont, A. Vorburger, R. D. Starr, and S. C. Solomon, Global major-element maps of Mercury from four years of MESSENGER X-Ray Spectrometer observations, *Icarus*, *345*, 113716, doi:10.1016/j.icarus.2020.113716, 2020.

Byrne, P. K., R. C. Ghail, M. S. Gilmore, A. M. C. Şengör, C. Klimczak, D. A. Senske, J. L. Whitten, S. Khawja, R.E. Ernst, and S. C. Solomon, Venus tesserae feature layered, folded, and eroded rocks, *Geology*, *49*, 81-85, doi:10.1130/G47940.1, 2021.

Byrne, P. K., R. C. Ghail, A. M. C. Şengör, P. B. James, C. Klimczak, and S. C. Solomon, A globally fragmented and mobile lithosphere on Venus, *Proc. Natl. Acad. Sci.*, *118*, 32025919118, doi:10.1073/pnas.2025919118, 8 pp., 2021.

Books and Book Chapters

Kaula, W. M., J. W. Head III, R. B. Merrill, R. O. Pepin, S. C. Solomon, D. Walker, and C. A. Wood, editorial committee, *Basaltic Volcanism on the Terrestrial Planets*, Pergamon Press, Elmsford, N.Y., 1286 pp., 1981.

Solomon, S. C., T. J. Ahrens, P. Cassen, A.T. Hsui, J. W. Minear, R. T. Reynolds, N. H. Sleep, D. W. Strangway, and D. L. Turcotte, Thermal histories of the terrestrial planets, in *Basaltic Volcanism on the Terrestrial Planets,* Pergamon Press, Elmsford, N.Y., pp. 1129-1234, 1981.

Solomon, S. C., On the early thermal state of the Moon, in *Origin of the Moon,* edited by W. K. Hartmann, R. J. Phillips, and G. J. Taylor, Lunar and Planetary Institute, Houston, Tex., pp. 435-452, 1986.

Bergman, E. A., and S. C. Solomon, Intraplate stress, in *Encyclopedia of Structural Geology and Plate Tectonics,* edited by C. K. Seyfert, Van Nostrand Reinhold, New York, N.Y., pp. 341-346, 1987.

Delaney, J. R., F. N. Spiess, S. C. Solomon, R. Hessler, J. L. Karsten, J. A. Baross, R. T. Holcomb, D. Norton, R. E. McDuff, F. Sayles, J. Whitehead, D. Abbott, and L. Olsen, Scientific rationale for establishing long-term ocean bottom observatory/laboratory systems, in *Marine Minerals: Advances in Research and Resource Assessment,* edited by P. G. Teleki, M. R. Dobson, J. R. Moore, and U. von Stackelberg, D. Reidel, Dordrecht, Holland, pp. 389-411, https://link.springer.com/chapter/10.1007/978-94-009-3803-8_27, 1987.

Solomon, S. C., Oceanic earthquakes and the tectonic evolution of oceanic lithosphere, in *IV International Conference on Solid Earth Geophysics: A Mission to Planet Earth,* edited by E. Boschi, D. Giardini, and A. Morelli, Il Cigno Galileo Galilei, Rome, pp. 35-70, 1989.

Schubert, G., D. L. Turcotte, S. C. Solomon, and N. H. Sleep, Coupled evolution of the atmospheres and interiors of planets and satellites, in *Origin and Evolution of Planetary and Satellite Atmospheres*, edited by S. K. Atreya, J. B. Pollack, and M. S. Matthews, Univ. Arizona Press, Tucson, Ariz., pp. 450-483, 1989.

Sauber, J., M. Lisowski, and S. C. Solomon, Geodetic measurement of deformation east of the San Andreas Fault in central California, in *Slow Deformation and Transmission of Stress in the Earth,* edited by S. Cohen and P. Vanicek, Geophys. Mon. Ser., *49,* Amer. Geophys. Un., Washington, D.C., pp. 71-86, 1989.

Solomon, S. C., V. L. Sharpton, and J. R. Zimbelman, editors, *Scientific Results of the NASA-Sponsored Study Project* on *Mars: Evolution of Volcanism, Tectonics, and Volatiles*, LPI Tech. Rpt. 90-06, Lunar and Planetary Institute, Houston, Tex., 322 pp., 1990.

Schubert, G., S. C. Solomon, D. L. Turcotte, M. J. Drake, and N. H. Sleep, Origin and thermal evolution of Mars, in *Mars,* edited by H. H. Kieffer, B. M. Jakosky, C. W. Snyder, and M. S. Matthews, Univ. Arizona Press, Tucson, Ariz., pp. 147-183, 1992.

Solomon, S. C., Venus: Geology and geophysics, in *Encyclopedia of Planetary Sciences*, edited by J. H. Shirley and R. W. Fairbridge, pp. 895-904, Chapman & Hall, London, 1997.

Solomon, S. C., and R. L. McNutt, Jr., Looking at Mercury…The MESSENGER mission to Mercury, in *Space Exploration 2007*, edited by B. Harvey, Praxis Publishing, Chichester, U.K., pp. 50-57, 2007.

Solomon, S. C., and R. L. McNutt, Jr., MESSENGER mission, in *McGraw-Hill 2009 Yearbook of Science & Technology*, McGraw-Hill, New York, N.Y., pp. 208-211, 2009.

Hawkins, S. E., III, S. L. Murchie, K. J. Becker, C. M. Selby, F. S. Turner, M. W. Noble, N. L. Chabot, T. H. Choo, E. H. Darlington, B. W. Denevi, D. L. Domingue, C. M. Ernst, G. M. Holsclaw, N. R. Laslo, W. E. McClintock, L. M. Prockter, M. S. Robinson, S. C. Solomon, and R. E. Sterner, II, In-flight performance of MESSENGER's Mercury Dual Imaging System, in *Instruments and Methods for Astrobiology and Planetary Missions XII,* edited by R. B. Hoover, G. V. Levin, A. Y. Rozanov, and K. D. Retherford, paper 74410Z, 12 pp., SPIE Proceedings, vol. 7441, SPIE, Bellingham, Wash., 2009.

Solomon, S. C., Foreword, in T. J. Mahoney, *Mercury*, *A Compendium of the Astronomical Lexicon, Part A: Gazetteer and Atlas of Astronomy, Vol. I: The Terrestrial Planets*, Part 1, Springer, New York, N.Y., pp. xv-xvi, 2014.

Solomon, S. C., L. R. Nittler, and B. J. Anderson, editors, *Mercury: The View after MESSENGER*, Cambridge University Press, Cambridge, U.K., 583 pp., doi:10.1017/9781316650684, 2018.

Solomon, S. C., and B. J. Anderson, The MESSENGER mission: Science and implementation overview, in *Mercury: The View after MESSENGER*, edited by S. C. Solomon, L. R. Nittler, and B. J. Anderson, Cambridge University Press, Cambridge, U.K., pp. 1-29, doi:10.1017/9781316650684, 2018.

Other Scientific Articles

Solomon, S. C., R. W. Ward, and M. N. Toksöz, Earthquake and explosion magnitudes: The effect of lateral variation of seismic attenuation, in *Copies of Papers Presented at Woods Hole Conference on Seismic Discrimination,* Volume 1, Advanced Research Projects Agency, July 20-23, 1970.

Solomon, S. C., R. Van der Voo, and M. A. Chinnery, Introduction to the special issue on "Quantitative Methods of Assessing Plate Motions," *Tectonophysics*, *74* (1-2), pp. vii-viii, doi:10.1016/0040-1951(81)90123-2, 1981.

Head, J. W., S. E. Yuter, and S. C. Solomon, A comparison of the topography of Venus and Earth as a test for the presence of plate tectonics, *Amer. Scientist, 69*, 614-623, https://www.jstor.org/stable/27850712, 1981.

Solomon, S. C., D. L. Anderson, W. B. Banerdt, R. G. Butler, P. M. Davis, F. K. Duennebier, Y. Nakamura, E. A. Okal, and R. J. Phillips, *Scientific Rationale and Requirements for a Global Seismic Network on Mars*, LPI Tech. Rep. 91-02, Lunar and Planetary Institute, Houston, Tex., 51 pp., https://repository.hou.usra.edu/handle/20.500.11753/960, 1991.

Jacobson, R. S., L. M. Dorman, G. M. Purdy, A. Schultz, and S. C. Solomon, Ocean bottom seismometer facilities available, *Eos Trans. Amer. Geophys. Un., 72*, 506, doi:10.1029/90EO00366, 1991.

Silver, P. G., Y. Bock, D. C. Agnew, T. Henyey, A. T. Linde, T. V. McEvilly, J. B. Minster, B. A. Romanowicz, I. S. Sacks, R. B. Smith, S. C. Solomon, and S. A. Stein, A plate boundary observatory, *IRIS Newsletter*, *16* (2), 3-9, 1998.

Solomon, S. C., Return to the iron planet, *New Scientist, 165* (2223), 32-35, 2000.

van der Lee, S., F. Marone, M. van der Meijde, D. Giardini, A. Deschamps, L. Margheriti, P. Burkett, S. C. Solomon, P. M. Alves, M. Chouliaras, A. Eshwehdi, A. Suleiman, H. Gashut, M. Herak, R. Ortiz, J. M. Davila, A. Ugalde, J. Vila, and K. Yelles, Eurasia-Africa plate boundary region yields new seismographic data, *Eos Trans. Amer. Geophys. Un.*, *82*, 637, 645-646, doi:10.1029/01EO00367, 2001.

Silveira, G., S. van der Lee, E. Stutzman, L. Matias, D. James, B. Burkett, M. Miranda, L. Mendes Victor, J. L. Gaspar, L. Senos, S. C. Solomon, J.-P. Montagner, and D. Giardini, Coordinated seismic experiment in the Azores, *ORFEUS Newsletter*, *4* (2), 10, Observatories and Research Facilities for EUropean Seismology, http://www.orfeus-eu.org/newsletter/vol4no2/cosea.html, September 2002.

Santo, A. G., J. C. Leary, M. R. Peterson, R. K. Huebschman, M. E. Goss, R. L. McNutt, Jr., R. E. Gold, R. W. Farquhar, J. V. McAdams, R. F. Conde, C. J. Ercol, S. E. Jaskulek, R. L. Nelson, B. A. Northrop, L. E. Mosher, R. M. Vaughan, D. A. Artis, R. S. Bokulic, R. C. Moore, G. Dakermanji, J. E. Jenkins, T. J. Hartka, D. F. Persons, and S. C. Solomon, MESSENGER: The Discovery-class mission to orbit Mercury, *53rd International Astronautical Congress of the International Astronautical Federation*, paper IAC-02-U.4.1.04, 11 pp., Houston, Tex., October 10-19, 2002.

Gold, R. E., S. C. Solomon, R. L. McNutt, Jr., and A. G. Santo, The MESSENGER spacecraft and payload, *International Astronautical Congress of the International Astronautical Federation*, paper IAC-02-Q.4.1.02, 9 pp., Houston, Tex., October 10-19, 2002.

Solomon, S. C., V. R. Baker, J. Bloxham, J. Booth, A. Donnellan, C. Elachi, D. Evans, E. Rignot, D. Burbank, B. F. Chao, A. Chave, A. Gillespie, T. Herring, R. Jeanloz, J. LaBrecque, B. Minster, W. C. Pitman, III, M. Simons, D. L. Turcotte, and M. L. C. Zoback, Plan for living on a restless planet sets NASA's solid Earth agenda, *Eos Trans. Amer. Geophys. Un.*, *84*, 485, 492, doi:10.1029/2003EO450001, 2003.

Gold, R. E., R. L. McNutt, Jr., S. C. Solomon, and the MESSENGER Team, The MESSENGER science payload, in *Proceedings of the 5th International Academy of Astronautics International Conference on Low-Cost Planetary Missions, Special Publication SP-542*, pp. 399-405, European Space Agency, Noordwijk, The Netherlands, 2003.

McNutt, R. L., Jr., R. E. Gold, S. C. Solomon, J. C. Leary, and D. G. Grant, MESSENGER: A Discovery mission to Mercury, in *Proceedings of the 6th International Academy of Astronautics International Conference on Low-Cost Planetary Missions*, 6th ICLCPM Secretary Office, Sagamihara, Japan, pp. 71-77, 2005.

Leary, J. C., R. W. Farquhar, M. E. Holdridge, R. E. Gold, D. G. Grant, C. C. Hall, J. V. McAdams, R. L. McNutt, Jr., and S. C. Solomon, MESSENGER operations and critical events, in *Proceedings of the 25th International Symposium on Space Technology and Science (Selected Papers)*, Japan Society for Aeronautical and Space Sciences, Tokyo, Japan, pp. 1582-1587, 2006.

McNutt, R. L., Jr., and S. C. Solomon, MESSENGER arrives at Mercury, *The Planetary Report, 28* (5), pp. 12-17, September/October 2008.

McNutt, R. L., Jr., Solomon, S. C., P. D. Bedini, E. J. Finnegan, D. G. Grant, and the MESSENGER Team, The MESSENGER mission: Results from the first two Mercury flybys, *60th International Astronautical Congress*, *International Astronautical Federation*, paper IAC-09-A3.6.2, 9 pp., Daejeon, Republic of Korea, October 12-16, 2009.

Solomon, S. C., Foreword to the special issue of *Planetary and Space Science* on the BepiColombo mission to Mercury, *Planet. Space Sci*., *58*, 1, doi:10.1016/j.pss.2009.10.003, 2010.

McNutt, R. L., Jr., S. C. Solomon, P. D. Bedini, B. J. Anderson, D. T. Blewett, L. G. Evans, R. E. Gold, S. M. Krimigis, S. L. Murchie, L. R. Nittler, L. M. Prockter, R. J. Phillips, J. A. Slavin, M. T. Zuber, E. J. Finnegan, D, G. Grant, and the MESSENGER Team, MESSENGER at Mercury: Early orbital operations, *9th Low-Cost Planetary Missions Conference, International Academy of Astronautics*, 8 pp., Laurel, Md., June 21-23, 2011.

Bedini, P. D., S. C. Solomon, E. J. Finnegan, A. B. Calloway, S. L. Ensor, R. L. McNutt, Jr., B. J. Anderson, and L. M. Prockter, MESSENGER at Mercury: A mid-term report, *62nd Astronautical Congress, International Astronautical Federation*, paper IAC-11.A3.5.1, 13 pp., Cape Town, South Africa, October 3-7, 2011.

McAdams, J. V., S. C. Solomon, P. D. Bedini, E. J. Finnegan, R. L. McNutt, Jr., A. B. Calloway, D. P. Moessner, M. W. Wilson, D. T. Gallagher, C. J. Ercol, and S. H. Flanigan, MESSENGER at Mercury: From orbit insertion to first extended mission, *63rd International Astronautical Congress*, paper IAC-12-C1.5.6, 11 pp., Naples, Italy, October 1-5, 2012.

McNutt, R. L., Jr., S. C. Solomon, L. R. Nittler, P. D. Bedini, E. J. Finnegan, H. L. Winters, D. G. Grant, and the MESSENGER Team, The MESSENGER mission continues: Transition to the extended mission, *63rd International Astronautical Congress*, paper IAC-12-A3.5.1, 15 pp., Naples, Italy, October 1-5, 2012.

Frank, E., M. D. Dyar, S. C. Solomon, S. Curry, J. Helbert, L. Jozwiak, A. Komjathy, S. Krishnamoorthy, E. Lakdawalla, R. Lillis, J. O'Rourke, E. Royer, C. Tsang, C. Voorhees, and C. Wilson, The Thalassa Venus mission concept, *Bull. Amer. Astron. Soc*., *53* (4), 8 pp., doi:10.3847/25c2cfeb.21d0ce48, 2021.

Deutsch, A. N., N. L. Chabot, A. Maiti, A. Luspay-Kuti, A. Kereszturi, A. Lucchetti, A. Virkki, A. Colaprete, A. Vorburger, B. Byron, B. Jones, B. Anzures, B. Butler, C. Schmidt, C. Ernst, C. Grava, C. Klimczak, C. Dong, C. Hamill, C. Hardgrove, D. Blewett, D. Lawrence, D. Hickson, E. Rivera-Valentin, E Costello, E. Mazarico, G. Filacchione, G. Bacon, G, Neumann, H. Susorney, H. Brown, I. Varatharajan, J. Wilson, J. Kloos, J. Head, J. Szalay, J. Steckloff, K. Miller, K. Cannon, K. Luchsinger, L. Rubanenko, L Magana, M. Landis, M. Gritsevich, M. Schneegurt, M. Slade, M. Siegler, M Pajola, M Sarantos, M. J. Poston, M. Sori, M. Delitsky. N. Pinilla-Alonso, N. Schorghofer, P. Prem, P. Byrne, P. Hayne, P. Lucey, P. James, P. Pokorny, R. J. Vervack, Jr., R. Killen, R. Potter, S. C. Solomon, S. Shukla, S. Bhiravarasu, S. Hauck, T. Orlando, T. Stubbs, V. Bickel, V. Eke, and W. Farrell, Science opportunities offered by Mercury's ice-bearing polar deposits, *Bull. Amer. Astron. Soc*., *53* (4), 8 pp., doi:10.3847/25c2cfeb.98885a8e, 2021.

Weber, R., C. R. Neal, R. Grimm, M. Grott, N. Schmerr, M. Wieczorek, J. Williams, B. Banerdt, C. Beghein, P. Chi, D. Currie, S. Dell'Agnello, J. Espley, R. Garcia, I. Garrick-Bethel, H. Haviland, S. Indyk, C. Johnson, T. Kawamura, S. Kedar, P. Lognonné, S. Nagihara, Y. Nakamura, C. Nunn, L. R. Ostrach, M. Panning, N. Petro, M. Siegler, T. Watters, C. Zacny, S. H. Baily, M. Banks, D. Barker, S. Bernhardt, V. Bickel, J. Cahill, J. Clark, D. DellaGiustina, J.-L. Dimech, A. Dombard, C. Elder, L. Elkins-Tanton, M. Eubanks, K. D. Hanna, J. Harms, S. Hauck, L. Hood, J. Hurtado, Jr., S. Jacobson, D. Jha, J. T. Keane, A. Khan, W. Kiefer, M. Knapmeyer, B. Knapmeyer-Endrun, K. Khurana, J. Lorenzo, A Marusiak, P. McGovern, L Montesi, F. Nimmo, D. Phillips, J. Richardson, C. Shearer, K. Soderlund, S. C. Solomon, T. Spohn, E. Stutzmann, S. Tikoo, S. Tursyhev, D. Waller, R. Yamada, and M. Zuber, The scientific rationale for deployment of a long-lived geophysical network on the Moon, *Bull. Amer. Astron. Soc*., *53* (4), 8 pp., doi:10.3847/25c2cfeb.674dcfdf, 2021.

Solomon, S. C., P. K. Byrne, and C. Klimczak, Celâl Şengör and planetary tectonics, in Kitalarin ve okyanuslarin öykülerini yazan adam: Ali Mehmet Celâl Şengör (in Turkish), *Herkese Bilim Teknoloji*, no. 318, p. 6, 28 April 2022.

Scientific Commentaries

Levy, E. H., and S. C. Solomon, The science of planetary exploration, in *The National Research Council in 1979, Current Issues and Studies,* Nat. Acad. Sci., Washington, D.C., pp. 117-137, 1979.

Coleman, P. J., Jr., M. Fuller, R. M. Housley, G. V. Latham, S. K. Runcorn, W. J. Sjogren, S. C. Solomon, and C. P. Sonett, Lunar studies, *Science*, *205*, 1082-1083, doi:10.1126/science.205.4411.1082, 1979.

Solomon, S. C., The geophysics of Mars: Whence the Tharsis plateau?, *Nature, 294*, 304-305, doi:10.1038/294304a0, 1981.

Solomon, S. C., and R. E. Grimm, Tectonic activity on Venus, *Nature*, *331*, 305-306, doi:10.1038/331305a0, 1988.

Solomon, S. C., Lunar geology: Ironing out the wrinkles, *Nature, 342,* 477-478, doi:10.1038/342477a0, 1989.

Solomon, S. C., Oceanic crust: New images for old faults, *Nature, 344,* 816-817, doi:10.1038/344816a0, 1990.

Solomon, S. C., Venus: Keeping that youthful look, *Nature*, *361*, 114-115, doi:10.1038/361114a0, 1993.

Solomon, S. C., Plate tectonics: Stirring times for Mars?, *Nature*, *369*, 606-607, doi:10.1038/369606a0, 1994.

Solomon, S. C., Solar system: A rougher, tougher Moon, *Nature*, *373*, 386-387, doi:10.1038/373386a0, 1995.

Solomon, S. C., Planetary science: An older face for Mars, *Nature, 418*, 27-28, doi:10.1038/418027a, 2002.

Solomon, S. C., Planetary science: Hot news on Mercury's core, *Science, 316*, 702-703, doi:10.1126/science.1142328, 2007.

Award Citations and Responses

Solomon, S. C., G. K. Gilbert Award response, *GSA Today, 10* (3), 31-32, https://www.geosociety.org/gsatoday/archive/10/3/pdf/gt0003.pdf, 2000.

Solomon, S. C., Citation of James W. Head for the 2002 G. K. Gilbert Award, *Planetary Geology Division Newsletter, 20* (2), 8-9, Geological Society of America, Boulder, Colo., 2003.

Solomon, S. C., Citation of Donald W. Forsyth for the 2005 Arthur L. Day Medal, Geological Society of America, http://www.geosociety.org/awards/05speeches/day.htm, 2005.

Solomon, S. C., Harry H. Hess Medal response, *Eos Trans. Amer. Geophys. Un., 87*, 88, https://honors.agu.org/winners/sean-c-solomon/, 2006.

Solomon, S. C., Citation of Maria T. Zuber for the 2007 G. K. Gilbert Award, Geological Society of America, http://www.geosociety.org/awards/07speeches/gilbert.htm, 2007.

Solomon, S. C., Citation of J. Kelly Beatty for the 2009 Robert C. Cowen Award, American Geophysical Union, *Eos Trans. Amer. Geophys. Un*., *90*, 253, https://honors.agu.org/winners/j-kelly-beatty/, 2009.

Solomon, S. C., Citation of Maria T. Zuber for the 2012 Harry H. Hess Medal, American Geophysical Union, *Eos, Trans. Amer. Geophys. Un.*, 94, 10-11, https://honors.agu.org/winners/maria-zuber/, 2013.

Meeting Reports

Solomon, S. C., Planetary interiors, *Geotimes, 22* (5), 16-18, 1977.

Simonds, C. H., P. H. Schultz, and S. C. Solomon, Comparison of Mercury and the Moon: A conference, *Eos Trans. Amer. Geophys. Un., 59*, 43-48, doi:10.1029/EO059i001p00043, 1978.

Solomon, S. C., The internal evolution of Venus and the Galilean satellites, *Nature, 298*, 15-16, doi:10.1038/298015a0, 1982.

Obituaries

Carlson, R. W., J. E. Chambers, and S. C. Solomon, Obituaries: George West Wetherill, *Physics Today*, *59* (10), 80-81, 2006.

Solomon, S. C., Paul G. Silver: Earth deformation, writ large, *Nature Geoscience*, *2*, 679, doi.10.1038/ngeo650, 2009.

Solomon, S. C., Paul G. Silver (1948-2009), *Eos Trans. Amer. Geophys. Un*., *90*, 412, doi:10.1029/2009EO450007, 2009.

Solomon, S. C., and T. H. Jordan, In Memoriam: Paul G. Silver (1948-2009), *Seismol. Res. Lett*., *80*, 938-939, doi:10.1785/gssrl.80.6.938, 2009.

Essays as DTM Director

Solomon, S. C., The Director's introduction, *Year Book 92*, Carnegie Institution of Washington, 105-110, 1993.

Solomon, S. C., The Director's introduction, *Year Book 93*, Carnegie Institution of Washington, 105-109, 1994.

Solomon, S. C., The tectonic evolution of Venus, *Year Book 93*, Carnegie Institution of Washington, 117-126, 1994.

Solomon, S. C., The Director's introduction, *Year Book 94,* Carnegie Institution of Washington, 105-108, 1995.

Solomon, S. C., The Director's introduction, *Year Book 95,* Carnegie Institution of Washington, 47-49, 1996.

Solomon, S. C., The Director's essay: Seismological studies at the Carnegie Institution, *Year Book 96/97,* Carnegie Institution of Washington, 54-61, 1997.

Solomon, S. C., The Director's essay: The stimulus of new ideas and enthusiasms, *Year Book 97/98,* Carnegie Institution of Washington, 58-69, 1999.

Solomon, S. C., The Director's introduction: The ever-whirling wheel of change, *Year Book 98/99,* Carnegie Institution of Washington, 104-107, 2000.

Solomon, S. C., The Director's report: Extending our senses, *Year Book 99/00,* Carnegie Institution of Washington, 60-67, 2001.

Solomon, S. C., The Director's report: The promise of fieldwork, *Year Book 00/01,* Carnegie Institution of Washington, 66-73, 2002.

Solomon, S. C., The Director's report: Worlds beyond the ken of mortal eye, *Year Book 01/02,* Carnegie Institution of Washington, 66-73, 2003.

Solomon, S. C., The Director's report: Real promise of new fruitfulness, *Year Book 02/03*, Carnegie Institution of Washington, 66-73, 2004.

Solomon, S. C., The Director's report: Investigation, research, and discovery, *Year Book 03/04*, Carnegie Institution of Washington, 60-66, 2005.

Essays as AGU President

Solomon, S. C., From the President, *AGU Handbook, Eos, Trans. Amer. Geophys. Un.*, 77 (48), suppl., 1, 1996.

Solomon, S. C., State of the Union, AGU's public outreach programs to expand, *Eos, Trans. Amer. Geophys. Un., 79*, 45, doi:10.1029/98EO00029, 1998.

Solomon, S. C., State of the Union, AGU's evolving national meetings, *Eos, Trans. Amer. Geophys. Un., 79*, 81, 84, doi:10.1029/98EO00054, 1998.

Book Reviews

Solomon, S. C., Book review of *Geophysics of Mars* by R. A. Wells, *Icarus, 49*, 157-158, doi:10.1016/0019-1035(82)90068-9, 1982.

Solomon, S. C., An inside view: Book review of *Planetary Interiors* by W. B. Hubbard, *Nature, 314,* 203, doi:10.1038/314203a0, 1985.

Solomon, S. C., An unusual planet: Book review of *Mercury* by F. Vilas, C. R. Chapman, and M. S. Matthews, *Science, 245,* 82-83, doi:10.1126/science.245.4913.82b, 1989.

Scientific Advisory Committee Strategies

Ocean Science Committee, Ocean Affairs Board, *Understanding the Mid-Atlantic Ridge, A Comprehensive Program*, National Academy of Sciences, 131 pp., 1972.

U.S. Geodynamics Committee, *Continental Drilling, Report of the Workshop on Continental Drilling*, National Academy of Sciences and Carnegie Institution of Washington, 56 pp., 1975.

Committee on Planetary and Lunar Exploration, Space Science Board, *Strategy for Exploration of the Inner Planets: 1977-1987*, National Academy of Sciences, 97 pp., 1978.

Committee on Planetary and Lunar Exploration, Space Science Board, *Strategy for Exploration of Primitive Solar-System Bodies – Asteroids, Comets, and Meteoroids: 1980-1990*, National Academy of Sciences, 83 pp., 1980.

Committee on Earth Sciences, Space Science Board, *A Strategy for Earth Science from Space in the 1980's, Part I: Solid Earth and Oceans*, National Academy of Sciences, 99 pp., 1982.

Joint Working Group on Cooperation in Planetary Exploration, Space Science Board, *United States and Western Europe Cooperation in Planetary Exploration*, National Academy Press, 204 pp., 1986.

RIDGE Steering Committee, Ocean Studies Board, *The Mid-Ocean Ridge — A Dynamic Global System, Proceedings of a Workshop*, National Academy Press, 352 pp., 1988.

Committee on Cooperative Mars Exploration and Sample Return, Space Studies Board, *International Cooperation for Mars Exploration and Sample Return*, National Academy Press, 44 pp., 1990.

The Roadmap Development Team, *Mission to the Solar System: Exploration and Discovery, A Mission and Technology Roadmap*, edited by S. Gulkis, D. S. Stetson, and E. R. Stofan, JPL Publication 97-12, Jet Propulsion Laboratory, 1998.

Solid Earth Science Working Group, *Living on a Restless Planet*, NASA, JPL 400-1040, Jet Propulsion Laboratory, 63 pp., 2002.

Earth Science and Applications from Space Strategic Roadmap Committee, *Exploring Our Planet for the Benefit of Society, NASA Earth Science and Applications from Space Strategic Roadmap*, in *NASA Strategic Roadmap Committees Final Roadmaps*, pp. 2-93, CD, NASA, 2005.

Advisory Committee for Geosciences, *GEO Vision Report: Unraveling Earth's Complexities through the Geosciences*, 44 pp., National Science Foundation, 2009.

Thesis

Solomon, S. C., Seismic-wave attenuation and the state of the upper mantle, Ph.D. thesis, Massachusetts Institute of Technology, Cambridge, Mass., 321 pp., 1971.

ORAL HISTORY INTERVIEWS

Niebur, S., Dr. Sean Solomon, MESSENGER Principal Investigator, Discovery Program Oral History Project, NASA, https://www.nasa.gov/history/history-publications-and-resources/discovery-and-new-frontiers-oral-histories/, Houston, Tex., 22 March 2009.

Zierler, D., Sean Solomon (BS '66), geophysicist and planetary scientist, Featured Oral History Collection: Seismology and Geophysics at Caltech, Caltech Heritage Project, https://heritageproject.caltech.edu/interviews-updates/sean-solomon, 22 April 2022.

ACADEMIC SUPERVISION

Postdoctoral Scientists

Longhi, John	1976-1977
Consolmagno, Guy J.	1980-1982
Bergman, Eric A.	1984-1986
Huang, Paul Y.	1986-1987
Toomey, Douglas R	1987-1990

Grimm, Robert E.	1988
Smrekar, Suzanne E.	1990-1991
Sheehan, Anne F.	1991
Bjarnason, Ingi Th.	1993-1994
VanDecar, John C.	1993-1996
Wolfe, Cecily J.	1994-1997
Johnson, Catherine L.	1995-1998
McGovern, Patrick J.	1996-1999
Hooft, Emilie E. E.	1997-1999
Freed, Andrew M.	1998-2001
Dombard, Andrew J.	2000-2002
Aurnou, Jonathan M.	2000-2002
Hauck, Steven A., II	2001-2003
Weeraratne, Dayanthie S.	2004-2007
Hier-Majumder, Catherine A.	2005-2006
Ruedas, Thomas	2006-2010
Gómez Pérez, Natalia	2007-2010
Klimczak, Christian	2011-2014
Byrne, Paul K.	2011-2014
Evans, Alexander J.	2013-2015
James, Peter B.	2013-2016

Ph.D. theses

Lee, Wook Bae	1977
Richardson, Randall M.	1978
Tréhu, Anne M.	1982
Muller, James L.	1983
Davis, Daniel M.	1983
Bergman, Eric A.	1984
Bratt, Steven R.	1984
Hall, J. Lynn	1985
Yomogida, Kiyoshi	1985
Huang, Paul Y.	1985
Toomey, Douglas R.	1987
Grimm, Robert E.	1988
Sauber, Jeanne M.	1988
Kong, Laura S. L.	1990
Sheehan, Anne F.	1991
Wilcock, William S. D.	1992
Wolfe, Cecily J.	1994
Lee, Sang-Mook	1995
Namiki, Noriyuki	1995
Simons, Mark	1995
McGovern, Patrick J.	1996

S.M. theses

Chapman, Edward D.	1973
Duschenes, Jeremy D.	1976
Burr, Norman C.	1977
Muller, James L.	1982
Blumberg, George M. C.	1987