

BIOGRAPHICAL SKETCH

SPAHR C. WEBB

Lamont–Doherty Earth Observatory,
Columbia University, Palisades, N.Y. 10964
Tel: 914–365–8439, Fax: 914–365–8150
email: scw@ldeo.columbia.edu

Profession Preparation:

B.S. 1978, Massachusetts Institute of Technology, Physics, and Earth and Planetary Science
Ph.D. 1984, University of California, San Diego, Oceanography

Professional Appointments:

2000–Present Senior Research Scientist, Lamont–Doherty Earth Observatory,
Columbia University, Palisades, N.Y.
2000–Present Adjunct Professor, Department of Earth and Environmental Science,
Columbia University, New York, NY
1997–2000 Research Oceanographer, Scripps Institution of Oceanography,
University of California, San Diego, La Jolla, CA.
1993–1997 Associate Research Oceanographer, Scripps Institution of Oceanography,
University of California, San Diego, La Jolla, CA
1986–1993 Assistant Research Oceanographer, Scripps Institution of Oceanography,
University of California, San Diego, La Jolla, CA.
1984–1986 Postdoctoral Scholar, Woods Hole Oceanographic Institution,
Woods Hole, MA.

Research Activities:

Broad band marine seismology.
Structure of the oceanic crust and mantle.
Seismicity of ridge crests and ridge crest hydrothermal systems.
Seafloor electromagnetic fluctuations and active source electromagnetic sounding of rock conductivity.
Marine instrumentation for geophysical and oceanographic applications.

Professional Societies:

American Geophysical Union, Seismological Society of America.

Research Cruises:

Sixty–seven research cruises or engineering tests since 1986, Cruises (Webb group) in 2000: February. (ship: Melville), San Diego to Manzanillo, active source electromagnetic sounding (MOSES) using deployed magnetometer array (20 OBM) and vertical electrical dipole. Extensive compliance measurements between 9–03, 9–50N, EPR (EM w/Evans, Comp w/Crawford). February, (ship: Eiwng), Littleton–Suva, recovery of Woodlark OBS array.

Graduate Students Supervised:

Mark A. Mc Donald, Ph.D 1994, Wayne C. Crawford, Ph.D 1994, Robert A. Sohn, Ph.D 1996, Robert Prescott, Charles Golden Ph.D. 2000.

Postdoctoral Associates: Vallerie Ballu (IPGP)

Recent Scientific Collaborators: Ph.D Supervisor: Charles S. Cox (SIO)
R. Nigel Edwards (U Toronto), Robert Evans (WHOI), Douglas Wiens (Washington U.), Don Forsyth (Brown), W.S. Wilcock (UW), John Hildebrand (SIO).

Synergistic Activities:

The ocean bottom seismometer systems developed in this lab form the basis for the new Lamont Doherty OBS instrument Pool, a fleet of 64 seismic instruments available to any NSF funded researcher for long duration, passive seismic experiments. This fleet represents a unique new resource within the seismic research community.

Related Publications:

Webb, S.C., and D.W. Forsyth, Structure of the upper mantle under the EPR from waveform inversion of regional events, *Science*, 280, 1227–1229, (1998).
Forsyth, D.W. and S.C. Webb, L.M. Dorman, and Y. Shen, Phase velocities of Rayleigh waves in the MELT experiment on the East Pacific Rise, *Science*, 280, 1235–1238, (1998).
Zhao, D.P., Y. Xu, D.A. Wiens, L.M. Dorman, J.A. Hildebrand, and S.C. Webb, Depth extent of the Lau back-arc spreading center and its relation to subduction processes, *Science*, 278, 254–257, (1997).
Smith, G.P., D.A. Wiens, K.M. Fischer, L.M. Dorman, S.C. Webb, and J.A. Hildebrand, A complex pattern of mantle flow in the Lau backarc, *Science*, 292, 713–716, (2001).
Gilbert, H.J., A.F. Sheenan, D.A. Wiens, L. Dorman, J. Hildebrand, and S.C. Webb, Upper mantle discontinuity structure in the region of the Tonga subduction zone, *Geophys. Res. Lett.*, 28(9), 1855–1858, (2001).

Other Significant Publications:

Webb, S.C. "Broadband seismology and noise under the ocean", *Rev. of Geophysics*, 36, 105–142., (1998).
Webb, S.C. and W.C. Crawford, Long period seafloor seismology and deformation under ocean waves, *Bull. Seismo. Soc. Amer.*, 89(6), 1535–1542, (1999).
Sohn, R.A., D.J. Fornari, K.L. VonDamm, J.A. Hildebrand, S.C. Webb, Seismic, thermal, and chemical evidence for a propagating hydrothermal cracking event on the East Pacific Rise, (9° 50'N), *Nature*, 396, 159–161, (1998).
Wilcock, W.S., S.C. Webb, and I. Bjarnason, The effect of local wind on seismic noise near 1 Hz, and local wind at the MELT site and on Iceland, *Bull. Seismo. Soc. Amer.*, 89(6), 1543–1557, (1999).
Crawford, W.C., S.C. Webb and J.A. Hildebrand, Constraints on melt in the lower crust and Moho at the East Pacific Rise, 9°48'N, using seafloor compliance, *J. Geophys. Res.*, 104(B2), 2923–2939, (1998)