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**PROFESSIONAL EXPERIENCE**

- 2103 - Present      **Senior Scientist (Affiliate), NOAA Pacific Marine Environmental Laboratory**
- \* Provides scientific, technical, and science program administrative expertise to the laboratory Director and the Leader of the Ocean Environmental Research Division.
  - \* Provides scientific and programmatic guidance for the Directors of the Laboratory's NOAA Center for Tsunami Research, Earth Oceans Interactions, and Acoustics programs.
  - \* Serves as a liaison between Division programs, senior staff of the NOAA Office of Ocean and Atmospheric Research, OAR sponsoring programs, and other NOAA line offices.
- 2013 - Present      **Senior Scientist (Affiliate), NOAA Office of Ocean Exploration and Research**
- \* Provides scientific, technical, as well as science program administrative expertise and guidance to the Director, Deputy Director, and the Office's science, operational, outreach, and education staffs.
  - \* Serves as the liaison between the Office and the NOAA Pacific Marine Environmental Laboratory in support of their Memorandum of Agreement.
  - \* Serves as a liaison between the Office and external organizations that support the Office's ocean exploration mission, including the Global Foundation for Ocean Exploration and the Nautilus Science Advisory Board.
- 1984 - 2013      **Supervisory Oceanographer, Division Leader and Program Director, Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (NOAA).**
- \* Directed interdisciplinary global oceanic exploration and research program, Vents, which addresses large-scale oceanographic, biological, and climatic impacts of submarine volcanic and hydrothermal activity. A principal focus of the program is interdisciplinary research at NeMO, a long-term seafloor observatory established, in part, to understand and provide access to the deep microbial biosphere. NeMO is co-located with the NSF/OOI cabled observatory.
  - \* Was responsible for administration of NOAA's Center for Tsunami Research. The Center is a principal partner in the National Tsunami Hazard Mitigation Program, a

collaborative program between NOAA, FEMA, USGS, Hawaii, Alaska, Oregon, Washington, and California. The Center is also responsible for developing tsunami and inundation forecasting methods and models for the NOAA Weather Service's West Coast and Alaska Warning Center and Pacific Tsunami Warning Center.

- \* Was responsible for administration of NOAA's interdisciplinary research program, EcoFOCI, a fisheries oceanography coordinated investigations partnership with NOAA National Marine Fisheries Service. The program incorporates physical oceanographic and marine biological time series data that help understand the natural variability of commercially important Bering Sea and Gulf of Alaska fisheries.
- \* Managed and supervised approximately 65 scientists and support staff and coordinated collaboration with 30-40 scientists from major US oceanographic institutions and foreign countries. Was responsible for an annual Division budget of between \$15M-\$20M.
- \* Advocated for program funding as well as provided science-based funding justification perspectives for NOAA senior management, the U.S. Congress, and national and international ocean exploration and research funding agencies.
- \* Advocated and facilitated development of new marine technologies and the innovative use of unconventional marine technology assets.
- \* Initiated and maintained support for acoustic monitoring of extensive regions of the Pacific Ocean basin using real-time data from the US Navy's underwater sound surveillance system, SOSUS.
- \* Served as Chief Scientist for NOAA interdisciplinary seagoing field operations including surface vessels and various submersible assets and platforms.
- \* Active geoscientist with bibliography in areas of marine geology and geophysics.

2008 - 2013 **Acting Chief Scientist, NOAA Office of Ocean Exploration and Research**

- \* Provided science guidance and oversight for the Office of Ocean Exploration and Research; approximately 35 personnel and an FY2013 budget of ~\$25M

2004 - 2008 **Acting Director, NOAA Office of Ocean Exploration and Research**

- \* Served as the Director of the Ocean Exploration program and the NOAA National Undersea Research Program. Principal activities in the OE program included implementation of a national grant funding program and bringing the Office's dedicated, state-of-the-art ocean-class research vessel into operational status. Activities on behalf of NURP included overseeing planning and initial execution of a reorganization of the office to include a new Cooperative Institute-based operating model.

2000 - 2004 **Chief Scientist, NOAA Ocean Exploration Program**

- \* Provided scientific oversight for multi-agency, interdisciplinary ocean research program with funding averaging ~\$14M/year

- 1979 - 1984     **Geophysicist, Office of the Chief Scientist, NOAA National Ocean Survey (NOS).**
- \* Pioneered, with NOS Chief Scientist, first US civilian use of previously classified, high-resolution, digital bathymetric swath-mapping system.
  - \* Provided scientific guidance to nation's ocean chart-making agency.
- 1974 - 1979     **Faculty and Research Staff, Hawaii Institute of Geophysics, University of Hawaii, Manoa.**
- \* Taught graduate and undergraduate courses in geology and geophysics and served as faculty advisor on student thesis committees.
  - \* Established laboratory for marine paleomagnetism research.
  - \* Conducted collaborative research focused Earth's magnetic field reversals.
  - \* Wrote successful scientific funding proposals to Office of Naval Research and National Science Foundation.
  - \* Published research in peer-reviewed journals and presented scientific findings in national and international fora.

#### **ADDITIONAL EXPERIENCE**

- Current
- \* Courtesy Faculty Professor, OSU College of Earth, Ocean, and Atmospheric Sciences (since 1984)
  - \* Advisory Board, Global Foundation for Ocean Exploration
  - \* Nautilus Science Advisory Board
- 1984 - 2013
- \* Periodic presentations and briefings to members/staff US House and Senate, professional meetings and symposia.
  - \* Extensive experience providing presentations and briefings for television and print media (e.g., CNN, National Geographic, New York Times, and the National Press Club).
  - \* Provided frequent invited science and science education and awareness presentations locally and in national as well as international venues (e.g., the Smithsonian Institution, National Geographic, the Exploratorium, the Oregon Museum of Science and Industry, World Ocean Congress/Indonesia, Japan Agency for Marine-Earth Science and Technology, French Institute for Exploitation of the Sea).
  - \* Member, Cooperative Institute of Marine Resources Studies Science Advisory Council. Cooperative Institute is the principal administrative link between Oregon State University (OSU) scientists collaborating with the NOAA Vents program.
  - \* Federal Program Officer for yearly NOAA research grant to OSU to facilitate cooperative research; ~\$1M/year.

- \* Community service and leadership.

Councilor, Newport City Council, 1991 - 1993, 1997 - 2003.

Commissioner, Newport City Planning Commission, 1993 - 1997.

## HONORS AND AWARDS

- \* Consistent Outstanding and Unusually Outstanding annual performance awards throughout 35-year NOAA career.
- \* Other NOAA awards and honors: NOAA Administrator's Award, Department of Commerce Silver and Bronze Medals, and the NOAA Distinguished Career Award.

## EDUCATION

- \* BS: University of Missouri at Kansas City - 1966.
- \* MS: Geoscience – Geology; University of Hawaii - 1970.
- \* PhD: Geology and Geophysics; University of Hawaii - 1974.

## SELECTED PUBLICATIONS

Malahoff, A. and **Hammond, S.R.**, 1971, *Sediment accumulation rates along the Murray Fracture Zone between 131°W and 167°W longitude*, Geol. Soc. Am. Bull., v. 82, pp.1429-1432.

**Hammond, S.R.**, Theyer, F., and Sutton, G.H., 1974, *Paleomagnetic evidence of northward movement of the Pacific Plate in deep-sea sediment cores from the Central Pacific Basin*, Earth. Planet. Sci. Lett., v. 22, pp. 22-28.

Theyer, F., and **Hammond, S.R.**, 1974, *Paleomagnetic polarity sequence and radiolarian zones, Brunhes to Polarity Epoch 20*, Earth Planet. Sci. Lett., v. 22, pp. 307-319.

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**Hammond, S.R.**, Kroenke, L.W., Theyer, F. and Keeling, D.L., 1975, *Late Cretaceous and Paleogene paleolatitudes of the Ontong Java Plateau*, Nature, V. 255, pp. 46-47.

**Hammond, S.R.**, Kroenke, L.W., and Theyer, F., 1975, *Northward motion of the Ontong Java Plateau between -110 and -30 my: A paleomagnetic investigation of DSDP Site 289*, Initial Reports of the Deep Sea Drilling Project, v. 30, pp. 415-418.

Seyb, S.M. **Hammond, S.R.**, and Gilliard, T. 1977, *A new device for recording the behavior of a piston corer*, Deep Sea Res., v. 24, pp. 943-950.

Theyer, F., Mato, C.Y., and **Hammond, S.R.**, 1978, *Paleomagnetic and geochronologic calibration of latest Oligocene to Pliocene radiolarian events, equatorial Pacific*, Mar. Micropaleont., Elsevier, v. 3, pp. 377-395.

Ninkovitch, D. Cadet, J.P., Burkle, L., and **Hammond, S.R.**, 1978, *Explosive volcanism in the Aleutians Arc: Spatial and temporal distribution of volcanic ashin*

*marine sediments: Geodynamic implications*, C.R. somm. Soc. Geol. Fr., Fasc. 5, 273-276.

Burkle, L. **Hammond, S.R.**, and Seyb, S. M., **1978**, *A stratigraphically important new diatom from the north Pacific*, Pacific Sci., v. 32, n. 2, pp. 209-214.

**Hammond, S.R.**, Epp, D., and Theyer, F., **1979**, *Neogene relative motion between the Pacific plate, the mantle, and the earth's spin axis*, Nature, v. 278, n. 5702, pp. 309-312.

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Mato, C.Y., Theyer, F., and **Hammond, S.R.**, **1979**, *Lychnocanoma bandyca, n. sp., a new stratigraphically important Eocene radiolarian*, Q.L. Bandy Memorial Volume, W. Sliter, ed., pp. 30-37.

Malahoff, A., **Hammond, S.R.**, Naughton, J.J., Keeling, D.L., and Richmond, R. N., **1982**, *Geophysical evidence for post-Miocene rotation of the island of Viti Levu, Fiji, and its relationship to the tectonic development of the North Fiji Basin*, Earth. Planet. Sci. Lett., v. 57, pp. 398-414.

Epp, D., Sager, W.H., Theyer, F., and **Hammond, S.R.**, **1983**, *Hotspot/spin axis motion or far-sided effect?*, Nature, v. 303, pp. 318-320.

Crane, K., Aikman, F., Embley, R., **Hammond, S.**, Malahoff, A., and Lupton, J., **1985**, *The distribution of geothermal fields on the Juan de Fuca Ridge*, Jour. Geophys. Res., v. 90, n. B1, pp. 727-744.

Chase, R., Delaney, J. Karsten, J., Johnson, P., Juniper, S., Lupton, J., Scott, S., Tunncliffe, V., **Hammond, S.**, and McDuff, R., **1985**, *Hydrothermal vents in Axial Seamount of the Juan de Fuca spreading zone*, Nature, V. 313, n. 5999, pp. 212-214.

Theyer, F., Herro-Brevera, E., Hsu, V., and **Hammond, S.R.**, **1985**, *The Williams-Fuller zonal harmonic model of polarity transitions: testing with successive reversals*, Jour. Geophys. Res., v. 90, n. B2, pp. 1963-1982.

Karsten, J., **Hammond, S.R.**, Davis, E., and Currie, R., **1986**, *Detailed geomorphology and neotectonics of the Endeavour segment, Juan de Fuca Ridge: new results from SeaBeam swath mapping*, Geol. Soc. Am. Bull., v. 97, pp. 213-221.

Herrero-Bervera, E., Helsley, C.E., **Hammond, S.R.**, and L.A. Chitwood, **1989**, *A possible lacustrine paleomagnetic record of the Blake episode from Pringle Falls, Oregon, USA*, Phys. Earth. Planet. Interiors, v. 56, pp.112-123.

Feely, R.A., T.L. Geiselman, T.L., Baker, E.T., Massoth, G.J., and **Hammond, S.R.**, **1990**, *Distribution and composition of hydrothermal plume particles from the ASHES vent field at Axial Volcano, Juan de Fuca Ridge*, Jour. Geophys. Res., v. 95, pp. 12855-12874.

**Hammond, S.R.**, **1990**, *Relationship between lava types, seafloor morphology, and the occurrence of hydrothermal venting in the ASHES vent field of Axial Volcano*, Jour. Geophys. Res., v. 95, pp. 12875-12894.

**Hammond, S.R.**, and Walker, D.A., **1991**, *Ridge event detection: T-phase signals from the Juan de Fuca Ridge spreading center*, Mar. Geophys. res., v. 13, pp. 331-348.

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Baker, E.T. and **Hammond, S.R.**, **1992**, *Hydrothermal venting and the apparent magmatic budget of the Juan de Fuca Ridge*, Jour. Geophys. Res., v. 97, pp. 3443-3456.

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**Hammond, S.**, J. McDonough, and C. Russell, **2010**, The NOAA ship Okeanos Explorer: New ways for exploring the ocean. *Oceanography*, v. 23, n. 1 pp. 88–89.

Dziak, R.P., **S.R. Hammond**, and C.G. Fox, **2011**, A 20-year hydroacoustic time series of seismic and volcanic events in the northeast Pacific Ocean. *Oceanography*, v. 24, n. 3, pp. 280–293.

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