

Michael E. Wyession
Curriculum Vitae
April, 2008

PRESENT POSITION:

Department of Earth and Planetary Sciences
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Washington University
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Web: <http://epsc.wustl.edu/seismology/michael/web/index.html>

DATE OF BIRTH December 6, 1961**CITIZENSHIP** USA**PLACE OF BIRTH** Jersey City, New Jersey**EDUCATION:**

Ph.D. (Geophysics), Northwestern University, 1991
Sc.B. (Geophysics), Brown University, 1984

ACADEMIC DISTINCTIONS:

IRIS and SSA Distinguished Lectureship, 2005.
NSF Presidential Faculty Fellowship, 1997-2002.
Distinguished Faculty Award, Washington University, 2000.
Innovation Award of the St. Louis Science Academy, 1999.
Washington University's First Residential College Faculty Fellow, 1998-2001.
Kemper Foundation Faculty Award to Improve Learning, 1993, 1999.
Lilly Foundation Teaching Fellowship, 1995.
Packard Foundation Fellowship for Science and Engineering, 1992-1997.
AAAS Mass Media Science and Engineering Fellowship, 1988.
President's Fellowship, Northwestern University, 1986.

PROFESSIONAL EXPERIENCE:

Associate Professor, Washington University, 1997 - present.
Assistant Professor, Washington University, 1991- 1997.
Faculty Member (part-time), University College, Northwestern University, 1989-1991.
Graduate Assistant, Northwestern University, 1986-1991.
High School Math and Physics Teacher, Staten Island (N.Y.) Academy, 1984-1986.

PROFESSIONAL SOCIETIES:

American Association for the Advancement of Science
American Geophysical Union
Geological Society of America
Incorporated Research Institutions for Seismology

National Association of Geoscience Teachers
 Seismological Society of America
 Sigma Xi

RESEARCH INTERESTS: Earthquake seismology, earth structure, mantle-core dynamics, intraplate seismicity, and geophysical education.

PROFESSIONAL ACTIVITIES:

IRIS - Incorporated Research Institutions for Seismology:

Chair, Education and Outreach Committee, 2005-present.
 Meetings and Publications Committee, 2005-present.
 Membership Committee, 2005-present.
 Planning Committee, 2003-5.
 Elections Committee, 2003-2004.
 Legal Affairs Committee, 2004.
 Secretary, Executive Committee, 1998-2001.
 Global Seismic Network Committee, 1998.
 Organizer, IRIS Annual Workshop, Tucson, AZ, June, 2002.
 Co-Facilitator of IRIS Annual Workshop, Yosemite, CA, May, 1999.

EarthScope:

Deep Earth Structure working group, 2008-present.
 Co-Facilitator of NSF EarthScope Workshop, Snowbird, Utah, October, 2001.

CIG - Computational Infrastructure for Geodynamics:

Seismology Working Group, 2005-present.
 Co-Organizer, CIG/SPICE Workshop, Jackson, NH, Oct., 2007.
 Host, Workshop on CIG/EarthScope Seismic Imaging (70 people), Washington University, St. Louis, Oct 31-Nov 2, 2006.
 Steering Committee, 2003-2004.

ESLI – Earth Science Literacy Initiative:

Chair, 2008-present.
 Online workshop organizer, May, 2008.

**NRC-COSG – National Research Council Committee on Seismology and Geodynamics
 (National Academy of Science):**

Vice-Chair, 2007-present.

RIDGE: Education and Outreach Committee, RIDGE 2000, 2006-present.

Consultant, GLOBE proposal for RIDGE 2000 E&O, 2006-present.

NSF – National Science Foundation:

Mathematics-Geophysics Panel member, 2005 and 2007.
 COMPRES Panel member, 2002.

AGU – American Geophysical Union:

Studies of the Earth's Deep Interior Committee (SEDI), 1994-1998 (Chair, 1996-1998).
 Co-editor, *The Core Mantle Boundary Region*, AGU Monograph, 1998.
 Seismology Editor, *Eos*, AGU, 1998-1999.
 Associate Editor, *Journal of Geophysical Research*, AGU, 1994-1996.
 Associate Editor, *Computational Seismology*, AGU, 1992-1994.
 Co-organizer of AGU meeting session on Water in the Deep Mantle, Fall, 2005.
 Organizer of AGU meeting session on the Core-Mantle Boundary, Fall, 2000; Fall, 1998;
 Fall, 1996.

OTCE – On The Cutting Edge:

Co-organizer, Teaching Geophysics in the 21st Century Workshop, Jackson Hole, WY,
 August, 2007.

NAGT – National Association of Geoscience Teachers:

Advisory Board, Building Strong Geoscience Departments, 2007-present.

Prentice Hall, Pearson Education:

Consultant for and author of secondary educational science textbooks, 2001-present.
 Consultant for middle school curriculum development, 2006–present.
 Professional development for high school science teachers, 2003–present.

The Teaching Company:

Author and lecturer for video course (48 half-hour lectures) on “How the Earth Works,”
 2008.

Other Professional Activities:

Board of Advisors, Earth and Planetary Science Letters, 2001-2007.
 Contributor to the "Glossary of Geology," published by the American Geological Institute,
 2003.
 Consultant for Earth Science Museum Exhibits (Smithsonian Institution Natural History
 Museum, American Museum of Natural History (New York), National Geographic).
 Peer reviewer of articles for *Nature*, *Science*, *Journal of Geophysical Research*, *Geology*,
Geophysical Research Letters, *Pure and Applied Geophysics*, *Physics of the Earth and
 Planetary Interiors*, *Earth and Planetary Science Letters*, *Geophysical Journal
 International*, *GSAToday*, *EOS*, and other journals, as well as proposals for the National
 Science Foundation.

INVITED LECTURES AND PRESENTATIONS:

March, 1992	St. Louis University, St. Louis, MO
October, 1992	Brown University, Providence, RI
February, 1993	Illinois University, Champaign-Urbana, IL
July, 1993	Washington University, George Engelmann Math and Science Institute Scholar Research Program
October, 1993	University of South Carolina, Columbia, SC

November, 1993 University of Wisconsin, Madison, WI: Lewis G. Weeks annual endowed lecture

April, 1994 Washington University, Computational Imaging Focus Group

June, 1994 Washington University, Dedication of the Alvin Goldfarb Auditorium

July, 1994 Washington University, George Engelmann Math and Science Institute Scholar Research Program

July, 1994 St. Louis Mensa Society

February, 1995 Scripps Inst., La Jolla, CA: Workshop on the future of Ocean Bottom Seismometers

March, 1995 University of Missouri, Columbia, MO

April, 1995 Washington University, Biochemistry Retreat Invited Keynote Lecture

July, 1995 Washington University, George Engelmann Math and Science Institute Scholar Research Program

December, 1995 Washington University, Century Club Lecture

March, 1996 University of Michigan, Ann Arbor, MI

June, 1996 Incorporated Research Institutions for Seismology (IRIS), Blaine, WA

July, 1996 Institute for Religion in an Age of Science (IRAS), Isle of Shoals, NH

August, 1996 Washington University, University Management meeting

February, 1997 University of Washington, Seattle, WA

March, 1997 Washington University, Arts & Sciences Executive Board

March, 1997 Northwestern University, Evanston, IL

July, 1997 NSF Young Scholars Program, Washington University

October, 1997 Washington University, Alumni Annual Meeting

November, 1997 Washington University, School of Architecture

May, 1998 University of New Mexico, Albuquerque, NM

October, 1998 St. Louis Science Center, St. Louis, MO

February, 1999 St. Louis Zoo, Washington U. Dept. Pediatrics Research Retreat, St. Louis, MO

June, 1999 Junior Academy, Washington University

July, 1999 Junior Academy, Washington University

November, 1999 St. Louis Zoo, St. Louis Science Academy Lecture Series, St. Louis, MO

May, 2000 Washington University, Lifelong Learning Institute

August, 2000 Junior Academy, Washington University

October, 2000 Physics Department, Truman State University, Kirksville, MO

November, 2000 Pew Conference (Keynote Address), Washington University

January, 2001 Dept. Geological Sciences, Illinois University, Champaign-Urbana, IL

February, 2001 Missouri Science Teachers' Conference (Keynote Address), Osage Beach, MO

May, 2001 Eliot Honors Convocation, Washington University

February, 2002 Dept. Earth, Atmospheric, and Planetary Sciences, MIT

April, 2002 Dept., Geological Sciences, Arizona State University

September, 2002 Ocean Mantle Dynamics Workshop, Snowbird, Utah

March, 2003 Structure and Evolution of the Antarctic Plate (SEAP) Workshop, Boulder, Colorado

March, 2003	National Science Teachers Association (NSTA) Conference, Philadelphia, PA
April, 2003	Great-Plains USArray Workshop, Manhattan, Kansas
May, 2003	St. Louis University, St. Louis, MO
May, 2003	Cooperative Institute for Deep Earth Research (CIDER) Workshop, Marshall, CA
September, 2003	150th Anniversary, Washington University
November, 2003	National Science Teachers Association (NSTA) Conference, Kansas City, KS
January, 2004	Computational Infrastructure for Geodynamics Workshop, Los Angeles, CA
April, 2004	National Science Teachers Association (NSTA) Conference, Atlanta, GA
May, 2004	Brown University, Providence, RI
August, 2004	Olathe School District, Olathe, KS
September, 2004	Indiana School Districts, Merrillville, Indianapolis, Jefferson, IN
September, 2004	Carnegie Institute of Geophysics, Washington, DC
October, 2004	EarthScope Workshop, Portland, OR
October, 2004	Northwestern University, Evanston, IL
October, 2004	University of Arkansas, Fayetteville, Arkansas
November, 2004	National Science Teachers Association (NSTA) Conference, Indianapolis, IN
December, 2004	National Science Teachers Association (NSTA) Conference, Richmond, VA
January, 2005	Washington University, Univ. Management Team Meeting
February, 2005	New Mexico Museum of Science and Natural History, Albuquerque, NM
February, 2005	Washington University, EPSc Brownbag
March, 2005	UC Berkeley, Berkeley, CA
March, 2005	St. Louis Public Library, Creve Couer, MO
March/Apr, 2005	National Science Teachers Association (NSTA) Conference, Dallas, TX (2 lectures)
April, 2005	Trinity Presbyterian Church, University City, MO
April, 2005	Washington University Alumni Dinner, New York, NY
May, 2005	Smithsonian Institution, Washington, DC
May, 2005	Maryland Museum of Science, Baltimore, MD
May, 2005	Washington University, Graduation Weekend Alumni Lecture
June, 2005	Houston Science Museum, Houston, TX
June, 2005	Houston Washington U Alumni Association, The Houstonian, Houston, TX
June, 2005	Department of Earth Science, Rice University, Houston, TX
June, 2005	American Museum of Natural History, New York, NY
July, 2005	Washington University, STARS Student Scholar Research Program
July, 2005	Field Museum, Chicago, IL
September, 2005	Arizona Museum of Science, Phoenix, AZ
September, 2005	Science-On-Tap, St. Louis, MO

October, 2005	Washington University Alumni & Development, Public Affairs, and Undergraduate Admission Luncheon, St. Louis, MO
October, 2005	Washington University Alumni Club of St. Louis, St. Louis, MO
October, 2005	St. Louis Science Center, St. Louis, MO
October, 2005	National Science Teachers Assoc. (NSTA) Conference, Hartford, CT
October, 2005	IACA (International Advisory Council on Asia), Shanghai, China
October, 2005	Peking University, Dept. of Geophysics, Beijing, China
November, 2005	New York Science Teachers Conference, Ellenville, NY
November, 2005	National Science Teachers Assoc. (NSTA) Conference, Chicago, IL
November, 2005	Denver Museum of Nature and Science, Denver, CO
November, 2005	Washington University, Lifelong Learning Institute
November, 2005	National Science Teachers Assoc. (NSTA) Conference, Nashville, TN
January, 2006	Yale University, Dept Geology and Geophysics, New Haven, CT
February, 2006	SUNY Stony Brook, Dept of Geosciences, Stony Brook, NY
April, 2006	National Science Teachers Assoc. (NSTA) Conference, Anaheim, CA
May, 2006	Washington University, Graduation Weekend Alumni Lecture
June, 2006	The Teaching Company, Chantilly, VA
July, 2006	Washington University, Regional Secretary Board Meeting
August, 2006	Institute for Religion in an Age of Science, Star Island, New Hampshire
September, 2006	University of Minnesota, Department of Geology and Geophysics, Minneapolis, MN
October, 2006	St. Louis Science Center, St. Louis, MO
October, 2006	Washington University, Eliot Society
October, 2006	California Science Teachers Association (CSTA) Conference, San Francisco, CA
October, 2006	IRIS Seismology Workshop, Geological Society of America Annual Meeting, Philadelphia, PA
November, 2006	National Science Teachers Assoc. (NSTA) Conference, Baltimore, MD
December, 2006	National Science Teachers Assoc. (NSTA) Conference, Salt Lake City, UT
March, 2007	National Science Teachers Assoc. (NSTA) Conference, St. Louis, MO (5 lectures: NESTA, EarthScope, IRIS (2), Prentice Hall)
April, 2007	St. Louis City High School Science Teachers Professional Development
May, 2007	Washington University, Reunion College
August, 2007	COMPRES sponsored VLAB (Virtual Laboratory for Earth and Planetary Materials) Conference, Univ. Minnesota, Minneapolis, MN
August, 2007	Teaching Geophysics Workshop, On the Cutting Edge, Jackson Hole, WY
September, 2007	Keynote Address, Society of Exploration Geophysics, San Antonio, TX
October, 2007	National Science Teachers Assoc. (NSTA) Conference, Detroit, MI
November, 2007	Washington Alumni Canary Islands Cruise (3 lectures).

December, 2007	National Science Teachers Assoc. (NSTA) Conference, Birmingham, AL
March, 2008	National Science Teachers Assoc. (NSTA) Conference, Boston, MA
April, 2008	Maryland High School Science Teachers Professional Development, Greenbelt, MD
April, 2008	Linda Hall Endowed Lecture, Kansas City, KS
August, 2008	Smithsonian lectures on Art&Science (with art historian Mariana Carpinisan), Washington, DC

FUNDING (since 1992):

- NSF: EarthScope EAR-0544731: "Seismic Travel Times and Attenuation Measurements: An EarthScope Data Product;" 2006-2009, \$215,135. (Current)
- NSF: IRIS Undergraduate Internship, 2005-2006, \$5,765.
- NSF-EAR-0207751: "Mapping Small-Scale Structure Above the Core-Mantle Boundary"; 2002-2007, \$300,000.
- NSF-EAR-0207737: "Acquisition of a New Geophysics Computer System" (Co-PI with D. Wiens); 2002-2006, \$96,999.
- NSF-EAR-9629018: Presidential Early Career Award for Science and Engineering; 1997-2003, \$500,000.
- NSF-EAR-9903260: "Collaborative Research: The Florida to Edmonton Broadband Seismic Deployment" (with K. Fischer); 2001-2004, \$157,072.
- NSF-REU-9903260: "Research Experience for Undergraduates, Supplement to NSF Collaborative Research: The Florida to Edmonton Broadband Seismic Deployment"; 2001, \$5,000.
- NSF-MRI-9977670: "Acquisition of a Parallel Computer for Research and Research Training in Science at Washington University" (PI: W.-M. Suen; Co-PIs - C. Bernard, B. Pickard, M. Wickerhauser, M. Wyssession); 1999-2003; \$1,208,403.
- David and Lucille Packard Fellowship for Science and Engineering; 1992-1997, \$500,000.
- Kemper Faculty Grant to Improve Learning; (with U. Goodenough and C. Bernard) 1999-2000, \$16,006.
- NSF-EAR-9614199: "Upgrade of Computational Facilities for Seismology Research" (with D. Wiens, D. Zhao, G. Al-eqabi, and P. Shore); 1996; \$36,203.
- NSF-EAR-9417542: "Seismic Studies of the Lowermost Mantle and Core-Mantle Boundary"; January 1, 1995 to December 31, 1996; \$80,451.
- NSF-EAR-9417494: "Acquisition of an Erasable Optical Jukebox for Analysis of Seismic Data" (with D. Wiens); 1995; \$27,401.
- NSF-EAR-9319324: "The Missouri to Massachusetts Broadband Seismometer Deployment: Collaborative Studies of Mantle Structure"; June 1, 1994 to December 31, 1996; \$79,267 (total of \$366,603 including Brown Univ. and Univ. of Illinois parts).
- NSF-REU-Supplement: "Research Experience for Undergraduates, Supplement to NSF MOMA Project", July 1, 1994 to December 31, 1996; \$30,369.
- NSF-EAR-9205368: "Diffracted wave studies of the structure of the core-mantle boundary"; July 1, 1992 to June 31, 1994; \$110,000.
- NSF-DUE-9455417: "Educational Earthquake Visualization": April 15, 1995 to April 15, 1998; \$138,133.

NSF-EAR-9712311: "CSEDI Collaborative Laboratory, Seismological, & Geodynamical Study of the Transition Zone Within and Near Subducting Slabs": July 1, 1997 to June 30, 1999; \$199,000 (Co-PIs: A. Hofmeister, R. Phillips, D. Wiens, D. Zhao).

Kemper Faculty Grant to Improve Learning; 1993-1994, \$11,500.

Lilly Teaching Fellowship, 1995-1996, \$6,500.

Pew Midstates: Undergraduate Student Research Assistance; June 1, 1992 to May 31, 1993; \$7,122.

W. M. Keck Foundation: Planetary geodynamics equipment purchases (P.I. – R. Arvidson, Washington University); June, 1992; \$230,000.

Washington University Research Grant: Purchase of Broadband seismometer (with D. Wiens); 1993; \$32,000.

STUDENTS SUPERVISED AND CO-SUPERVISED:

Ghassan Al-Eqabi: Post-Doctoral Assistant, 2/95 - present.

Saadia Baqer: Post-Doctoral Assistant, 10/97 - 6/02.

An-Ning Zhu: Post-Doctoral Assistant, 6/93 - 5/95.

Graduate Students:

David Heeszal: Graduate Student, 1/07 – present.

Garrett Euler: Graduate Student, 1/05 – present.

Jesse Fisher Lawrence: Ph.D., 8/94.

Keith Koper: Ph.D., 8/98.

Raul Valenzuela Wong: Ph.D., 12/96.

Other graduate students partially advised with research (Jacob Lesgold, Lilla Bartkó, Stacey Robertson, Brian White, Moira Pyle).

Undergraduate Students Advised in Research:

Brittany Huhmann: 09/07 – present; Hesham Humbazazza: 09/05 – 6/06; Tara Mayeau: 06/05 – 08/05; Eboni Collins: 09/03 – 5/05; Scott Parton: 09/03 - 12/04; Kurt Solander: 05/02 - 8/03; Jessica Lin: 09/02 - 05/02; Emily Carter: 8/02 - 5/03; Juliana Rakosky: 6/02 - 8/02; Tracy Portle: 5/02 - 6/02, 5/03-8/03; Rakhi Kasat: 9/00 - 5/01; Laquesha Andrews: 9/00 - 5/01; Paul Geisting: 6/00 - 9/00; Brian Yanites: 5/99 - 8/01; Tim Huff: 5/99 - 5/00; Megan Murphy: 8/98 - 7/02; Itai Gurari: 5/98 - 5/00; Ranjini Mahinda: 8/97 - 5/99; Jared Leavitt: 9/97 - 5/98; Amy Langenhorst: 6/97 - 9/97, and 6/98 - 9/98; Jacob Owen: 5/97 - 8/97, and 5/98 - 8/98; Jeffrey Watts: 5/97 - 8/97; Mason Mitchell-Daniels: 8/96 - 5/97; Chris Wolpert: 6/96 - 8/96; Jeremy Voligny: 1/96 - 6/96; Manjali Gupta: 8/95 - 6/96; Brian Murray: 6/95 - 8/97; Martha Neustadt: 3/95 - 8/96; Andrew Hovland: 8/94 - 6/95; Brian Hicks: 8/93 - 8/95; Rachel Sakata: 8/93 - 6/95; Jessica Butler: 11/92 - 9/94; Diane Pietrzak: 9/92 - 5/93; Joyce Wilson, 1992; Lilla Bartkó, 1992.

COURSES TAUGHT:

Physical Geology - EPSc 119A (Fall-1991).

*Ring of Fire: Earthquakes, Volcanoes, and Plate Tectonics - EPSc 130A (Fall-1993; Fall-1994; Fall-1997; Fall-2006)

*Evolution of the Earth - EPSc 200A (Spring-1993; Fall-1996; Fall-1998; Fall-2000; Fall-2001; Fall-2002)

- *Earth and the Environment - EPSc 201 (Fall-2004; Fall-2006)
- *Epic of Evolution - Biol/EPSc/Phys 210A (Spring-2000; Spring-2001; Spring-2002; Spring-2003, Spring-2005, Spring-2006, Spring-2008, with C. Bernard and U. Goodenough)
- Earth Forces – EPSc 353 (Spring-2006; Spring-2008, with D. Wiens)
- Introduction to Geophysics - EPSc 450 (Fall-1992; Fall-1995, with D. Wiens)
- **Introduction to Seismology - EPSc 452 (Spring-1997, with D. Wiens; Spring-1998; Spring-2000; Spring-2002; Fall-2003; Fall-2005; Fall-2007)
- *Interior of the Earth - EPSc 453 (Spring-1992; Spring-1994, with R. Phillips; Spring-1999, Spring-2001, Spring-2003, with D. Wiens; Spring-2005)
- Undergraduate Research Seminar - EPSc 498 (Fall-2003, with R. Phillips)
- Geodynamics - EPSc 559 (Spring-1994, with R. Phillips; Spring-1997, with D. Wiens; Spring-2004)
- *Advanced Seismology - EPSc 561 (Fall-1995, with D. Wiens)
- Geophysics Seminar - EPSc 595 (Fall-1991, with D. Wiens; Fall-1992, with D. Wiens)
- *Topical Seminar in Geosciences - EPSc 597 (Spring-1998, with L. Haskin; Spring-1999, with R. Dymek)

(* - Designed or co-designed the course)

(** - Used my own textbook)

WASHINGTON UNIVERSITY AND EPSC RESPONSIBILITIES:

- Faculty Representative to the Graduate Council, 1992 - 1993
- EPSc Departmental Undergraduate Advisor, 1991-1997
- EPSc Pew Midstates Consortium Representative, 1991- present
- EPSc Undergraduate Program Development and Advising Committee, 1991- present (Chair, 1991-1997)
- EPSc Curriculum and Teaching Committee Member, 1991- present
- EPSc United Way Representative, 1991- 1993
- EPSc Tolman Fellowship Development, 1992
- EPSc Graduate Recruitment, 1998 - 2001 (Chair); 2006 – present (Chair)
- EPSc Computers and Data Management Committee, 2001 – 2005
- EPSc Graduate Student Advisor, 2004 - 2005

- University Freshman Advisor; 1992-1993
- University Compton Scholar Selection Committee; 1992 - 1993
- University Secondary Education Certification Evaluation Committee, 1992-1993
- University Course Evaluation Task Force, 1995
- University Mathematics Task Force, 1995
- University Witherspoon Search Committee, 1996
- University Undergraduate Brochure Committee, 1996
- University Natural Sciences Curriculum Committee, 1996-1997
- University Special Major Committee, 1997 - 1999
- University Disabled Students Committee, 1997
- University Undergraduate Council, 1997- 1999
- University Undergraduate Council (Steering Committee), 1998 - 1999

Chair, University UC Information Dissemination Committee, 1998 - 1999
 University Disabled Students Committee, 1997
 University's First Resident Faculty Fellow, 1998 - 2001
 University Residential College Associates Team, 1998 - 2001
 University Four-Year Undergraduate Advisor, 1999 - 2004
 University Undergraduate Teacher Preparation Board, 1998 - present
 University Supercomputer Advisory Committee, 1999 - 2003
 University Cluster Convener for clusters CL1600, 1777, 1801, 2002 - present
 University Discrimination and Title IX Grievance Committee, 2004-present
 University Speakers' Bureau, 2004-2006

CURRENT COMMUNITY SERVICE

St. Louis Science Center Advisory Board, 2002 - present
 Clayton City School District Science Advisory Board, 2001 – present
 Volunteer lecturing, Captain Elementary School, Clayton, MO

ABSTRACTS:

- Kuo, B. Y., D. W. Forsyth and M. E. Wysession, Azimuthal anisotropy in the upper mantle beneath the North Atlantic from *SS-S* differential travel times, *Eos Trans. AGU*, 67, 1113, 1986.
- Wysession, M. E. and E. A. Okal, Modal synthetics for diffracted *SH*: evidence for a high-velocity zone at the base of the mantle, *Eos Trans. AGU*, 68, 357, 1987.
- Kuo, B. Y., D. W. Forsyth and M. E. Wysession, Shear-wave splitting and determination of azimuthal anisotropy for the North Atlantic upper mantle from *SS-S* differential travel times, *Eos Trans. AGU*, 68, 360, 1987.
- Wysession, M. E. and E. A. Okal, Limits on the *SH* and *P* velocity structure at the base of the mantle from diffracted ray slownesses, *Eos Trans. AGU*, 68, 1494, 1987.
- Forsyth, D. W., B. Y. Kuo, E. M. Lavelly, M. E. Wysession and P. Friedmann, Lateral heterogeneity and azimuthal anisotropy in the mantle from *SS-S* and *ScS* differential travel times, XIX General Assembly of the International Union of Geodesy and Geophysics, 47, 1987.
- Wysession, M. E., and E. A. Okal, Heterogeneity in the *P* velocity structure of *D''* from diffracted ray slownesses, *Eos Trans. AGU*, 70, 390, 1989.
- Wysession, M. E., and E. A. Okal, Using diffracted rays to determine the lateral heterogeneity of the *SH* and *P* velocity structures of *D''*, Abs. 25th Gen. Assemb. Int. Assoc. Seis. Phys. of the Earth's Int. (IASPEI), Istanbul, Turkey, 81, 1989.
- Wysession, M. E., E. A. Okal and K. L. Miller, Historical Seismicity in the Pacific basin, *Eos Trans. AGU*, 70, 1202, 1989.
- Wysession, M. E., E. A. Okal and K. L. Miller, Implications of Pacific Basin intraplate Seismicity, *Eos Trans. AGU*, 71, 561, 1990.
- Okal, E. A., and M. E. Wysession, Intraplate seismicity of the Pacific Basin: the contribution of swarms, *Eos Trans. AGU*, 71, 561, 1990.
- Wysession, M. E., and E. A. Okal, Intraplate seismicity in the Pacific Basin, 1913-1988, Trans. of Western Pacific Geophysics Meeting, Kanazawa, Japan, *Eos Trans. AGU*, 71, 902, 1990.

- Wyession, M. E., and E. A. Okal, Seismicity along the southern segment of the Pacific-Australian plate boundary, Trans. of Western Pacific Geophysics Meeting, Kanazawa, Japan, *Eos Trans. AGU*, 71, 903, 1990.
- Wyession, M. E., C. R. Bina, and E. A. Okal, Diffracted waves, Poisson ratios, and thermal gradients at the base of the mantle, *Eos Trans. AGU*, 71, 1290, 1990.
- Wyession, M. E., C. R. Bina, and E. A. Okal, Constraints on the temperature and composition of the base of the mantle, XX General Assembly of the International Union of Geodesy and Geophysics, 1991.
- Wyession, M. E., Coupling between the mantle and core beneath Indonesia, implied from teleseismic body waves, *Eos Trans. AGU*, 73, 202, 1992.
- Wyession, M. E., A multi-disciplinary field trip to the core-mantle boundary beneath Indonesia, Proc. of 4th Ann. Workshop for Inc. Res. Inst. Seis. (IRIS), Santa Fe, NM, 1992. (INVITED)
- Valenzuela, R. W., and M. E. Wyession, Intraplate seismicity of the Southern Tasman Sea and its relation to the Macquarie Ridge Complex, *Eos Trans. AGU*, 73, 399, 1992.
- Valenzuela, R. W., and M. E. Wyession, Identification and examination of intraplate seismicity in the pacific ocean region of the Australian plate, *Seism. Res. Lett.*, 64, 23, 1993.
- Wyession, M. E., and L. Bartkó, Investigating the core-mantle boundary under the Southwest Pacific with ScS and sScS phases, *Eos Trans. AGU*, 74, 50, 1993. (INVITED)
- Wilson, J., L. Bartkó, and M. E. Wyession, Teleseismic intraplate seismicity in the Atlantic Ocean Basin, 1918-1990, *Eos Trans. AGU*, 74, 284, 1993.
- Wyession, M. E., and P. Shore, Time-varying visualization of seismic shear energy transmitted through the whole Earth using torsional normal mode summation, *Eos Trans. AGU*, 74, 214, 1993.
- Wiens, D. A., M. P. Flanagan, A.-N. Zhu, L. Reiser Wetzell, J. J. McGuire, M. E. Wyession, and P. J. Shore, Seismological studies of the Tonga subduction zone and Lau back-arc basin, Proc. of 5th Ann. Workshop for Inc. Res. Inst. Seis. (IRIS), Hawaii, 1993.
- Wyession, M. E., Seismic variations at the base of the mantle: Anti-continentals at the core-mantle boundary, Proc. of Packard Foundation Symposium, Monterey, 1993. (INVITED)
- Wyession, M. E., Lateral scales of heterogeneity at the base of the mantle, *Eos Trans. AGU*, 74, 415, 1993. (INVITED)
- Wyession, M. E., P. J. Shore, and J. Lesgold, The role of core-mantle boundary diffraction in the propagation of shear waves through the whole mantle: A video visualization, *Eos Trans. AGU*, 74, 406, 1993.
- Valenzuela, R. W., J. L. Butler, and M. E. Wyession, Velocity structure at the core-mantle boundary from digital diffracted shear waves, *Eos Trans. AGU*, 74, 406, 1993.
- Wyession, M. E., Structures at the base of the mantle as keys to mantle dynamics, Proc. of 1994 IASPEI Meeting, Wellington, New Zealand, 1994. (INVITED)
- Wyession, M. E., R. W. Valenzuela, E. A. Okal, and F. Tajima, Intraplate seismicity in the Southwest Pacific, Proc. of 1994 IASPEI Meeting, Wellington, New Zealand, 1994. (INVITED)

- Wyssession, M. E., R. W. Valenzuela, and A.-N. Zhu, Investigation the base of the mantle using differential travel times: *PcP-P*, *PKP-Pdiff*, *ScS-S*, *sScS-sS*, and *Sdiff*, Proc. of 1994 IASPEI Meeting, Wellington, New Zealand, 1994.
- Okal, E. A., and M. E. Wyssession, Historical intraplate earthquakes, SUBCON Subduction Conference, Catalina Island, CA, 1994. (INVITED)
- Wyssession, M. E., Non-subduction zone seismicity in the ocean basins, SUBCON Subduction Conference, Catalina Island, CA, 1994 (abstract only). (INVITED)
- Wyssession, M. E., Imaging cold material at the base of the mantle: the possible fate of slabs?, SUBCON Subduction Conference, Catalina Island, CA, 1994. (INVITED)
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