Curriculum Vitae

Eric Firing

Education

Sept. l978	Ph.D., Mass. Inst. of Technology, Woods Hole Oceanographic Institution Joint Program in Oceanography
June l973	B.S., Department of Earth and Planetary Science, Mass. Inst. of Technology.

Positions

2007–	Professor, Dept. of Oceanography, University of Hawaii, Honolulu, Hawaii.
1987–2007	Associate Professor, Dept. of Oceanography, University of Hawaii, Honolulu, Hawaii.
1985–1987	Assistant Professor of Oceanography, Dept. of Oceanography and Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii.
l980–1985	Assistant Physical Oceanographer, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii.
l979–l980	Research Associate, Joint Institute for Marine and Atmospheric Research (JIMAR), University of Hawaii/NOAA, Honolulu, Hawaii.
l978–l979	Research Associate, Joint Institute for the Study of the Atmosphere and Ocean (JISAO), Seattle, Washington.

Recent classroom teaching

OCN 620 Introduction to Physical Oceanography. Fall term. (https://currents.soest.hawaii.edu/ocn620/)

OCN 760-02 Introduction to Geophysical Fluid Dynamics. Spring term.

OCN 760-03 Data Analysis with Python. Spring term. (https://currents.soest.hawaii.edu/ocn_data_analysis/)

Student committees

Presently serving on one PhD and one MS committee.

Publications

2019 Cornillon, P. C., E. Firing, A. F. Thompson, L. M. Ivanov, I. Kamenkovich, C. E. Buckingham and Y. D. Afanasyev. Chapter II.2, Zonal Jets in Nature: Oceans. To appear in *Zonal Jets: Phenomenology, Genesis, and Physics*, B. Galperin and P. L. Read, eds., Cambridge University Press, 44–70.

2017 Cravatte, S., E. Kestenare, F. Marin, P. Dutrieux and E. Firing. Subthermocline and Intermediate Zonal Currents in the Tropical Pacific Ocean: paths and vertical structure. *J. Phys. Oceanogr.*, 47, 2305–2324.

2016 Talley, L. D., R. A. Feely, B. M. Sloyan, R. Wanninkhof, M. O. Baringer, J. L. Bullister, C. A. Carlson, R.A. Fine, E. Firing, N. Gruber, D.A. Hansell, M. Ishii, G.C. Johnson, K. Katsumata, R.M. Key, M. Kramp, C. Langdon, A.M. Macdonald, J.T. Mathis, E.L. McDonagh, S. Mecking, F.J. Millero, C.W. Mordy, T. Nakano, C.L. Sabine, W.M. Smethie, J.H. Swift, T. Tanhua, A.M. Thurnherr, M.J. Warner, and J-Z. Zhang. Changes in Ocean Heat, Carbon Content, and Ventilation: A Review of the First Decade of GO-SHIP Global Repeat Hydrography. *Annual Review of Marine Science*, 8, 185–215. (doi:10.1146/annurev-marine-052915-100829)

2016 Thompson, P. R., C. G. Piecuch, M. A. Merrifield, J. P. McCreary, and E. Firing. Forcing of Recent Decadal Variability in the Equatorial and North Indian Ocean. *J. Geophys. Res. Oceans*, 121, 6762–6778. (doi:10.1002/2016JC012132)

2015 Ascani, F., E. Firing, J. P. McCreary, P. Brandt, and R. J. Greatbatch. The deep equatorial ocean circulation in wind-forced numerical solutions. *J. Phys. Oceanogr.*, 45, 1709–1734. (doi:10.1175/JPO-D-14-0171.1)

2015 Richards, K. J., A. Natarov, E. Firing, Y. Kashino, S. M. Soares, M. Ishizu, G. S. Carter, J. H. Lee, and K. I. Chang. Shear-generated turbulence in the equatorial Pacific produced by small vertical scale flow features. *J. Geophys. Res. Oceans*, 120, 3777–3791. (doi:10.1002/2014JC010673)

2013 Ascani, F., K. J. Richards, E. Firing, S. Grant, K. S. Johnson, Y. Jia, R. Lukas, and D. M. Karl. Physical and biological controls of nitrate concentrations in the upper subtropical North Pacific Ocean. *Deep-Sea Res. II*, 93, 119–134. (doi: 10.1016/j.dsr2.2013.01.034)

2012 Chavanne, C. P., E. Firing, and F. Ascani. Inertial Oscillations in Geostrophic Flow: Is the Inertial Frequency Shifted by $\zeta/2$ or by ζ? *J. Phys. Oceanogr.*, 42, 884–888. (doi: 10.1175/JPO-D-12-031.1)

2012 Firing, E., J. M. Hummon, and T. K. Chereskin. Improving the quality and accessibility of current profile measurements in the Southern Ocean. *Oceanography*, 25, 164–165.

2012 Richards, K. J., Y. Kashino, A. Natarov, E. Firing. Mixing in the western equatorial Pacific and its modulation by ENSO. *Geophys. Res. Lett.*, 39, 5 pp. (doi:10.1029/2011GL050439)

2010 Stramma, L., G. C. Johnson, E. Firing, S. Schmidtko. Eastern Pacific oxygen minimum zones: Supply paths and multi-decadal changes. *J. Geophys. Res.* 115, C09011, 12 pp. (doi:10.1029/2009JC005976)

2010 Ascani, F., E. Firing, P. Dutrieux, J. P. McCreary, A. Ishida. Deep equatorial ocean circulation induced by a forced-dissipated Yanai beam. *J. Phys. Oceanogr.*, 40, 1118–1142. doi:10.1175/2010JPO4356.1

2007 Lenn, Yueng-Djern, T. K. Chereskin, J. Sprintall and E. Firing. Mean Jets, Mesoscale Variability and Eddy Momentum Fluxes in the Surface Layer of the Antarctic Circumpolar Current in Drake Passage. *J. Marine Res.*, 65, 27–58.

2006 Kunze, E., E. Firing, J. Hummon, T. Chereskin, and A. Thurnherr. Inferring abyssal mixing from lowered ADCP shear and CTD strain profiles. *J. Phys. Oceanogr.*, 36, 1553–1576.

2006 Chen, S. and E. Firing. Currents in the Aleutian Basin and subarctic North Pacific near the dateline in summer 1993. *J. Geophys. Res.*,111, C03001, doi:10.1029/2005JC003064.

2005 Firing, E., Y. Kashino, and P. Hacker. Energetic subthermocline currents observed east of Mindanao. *Deep Sea Res. II*, 52, 605–613.

2004 Ascani, F, D. Wang, D.W. Moore, E. Firing, and J.P. McCreary. Comments on "A Theory of Equatorial Deep Jets". *J. Phys. Oceanogr.*, 34, 1781–1790.

2003 Shcherbina, A.Y., L.D. Talley, E. Firing, and P. Hacker. Near surface frontal zone trapping and deep upward propagation of internal wave energy in the Japan/East Sea. *J. Phys. Oceanogr.*, 33, 900–912.

2003 Hummon, J.M., and E. Firing. A direct comparison of two RDI shipboard ADCPs: a 75-kHz Ocean Surveyor and a 150-kHz Narrowband. *J. Atmos. and Oceanic Technol.*, 20, 872–888.

2002 Polzin, K., E. Kunze, J. Hummon, and E. Firing. The finescale response of lowered ADCP velocity profiles. *J. Atmos. Oceanic Technol.*, 19, 205–225.

2002 Donohue, K., E. Firing, G. D. Rowe, A. Ishida, and H. Mitsudera. Equatorial Pacific subsurface countercurrents: a model/data comparison in stream coordinates. *J. Phys. Oceanogr.*, 32, 1252–1264.

2001 Donohue, K. A., E. Firing, and S. Chen. Absolute geostrophic velocity within the subantarctic front in the Pacific Ocean. *J. Geophys. Res.*, 106, 19,869–19,882.

2001 Yoshinari, H., I. Yasuda, S. Ito, E. Firing, Y. Matsuo, O. Katoh, and Y. Shimizu. Meridional transport of the North Pacific Intermediate Water in the Kuroshio-Oyashio interfrontal zone. *Geophys. Res. Letters*, 28, 3445-3448.

2001 Kashino, Y., E. Firing, P. Hacker, A. Sulaiman, and Lukiyanto. Currents in the Celebes and Maluku Seas, February 1999. *Geophys. Res. Letters*, 28, 1263–1266.

2001 King, B. A., E. Firing, and T. M. Joyce. Shipboard observations during WOCE. Chapter 3.1 in *Ocean Circulation and Climate*, edited by Gerold Siedler, John Church, and John Gould. Academic Press, London, 99–122.

2001 Johnson, G. C., M. J. McPhaden, and E. Firing. Equatorial Pacific Ocean horizontal velocity, divergence, and upwelling. *J. Phys. Oceanogr., 31*, 839–849.

2000 Donohue, K. A., E. Firing, and L. Beal. Comparison of three velocity sections of the Agulhas Current and Agulhas Undercurrent. *J. Geophys. Res., 105*, 28,585–28,593.

2000 Rowe, G. D., E. Firing, and G. C. Johnson. Pacific Equatorial Subsurface Countercurrent velocity, transport, and potential vorticity. *J. Phys. Oceanogr., 30*, 1172–1187.

1999 Firing, E., B. Qiu, and W. Miao. Time-dependent island rule and its application to the time-varying north Hawaiian ridge current. *J. Phys. Oceanogr., 29*, 2671–2688.

1998 Firing, E., S. Wijffels, and P. Hacker. Equatorial subthermocline currents across the Pacific. *J. Geophys. Res., 103*, 21,413–21,423.

1998 Wijffels, S., M. Hall, T. Joyce, D.J. Torres, P. Hacker, and E. Firing. The multiple gyres of the western North Pacific: a WOCE section along 149°E. *J. Geophys. Res., 103*, 12,985–13,009.

1998 Hacker, P., E. Firing, J. Hummon, L. L. Gordon, and J. Kindle. Bay of Bengal currents during the northeast monsoon. *Geophys. Res. Letters, 25*, 2769–2772.

1998 Feng, M., M. A. Merrifield, R. Pinkel, Pl Hacker, A. J. Plueddemann, E. Firing, R. Lukas, and C. Eriksen. Semidiurnal tides observed in the western equatorial Pacific during the Tropical Ocean-Global Atmosphere Coupled Ocean-Atmosphere Response Experiment. *J. Geophys. Res., 103*, 10,253–10,272.

1997 Firing, E., R-C Lien, and P. Muller. Observations of strong inertial oscillations after the passage of tropical cyclone Ofa. *J. Geophys. Res., 102*, 3317–3322.

1996 Hacker, P., E. Firing, W. Wilson, and R. Molinari. Direct Observations of the current structure east of the Bahamas. *Geophys. Res. Letters, 23,* 1127–1130.

1996 Firing, E. Currents observed north of Oahu during the first 5 years of HOT. *Deep-Sea Res., 43*, 281–303.

1995 Wijffels, S., E. Firing, and J. Toole. The mean structure and variability of the Mindanao Current at 8°N. *J. Geophys. Res., 100*, 18421–18436.

1994 Wijffels, S., E. Firing, and H. Bryden. Direct Observations of the Ekman Balance at 10°N in the Pacific. *J. Phys. Oceanogr.,24,* 1666–1679.

1994 Muench, J., E. Kunze and E. Firing. The potential vorticity structure of equatorial deep jets. *J. Phys. Oceanogr.,24,* 418–428.

1992 McPhaden, M., F. Bahr, Y. du Penhoat, E. Firing, S. Hayes, P. Niiler, P. Richardson, and J. Toole. The response of the western equatorial Pacific Ocean to westerly wind bursts during November 1989–January 1990. *J. Geophys. Res., 97,* 14,289–14,303.

1992 Delcroix, T., G. Eldin, M.-H. Radenac, J. Toole, and E. Firing. Variation of the western equatorial Pacific Ocean, 1986–1988. *J. Geophys. Res., 97,* 5423–5446.

1992 Wilson, C. and E. Firing. Sunrise swimmers bias acoustic Doppler current profiles. *Deep-Sea Res., 39,* 885–892.

1991 Lukas, R., E. Firing, P. Hacker, P. L. Richardson, C. A. Collins, R. Fine and R. Gammon. Observations of the Mindanao Current during the Western Equatorial Pacific Ocean Circulation Study (WEPOCS). *J. Geophys. Res., 96,* 7089–7104.

1990 Santiago-Mandujano, F., and E. Firing. Mixed layer shear generated by wind stress in the central equatorial Pacific. *J. Phys. Oceanogr., 20,* 1576–1582.

1989 Tsuchiya, M., R. Lukas, R. Fine, E. Firing, and E. Lindstrom. Source waters of the Pacific Equatorial Undercurrent. *Progress in Oceanography, 23*, 101–147.

1989 Chereskin, T., E. Firing, and J. Gast. On identifying and screening filter skew and noise bias in acoustic Doppler current profiler measurements. *J. Ocean and Atmos. Technol., 6,* 1040–1054.

1989 Firing, E. Mean zonal currents below 1500 m near the equator, 159°W. *J. Geophys. Res., 94,* 2023–2028.

1988 Firing, E. Shallow Equatorial Jets. *J. Geophys. Res., 93,* 9213–9222.

1988 Joyce, T., R. Lukas, and E. Firing. On the hydrostatic balance and equatorial geostrophy. *Deep Sea Res.,* 35, 1255–1257.

1987 Firing, E. Deep zonal currents in the central equatorial Pacific. *J. Marine Res. 45,* 971–812.

1987 Lindstrom, E., R. Lukas, R. Fine, E. Firing, S. Godfrey, G. Meyers, M. Tsuchiya. The Western Equatorial Pacific Ocean Circulation Study. *Nature, 330*, 533–537.

1985 Lukas, R. and E. Firing. An annual Rossby wave in the central equatorial Pacific. *J. Phys. Oceanogr., 15,* 55–67.

1985 Firing, E., and R. Lukas. Sampling and Aliasing during the NORPAX Tahiti Shuttle Experiment. *J. Geophys. Res., 90,* 11709–11718.

l984 Lukas, R. and E. Firing. The geostrophic balance of the Pacific Equatorial Undercurrent. *Deep-Sea Res., 31,* 61–66.

l983 Firing, E., R. Lukas, J. Sadler, and K. Wyrtki. Equatorial Undercurrent disappears during l982–83 El Nino. *Science, 222,* 1121–1123.

l983 Freitag, P. and E. Firing. Comparison of profiling and moored current measurements in the Equatorial Pacific. *J. Geophys. Res., 89,* 3724–3728.

l98l Wyrtki, K., E. Firing, D. Halpern, R. Knox, G.J. McNally, W.C. Patzert, E.D. Stroup, B.A. Taft, and R. Williams. The Hawaii to Tahiti Shuttle Experiment. *Science, 211,* 22–28.