
Reference List

Pages on which references are cited appear in angle brackets. Every reference to original material not in English for which the editors knew of an English translation is followed by a reference to the English translation; references to untranslated Russian material include translations of the Russian titles immediately following the Russian titles.

- Aanderaa, I. R., 1964. A recording and telemetering instrument. *Fixed Buoy Project, NATO Subcommittee on Oceanographic Research Technical Report No. 16*, Bergen, 46 pp., 20 figures. (405)
- Accad, Y., and C. L. Pekeris, 1978. Solution of the tidal equations for the M_2 and S_2 tides in the world oceans from a knowledge of the tidal potential alone. *Philosophical Transactions of the Royal Society of London A* 290:235–266. (297, 322, 323, 329, 330)
- Adamec, D., and J. J. O'Brien, 1978. The seasonal upwelling in the Gulf of Guinea due to remote forcing. *Journal of Physical Oceanography* 8:1050–1060. (193)
- Adams, J. K., and V. T. Buchwald, 1969. The generation of continental shelf waves. *Journal of Fluid Mechanics* 35: 815–816. (358)
- African Pilot, 1967. Hydrographer of the Navy, London, 12th ed., 3, 529 pp. (185)
- Agree, E. M., and K. E. Dowell, 1974. Observational studies of mesoscale cellular convection. *Journal of Applied Meteorology* 13:46–53. (500)
- Agnew D., and W. Farrell, 1978. Self-consistent equilibrium ocean tides. *Geophysical Journal of the Royal Astronomical Society* 55:171–181. (339)
- Agnew, R., 1961. Estuarine currents and tidal streams. In *Proceedings of the Seventh Conference on Coastal Engineering*, The Hague, 1960, 2, pp. 510–535. (204)
- Allen, J. S., 1980. Models of wind-driven currents on the continental shelf. *Annual Review of Fluid Mechanics* 12:389–433. (222)
- Amos, A. F., A. L. Gordon, and E. D. Schneider, 1971. Water masses and circulation patterns in the region of the Blake-Bahama Outer Ridge. *Deep-Sea Research* 18:145–165. (27, 28, 36, 121)
- Anderson, D. L. T., and A. E. Gill, 1975. Spin-up of a stratified ocean, with applications to upwelling. *Deep-Sea Research* 22:583–596. (526)
- Anderson, D. L. T., and P. D. Killworth, 1977. Spin-up of a stratified ocean, with topography. *Deep-Sea Research* 24:709–732. (526)
- Anderson, D. L. T., and P. B. Rowlands, 1976a. The role of inertia-gravity and planetary waves in the response of a tropical ocean to the incidence of an equatorial Kelvin wave on a meridional boundary. *Journal of Marine Research* 34:295–312. (191)
- Anderson, D. L. T., and P. B. Rowlands, 1976b. The Somali Current response to the southwest monsoon: the relative importance of local and remote forcing. *Journal of Marine Research* 34:395–417. (192)

- Andrews, D. G., and B. J. Hoskins, 1978. Energy spectra predicted by semi-geostrophic theories of frontogenesis. *Journal of the Atmospheric Sciences* 35:509–519. ⟨544⟩
- Andrews, D. G., and M. E. McIntyre, 1976. Planetary waves in horizontal and vertical shear: The generalized Eliassen-Palm relation and mean zonal acceleration. *Journal of the Atmospheric Sciences* 33:2031–2048. ⟨533⟩
- Andrews, D. G., and M. E. McIntyre, 1978a. An exact theory of nonlinear waves on a Lagrangian-mean flow. *Journal of Fluid Mechanics* 89:609–646. ⟨345, 506, 533⟩
- Andrews, D. G., and M. E. McIntyre, 1978b. Generalized Eliassen-Palm and Charney-Drazin theorems for waves on axisymmetric mean flows in compressible atmospheres. *Journal of the Atmospheric Sciences* 35:175–185. ⟨533⟩
- Apel, J. R., 1976. Ocean science from space. *EOS, Transactions of the American Geophysical Union* 57:612–624. ⟨426⟩
- Appell, G. F., J. E. Boyd, and W. Woodward, 1974. Evaluation of the Aanderaa recording current meter. *NOAA Technical Report NOASIC-TM-OX5/74-ARO4*, 25 pp. ⟨406⟩
- Arakawa, A., 1975. Modelling clouds and cloud processes for use in climate models. In *Physical Basis of Climate and Climate Modelling*, WMO-ICSU Joint Organizing Committee, GARP Publication Series No. 16, World Meteorological Organization, Geneva, pp. 183–197. ⟨496⟩
- Armi, L., 1978. Some evidence for boundary mixing in the deep ocean. *Journal of Geophysical Research* 83:1971–1979. ⟨183, 261, 262⟩
- Armi, L., and R. C. Millard, 1976. The bottom boundary layer of the deep ocean. *Journal of Geophysical Research* 81:4983–4990. ⟨259, 334⟩
- Armstrong, R. L., 1980. 1976 in light of atmospheric and oceanic climatological relationships. In *Oxygen Depletion and Associated Benthic Mortalities in New York Bight*, 1976, R. L. Swanson and C. S. Sindermann, eds., NOAA Professional Paper, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland. ⟨225⟩
- Arnol'd, V. I., 1965. Ob usloviyakh nelineinoi ustochivosti ploskikh statcionarnykh krivolineinykh techenii ideal'noi zhidkosti. *Doklady Akademii Nauk SSSR* 162:975–978. (Conditions for nonlinear stability of stationary plane curvilinear flows of an ideal fluid. *Soviet Mathematics* 6:773–777.) ⟨530⟩
- Arons, A. B., and H. Stommel, 1951. A mixing-length theory of tidal flushing. *Transactions of the American Geophysical Union* 32:419–421. ⟨202⟩
- Arons, A. B., and H. Stommel, 1956. A beta plane analysis of free periods of the second class in meridional and zonal oceans. *Deep-Sea Research* 4:23–31. ⟨344⟩
- Arons, A. B., and H. Stommel, 1967. On the abyssal circulation of the World Ocean—III. An advection-lateral mixing model of the distribution of a tracer property in an ocean basin. *Deep-Sea Research* 14:441–457. ⟨xvii, 435⟩
- Augstein, E., H. Schmidt, and F. Ostapoff, 1974. The vertical structure of the atmospheric planetary boundary layer in undisturbed trade winds over the Atlantic Ocean. *Boundary-Layer Meteorology* 6:129–150. ⟨503⟩
- Austin, T. S., 1960. Oceanography of the east central equatorial Pacific as observed during expedition Eastropic. *Fishery Bulletin of the Fish and Wildlife Service* 60:257–282. ⟨83⟩
- Baines, P. G., 1971. The reflection of internal/inertial waves from bumpy surfaces. Part 2. Split reflexion and diffraction. *Journal of Fluid Mechanics* 49:113–131. ⟨331⟩
- Baines, P. G., 1974. The generation of internal tides over steep continental slopes. *Philosophical Transactions of the Royal Society of London A* 277:27–58. ⟨337⟩
- Baines, P. G., and P. A. Davies, 1980. Laboratory studies of topographic effects in rotating and/or stratified fluids. In *Orographic Effects in Planetary Flows*, R. Hide and P. W. White, eds., GARP Publication Series, World Meteorological Organization, Geneva. ⟨543⟩
- Baker, D. J., 1966. A technique for the precise measurement of small fluid velocities. *Journal of Fluid Mechanics* 26:573–575. ⟨472⟩
- Baker, D. J., Jr., 1969. On the history of the high seas tide gauge. *W.H.O.I. Technical Memorandum* 5-69, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 17 pp. ⟨399, 424⟩
- Baker, D. J., Jr., 1970. Models of oceanic circulation. *Scientific American* 222:1, 114–121. ⟨472⟩
- Baker, D. J., Jr., 1979. Ocean-atmosphere interaction in high southern latitudes. *Dynamics of Atmospheres and Oceans* 3:213–229. ⟨425⟩
- Baker, D. J., Jr., W. D. Nowlin, Jr., R. D. Pillsbury, and H. C. Bryden, 1977. Antarctic circumpolar current: space and time fluctuations in the Drake Passage. *Nature* 268:696–699. ⟨372⟩
- Baker, D. J., Jun., and A. R. Robinson, 1969. A laboratory model for the general ocean circulation. *Philosophical Transactions of the Royal Society of London A* 265:533–566. ⟨472⟩
- Baker, D. J., Jr., R. B. Wearn, Jr., and W. Hill, 1973. Pressure and temperature measurements at the bottom of the Sargasso Sea. *Nature* 245:25–26. ⟨400, 425⟩
- Banner, M. L., and W. K. Melville, 1976. On the separation of air flow over water waves. *Journal of Fluid Mechanics* 77:825–842. ⟨495⟩
- Banner, M. L., and O. M. Phillips, 1974. On the incipient breaking of small scale waves. *Journal of Fluid Mechanics* 68:647–656. ⟨495⟩
- Barenblatt, G. I., and A. S. Monin, 1979. The origin of the oceanic microstructure. In *Twelfth Symposium Naval Hydrodynamics*, National Academy of Sciences, Washington, D.C., pp. 574–581. ⟨278⟩
- Barkley, R. A., 1968. *Oceanographic Atlas of the Pacific Ocean*. University of Hawaii Press, Honolulu, 20 pp., 156 figures. ⟨83, 85⟩
- Barnett, T. P., 1978. The role of the oceans in the global climate system. In *Climatic Change*, J. Gribbin, ed., Cambridge University Press, London, pp. 157–177. ⟨353⟩
- Barnett, T. P., and R. E. Davis, 1975. Eigenvector analysis and prediction of sea surface temperature fluctuations in the northern Pacific Ocean. In *Proceedings of the Symposium on Long-Term Climatic Fluctuation*, World Meteorological Organization, Technical Note No. 421, Geneva, pp. 439–450. ⟨353, 354⟩
- Barnett, T. P., W. C. Patzert, S. C. Webb, and B. R. Bean, 1979. Climatological usefulness of satellite determined sea-surface temperatures in the tropical Pacific. *Bulletin of the American Meteorological Society* 60:197–205. ⟨427⟩

- Barnett, T. P., and J. C. Wilkerson, 1967. On the generation of ocean wind waves as inferred from airborne radar measurements of fetch-limited spectra. *Journal of Marine Research* 25:292–321. ⟨491⟩
- Barrett, J. R., 1965. Subsurface currents off Cape Hatteras. *Deep-Sea Research* 12:173–184. ⟨27, 121, 123⟩
- Batchelor, G. K., 1953a. *The Theory of Homogeneous Turbulence*. Cambridge University Press, London, 197 pp. ⟨141, 175, 543⟩
- Batchelor, G. K., 1953b. The conditions for dynamical similarity of motions of a frictionless perfect-gas atmosphere. *Quarterly Journal of the Royal Meteorological Society* 79:224–235. ⟨548⟩
- Batchelor, G. K., 1959. Small-scale variation of convected quantities like temperature in turbulent fluid. *Journal of Fluid Mechanics* 5:113–139. ⟨250⟩
- Bates, J. R., 1970. Dynamics of disturbances on the Intertropical Convergence Zone. *Quarterly Journal of the Royal Meteorological Society* 96:677–701. ⟨506⟩
- Beardsley, R. C., 1969. A laboratory model of the wind-driven ocean circulation. *Journal of Fluid Mechanics* 38:255–272. ⟨152, 469, 470, 471⟩
- Beardsley, R. C., 1972. A numerical model of the wind-driven circulation in a circular basin. *Geophysical Fluid Dynamics* 3:211–243. ⟨152⟩
- Beardsley, R. C., 1974. A note on some Antarctic Ocean model experiments. Department of Meteorology, Massachusetts Institute of Technology, Cambridge, Massachusetts, 12 pp. (Unpublished manuscript.) ⟨472⟩
- Beardsley, R. C., 1975. The ‘sliced-cylinder’ laboratory model of the wind-driven ocean circulation. Part 2. Oscillatory forcing and Rossby wave resonance. *Journal of Fluid Mechanics* 69:41–64. ⟨472⟩
- Beardsley, R. C., W. C. Boicourt, and D. V. Hansen, 1976. Physical oceanography of the Middle Atlantic Bight. In *Middle Atlantic Continental Shelf and the New York Bight*, M. G. Gross, ed., American Society of Limnology and Oceanography, Special Symposia, 2, pp. 20–34. ⟨207, 208, 214, 227, 228⟩
- Beardsley, R. C., and B. Butman, 1974. Circulation on the New England Continental Shelf: response to strong winter storms. *Geophysical Research Letters* 1:181–184. ⟨214⟩
- Beardsley, R. C., and D. B. Haidvogel, 1980. A simple numerical model for the wind-driven transient circulation in the Middle Atlantic Bight. *Journal of Physical Oceanography*. ⟨223⟩
- Beardsley, R. C., H. Mofjeld, M. Wimbush, C. Flagg, and J. Vermersch, 1977. Ocean tides and weather-induced bottom pressure fluctuations in the Middle Atlantic Bight. *Journal of Geophysical Research* 82:3175–3182. ⟨222, 327⟩
- Beardsley, R. C., and K. Robbins, 1975. The ‘sliced-cylinder’ laboratory model of the wind-driven ocean circulation. Part I. Steady forcing and topographic Rossby wave instability. *Journal of Fluid Mechanics* 69:27–40. ⟨472⟩
- Beardsley, R. C., K. D. Saunders, A. C. Warn-Varnas, and A. D. Harding, 1979. An experimental and numerical study of the secular spin-up of a thermally stratified rotating fluid. *Journal of Fluid Mechanics* 93:161–184. ⟨476⟩
- Beardsley, R. C., and C. D. Winant, 1979. On the mean circulation in the Mid-Atlantic Bight. *Journal of Physical Oceanography* 9:612–619. ⟨228⟩
- Begemann, F., and W. F. Libby, 1957. Continental water balance, inventory of ground water storage times, surface ocean mixing rates and world-wide circulation patterns from cosmic-ray and bomb tritium. *Geochimica et Cosmochimica Acta* 12:277–296. ⟨441⟩
- Behringer, D. W., R. L. Molinari, and J. F. Festa, 1977. The variability of anticyclonic current patterns in the Gulf of Mexico. *Journal of Geophysical Research* 82:5469–5476. ⟨113⟩
- Bell, T. H., 1975. Topographically generated internal waves in the open ocean. *Journal of Geophysical Research* 80:320–327. ⟨332⟩
- Belyaev, V. S., M. M. Lubimtzev, and R. V. Ozmidov, 1975. The rate of dissipation of turbulent energy in the upper layer of the ocean. *Journal of Physical Oceanography* 5:499–505. ⟨283⟩
- Bennett, E. B., 1963. An oceanographic atlas of the eastern tropical Pacific Ocean, based on data from Eastropic Expedition, October–December 1955. *Interamerican Tropical Tuna Commission Bulletin* 8:31–165. ⟨14⟩
- Bennett, J. R., and B. A. Magnell, 1979. A dynamical analysis of currents near the New Jersey Coast. *Journal of Geophysical Research* 84:1165–1175. ⟨218⟩
- Bernstein, R. L., and W. B. White, 1974. Time and length scales of baroclinic eddies in the central North Pacific Ocean. *Journal of Physical Oceanography* 4:613–624. ⟨359, 372⟩
- Bernstein, R. L., and W. B. White, 1977. Zonal variability in the distribution of eddy energy in the mid-latitude North Pacific Ocean. *Journal of Physical Oceanography* 7:123–126. ⟨359, 414⟩
- Bernstein, R. L., L. Breaker, and R. Whritner, 1977. California Current eddy formation: Ship, air, and satellite results. *Science* 195:353–359. ⟨427⟩
- Berteaux, H. O., 1975. *Buoy Engineering*. Wiley, New York. 319 pp. ⟨402⟩
- Berteaux, H. O., and R. G. Walden, 1968. The mooring wire testing and evaluation programs for 1968. *W.H.O.I. Technical Memorandum* 7-68, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 16 pp. ⟨410⟩
- Berteaux, H. O., and R. G. Walden, 1969. Analysis and experimental evaluation of single point moored buoy systems. *W.H.O.I. Technical Report* 69-36, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 51 pp. + Appendices. ⟨410⟩
- Bien, G. S., N. W. Rakestraw, and H. E. Suess, 1963. Radiocarbon dating of deep water of the Pacific and Indian Oceans. In *Radiocarbon Dating*, International Atomic Energy Agency, Vienna, pp. 159–173. ⟨449⟩
- Bigelow, H. B., 1915. Exploration of the coast water between Nova Scotia and Chesapeake Bay, July and August, 1913, by the U.S. Fisheries Schooner *Grampus*. Oceanography and plankton. *Bulletin of the Museum of Comparative Zoology* 59:152–359. ⟨209, 210, 211⟩
- Bigelow, H. B., 1922. Exploration of the coastal water off the northeastern United States in 1916 by the U.S. Fisheries Schooner *Grampus*. *Bulletin of the Museum of Comparative Zoology* 65:88–188. ⟨209, 211⟩

- Bigelow, H. B., 1927. Physical oceanography of the Gulf of Maine. *Bulletin of the United States Bureau of Fisheries* 40 (Part 2):511–1027. (209, 233)
- Bigelow, H. B., 1929. *Report of the Committee on Oceanography of the National Academy of Sciences*, National Academy of Sciences, Washington, D.C., 165 pp. (233)
- Bigelow, H. B., 1933. Studies of the waters on the continental shelf, Cape Cod to Chesapeake Bay. I. The cycle of temperature. *Papers in Physical Oceanography and Meteorology* 2:4, 135 pp. (211)
- Bigelow, H. B., and M. Sears, 1935. Studies of the waters on the continental shelf, Cape Cod to Chesapeake Bay. II. Salinity. *Papers in Physical Oceanography and Meteorology* 4:1, 94 pp. (211, 233)
- Bjerknes, P., 1919. Results of the hydrographical observations made by Dr. Johan Hjort in the Canadian Atlantic Waters during the year 1915. In *Canadian Fisheries Expedition, 1914–1915, Investigations in the Gulf of St. Lawrence and Atlantic Waters of Canada*, J. Hjort, director, Department of the Naval Service, J. de Labroquerie Taché, Ottawa, pp. 347–404. (233)
- Bjerknes, J., 1919. On the structure of moving cyclones. *Geofysiske Publikasjoner* 1:2, 8 pp. (529)
- Bjerknes, J., 1937. Die Theorie der Aussertropischen Zyklogenbildung. *Meteorologische Zeitschrift* 54:462–466. (302, 508, 529)
- Bjerknes, J., 1955. Investigations of the general circulation of the atmosphere. *Final Report General Circulation Project, AF 19(122)-48*, Department of Meteorology, University of California at Los Angeles. (507)
- Bjerknes, J., 1957. Large scale synoptic processes. *Final Report General Circulation Project, AF 19(604)-1286*, Department of Meteorology, University of California at Los Angeles. (507)
- Bjerknes, J., 1969. Atmospheric teleconnections from the equatorial Pacific. *Monthly Weather Review* 97:163–172. (351, 353, 496)
- Bjerknes, J., and H. Solberg, 1921. Meterological conditions for the formation of rain. *Geofysiske Publikasjoner* 2:3, 61 pp. (529)
- Bjerknes, J., and H. Solberg, 1922. Life cycle of cyclones and the polar front theory of atmospheric circulation. *Geofysiske Publikasjoner* 3:1, 18 pp. (529)
- Bjerknes, V., 1898. Ueber einen hydrodynamischen Fundamentalsatz und seine Anwendung besonders auf die Mechanik der Atmosphäre und des Weltmeeres. *Kongliga Svenska Vetenskaps-Akademiens Handlingar, Ny Föld* 31:4, 35 pp. (201, 233)
- Bjerknes, V., J. Bjerknes, H. Solberg, and T. Bergeron, 1933. *Physikalische Hydrodynamik. Mit Anwendung auf die Dynamische Meterologie*. Springer, Berlin, 797 pp. (295)
- Blackadar, A. K., and H. Tennekes, 1968. Asymptotic similarity in neutral barotropic planetary boundary layers. *Journal of the Atmospheric Sciences* 25:1015–1020. (502)
- Blandford, R. R., 1965. Notes on the theory of the thermocline. *Journal of Marine Research* 23:18–29. (159)
- Blandford, R., 1966. Mixed gravity-Rossby waves in the ocean. *Deep-Sea Research* 13:941–961. (191, 527)
- Blandford, R. R., 1971. Boundary conditions in homogeneous ocean models. *Deep-Sea Research* 18:739–751. (89)
- Blanton, J., 1971. Exchange of Gulf Stream water with North Carolina shelf water in Onslow Bay during stratified conditions. *Deep-Sea Research* 18:167–178. (119)
- Blanton, J. O., 1975. Potential energy fluctuations at the edge of the North Carolina continental shelf. *Deep-Sea Research* 22:559–563. (119)
- Blumen, W., 1968. On the stability of quasi-geostrophic flow. *Journal of the Atmospheric Sciences* 25:929–933. (509, 530, 531)
- Blumsack, S. L., 1973. Length scales in a rotating stratified fluid on the beta plane. *Journal of Physical Oceanography* 3:133–138. (37)
- Bogdanov, K. T., and V. A. Magarik, 1967. Chislennoe reshenie zadachi o raprostranenii polusutochnykh prilivnykh voln (M_2 i S_2) v Mirovom okeane. *Doklady Akademii Nauk SSSR* 172: 1315–1317. (Numerical solution of the distribution problem for the semidiurnal tidal waves (M_2 and S_2) in the world ocean. *Doklady of the Academy of Sciences of the U.S.S.R., Earth Science Sections* 172:7–9.) (322)
- Boicourt, W. C., 1973. The circulation of water on the continental shelf from Chesapeake Bay to Cape Hatteras. Ph.D. Thesis, The Johns Hopkins University, Baltimore, Maryland, 183 pp. (214)
- Boicourt, W. C., and P. W. Hacker, 1976. Circulation on the Atlantic continental shelf of the United States, Cape May to Cape Hatteras. *Mémoires de la Société Royale des Sciences de Liège, Sixième Série* 10:187–200. (214, 219, 222)
- Bolin, B., 1950. On the influence of the earth's orography on the general character of the westerlies. *Tellus* 2:184–195. (522)
- Bolin, B., 1955. Numerical forecasting with the barotropic model. *Tellus* 7:27–49. (508)
- Bolin, B., and E. Eriksson, 1959. Changes in the carbon dioxide content of the atmosphere and sea due to fossil fuel combustion. In *The Atmosphere and the Sea in Motion. Scientific Contributions to the Rossby Memorial Volume*, B. Bolin, ed., Rockefeller Institute Press, New York, pp. 130–143. (449)
- Bolin, B., and H. Stommel, 1961. On the abyssal circulation of the World Ocean.—IV. Origin and rate of circulation of deep ocean water as determined with the aid of tracers. *Deep-Sea Research* 8:95–110. (435)
- Booker, J. R., and F. P. Bretherton, 1967. The critical layer for internal gravity waves in a shear flow. *Journal of Fluid Mechanics* 27:513–539. (274)
- Born, G. H., J. A. Dunne, and D. B. Lame, 1979. Seasat mission overview. *Science* 204:1405–1406. (426)
- Bowden, K. F., 1962. Turbulence. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 1: *Physical Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 802–825. (239, 258)
- Bowden, K. F., 1963. The mixing processes in a tidal estuary. *International Journal of Air and Water Pollution* 7:343–356. (204)
- Bowden, K. F., 1965. Horizontal mixing in the sea due to a shearing current. *Journal of Fluid Mechanics* 21:83–95. (378)

- Bowden, K. F., 1977. Turbulent processes in estuaries. In *Estuaries, Geophysics, and the Environment*, C. B. Officer, panel chairman, National Academy of Sciences, Washington, D.C., pp. 46–56. (205)
- Bowden, K. F., and L. A. Fairbairn, 1952. Further observations of the turbulent fluctuations in a tidal current. *Philosophical Transactions of the Royal Society of London A* 244:335–356. (205)
- Bowden, K. F., and L. A. Fairbairn, 1956. Measurements of turbulent fluctuations and Reynolds stresses in a tidal current. *Proceedings of the Royal Society of London A* 237:422–438. (205)
- Bowden, K. F., and R. M. Gilligan, 1971. Characteristic features of estuarine circulation as represented in the Mersey Estuary. *Limnology and Oceanography* 16:490–502. (205)
- Bowden, K. F., and M. R. Howe, 1963. Observations of turbulence in a tidal channel. *Journal of Fluid Mechanics* 17:271–284. (205)
- Bowen, V. T., and T. T. Sugihara, 1957. Sr⁹⁰ in North Atlantic surface water. *Proceedings of the National Academy of Sciences of the U.S.A.* 43:576–580. (446)
- Bowen, V. T., and T. T. Sugihara, 1958. Marine geochemical studies with fallout radioisotopes. In *Waste Treatment and Environmental Aspects of Atomic Energy. Proceedings of International Conference on Peaceful Uses of Atomic Energy*, United Nations, Geneva, 18, pp. 434–438. (446)
- Bowen, V. T., and T. T. Sugihara, 1960. Strontium-90 in the “mixed layer” of the Atlantic Ocean. *Nature* 186:71–72. (446)
- Boyd, J. P., 1976. The noninteraction of waves with the zonally averaged flow on a spherical earth and the interrelationships of eddy fluxes of energy, heat and momentum. *Journal of the Atmospheric Sciences* 33:2285–2291. (533)
- Boyd, J. P., 1977. Solitary waves on the equatorial beta-plane. In *Review Papers of Equatorial Oceanography-FINE Workshop Proceedings*, Nova/N.Y.I.T. University Press, Fort Lauderdale, 13 pp. (516)
- Bradshaw, A., and K. E. Schleicher, 1965. The effect of pressure on the electrical conductance of sea water. *Deep-Sea Research* 12:151–162. (416)
- Brekhovskikh, L. M., K. N. Fedorov, L. M. Fomin, M. N. Koshyakov, and A. D. Yampolsky, 1971. Large-scale multi-buoy experiment in the Tropical Atlantic. *Deep-Sea Research* 18:1189–1206. (359, 374)
- Brekhovskikh, L. M., V. V. Goncharov, V. M. Kurtevov, and K. A. Naugol’nykh, 1972. O rezonansnom vozobuzhdenii vnutrennei volny pri nelineinom vzaimodeistvii poverkhnostykh voln. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 8:192–203. (Resonant excitation of internal waves by nonlinear interaction of surface waves. *Izvestiya, Academy of Sciences, USSR, Atmospheric and Oceanic Physics*, 8:112–117.) (286)
- Brennecke, W., 1909. Ozeanographie. *Forschungsreise S.M.S. "Planet"* 1906/07, 3, 153 pp. (8)
- Brennecke, W., 1911. Ozeanographischen Arbeiten der Deutschen Antarktischen Expedition. (Pernambuco-Buenos Aires.) III. Bericht. *Annalen der Hydrographie und Maritimen Meteorologie* 39:642–647. (9)
- Brennecke, W., 1915. Aufgaben und Probleme der Ozeanographie. *Annalen der Hydrographie und Maritimen Meteorologie* 43:49–62. (11)
- Brennecke, W., 1918. Ozeanographische Ergebnisse der zweiter Französischen, der schwedischen und der schottischen Südpolarexpeditionen. *Annalen der Hydrographie und Maritimen Meteorologie* 46:173–183. (17)
- Brennecke, W., 1921. Die ozeanographischen Arbeiten der Deutschen Antarktischen Expedition 1911–1912. *Aus dem Archiv der Deutschen Seewarte* 39:1, 216 pp. (11, 17, 22, 72)
- Bretherton, F. P., 1964. Low frequency oscillations trapped near the equator. *Tellus* 16:181–185. (295)
- Bretherton, F. P., 1966a. Baroclinic instability and the short wavelength cut-off in terms of potential vorticity. *Quarterly Journal of the Royal Meteorological Society* 92:335–345. (141, 169, 172, 529)
- Bretherton, F. P., 1966b. Critical layer instability in baroclinic flows. *Quarterly Journal of the Royal Meteorological Society* 92:325–334. (169, 173, 182, 529, 531)
- Bretherton, F. P., 1966c. The propagation of groups of internal gravity waves in a shear flow. *Quarterly Journal of the Royal Meteorological Society* 92:466–480. (274)
- Bretherton, F. P., R. E. Davis, and C. B. Fandry, 1976. A technique for objective analysis and design of oceanographic experiments applied to MODE-73. *Deep-Sea Research* 23:559–581. (431)
- Bretherton, F. P., and D. B. Haidvogel, 1976. Two-dimensional turbulence above topography. *Journal of Fluid Mechanics* 78:129–154. (178)
- Bretherton, F. P., P. Hazel, S. A. Thorpe, and I. R. Wood, 1967. Appendix to: “The effect of viscosity and heat conduction on internal gravity waves at a critical level” by P. Hazel. *Journal of Fluid Mechanics* 30:781–783. (274)
- Bretherton, F. P., and M. J. Karweit, 1975. Mid-ocean meso-scale modeling. In *Numerical Models of Ocean Circulation*, National Academy of Sciences, Washington, D.C., pp. 237–249. (133, 178)
- Brewer, P. G., and A. Bradshaw, 1975. The effect of the non-ideal composition of seawater on salinity and density. *Journal of Marine Research* 33:157–175. (448)
- Brink, K. H., 1978. A laboratory study of open ocean barometric response. *Dynamics of Atmospheres and Oceans* 2: 153–183. (475)
- Brink, K. H., and J. S. Allen, 1978. On the effect of bottom friction on barotropic motion over the continental shelf. *Journal of Physical Oceanography* 8:919–922. (223)
- Briscoe, M. G., 1975a. Internal waves in the ocean. *Reviews of Geophysics and Space Physics* 13:591–598. (265)
- Briscoe, M. G., 1975b. Preliminary results from the tri-moored internal wave experiment (IWEX). *Journal of Geophysical Research* 80:3872–3884. (265, 332)
- British Admiralty, 1903. *Sailing Directions for the Southeast Coast of Nova Scotia and Bay of Fundy*, London, 350 pp. (209)
- Brocks, K., and L. Krügermeyer, 1972. The hydrodynamic roughness of the sea surface. In *Studies in Physical Ocean-*

- ography: A Tribute to Georg Wüst on his 80th Birthday, A. L. Gordon, ed., Gordon and Breach, New York, 1, pp. 75–92. (489)
- Broecker, W. S., 1963. C¹⁴/C¹² ratios in surface ocean water. In *Proceedings of Conference on Nuclear Geophysics, Woods Hole, June 7–9, 1962*, P. M. Hurley, G. Faure, and C. Schnetzler, eds., Publication 1075, National Academy of Sciences—National Research Council, Washington, D.C., pp. 138–149. (439, 449)
- Broecker, W. S., 1965. An application of natural radon to problems in ocean circulation. In *Symposium on Diffusion in Oceans and Fresh Waters*, Lamont Geological Observatory, Palisades, New York, pp. 116–145. (446)
- Broecker, W. S., 1974. "NO", a conservative water-mass tracer. *Earth and Planetary Science Letters* 23:100–107. (448)
- Broecker, W. S., 1979. A revised estimate for the radiocarbon age of North Atlantic deep water. *Journal of Geophysical Research* 84:3218–3226. (450, 453)
- Broecker, W. S., in press. A distribution of He³ anomalies in the deep Atlantic. *Earth and Planetary Science Letters*. (445)
- Broecker, W. S., J. Cromwell, and Y.-H. Li, 1968. Rates of vertical eddy diffusion near the ocean floor based on measurements of the distribution of excess ²²²Rn. *Earth and Planetary Science Letters* 5:101–105. (446)
- Broecker, W. S., R. Gerard, M. Ewing, and B. C. Heezen, 1960. Natural radiocarbon in the Atlantic Ocean. *Journal of Geophysical Research* 65:2903–2931. (449, 450)
- Broecker, W. S., and Y.-H. Li, 1970. Interchange of water between the major oceans. *Journal of Geophysical Research* 75:3545–3552. (440, 449, 450)
- Broecker, W. S., Y.-H. Li, and T.-H. Peng, 1971. Carbon dioxide—man's unseen artifact. In *Impingement of Man on the Oceans*, D. W. Hood, ed., John Wiley and Sons, New York, pp. 234–287. (449)
- Broecker, W. S., and E. A. Olson, 1959. Lamont natural radiocarbon measurements VI. *American Journal of Science Radiocarbon Supplement* 1:111–132. (439)
- Broecker, W. S., and E. A. Olson, 1961. Lamont radiocarbon measurements VIII. *Radiocarbon* 3:176–204. (439)
- Broecker, W. S., and H. G. Östlund, 1979. Property distributions along the $\sigma_\theta = 26.8$ isopycnal in the Atlantic Ocean. *Journal of Geophysical Research* 84:1145–1154. (456)
- Broecker, W. S., T.-H. Peng, and M. Stuiver, 1978. An estimate of the upwelling rate in the equatorial Atlantic based on the distribution of bomb radiocarbon. *Journal of Geophysical Research* 83:6179–6186. (440, 456, 460)
- Broecker, W. S., T.-H. Peng, and T. Takahashi, in press. A strategy for the use of bomb produced radiocarbon as a tracer for the uptake of fossil fuel CO₂ by the ocean's deep water source regions. *Earth and Planetary Science Letters*. (447)
- Broecker, W. S., T. Takahashi, and Y.-H. Li, 1976. Hydrography of the Central Atlantic—I. The two degree discontinuity. *Deep-Sea Research* 23:1083–1104. (454)
- Broecker, W. S., T. Takahashi, H. J. Simpson, and T.-H. Peng, 1979. The fate of fossil fuel carbon dioxide and the global carbon budget. *Science* 206:409–418. (449)
- Broecker, W. S., and A. Walton, 1959. Radiocarbon from nuclear tests. *Science* 130:309–314. (439)
- Brooks, D. A., 1975. Wind-forced Continental Shelf waves in the Florida Current. *University of Miami, Rosenstiel School of Marine and Atmospheric Sciences, Technical Report UM-RSMAS-#75026*, 268 pp. (117, 120, 121)
- Brooks, D. A., 1978. Subtidal sea level fluctuations and their relation to atmospheric forcing along the North Carolina coast. *Journal of Physical Oceanography* 8:481–493. (120)
- Brooks, D. A., and J. M. Bane, Jr., 1978. Gulf Stream deflection by a bottom feature off Charleston, South Carolina. *Science* 201:1225–1226. (120)
- Brooks, I. H., and P. P. Niiler, 1977. Energetics of the Florida Current. *Journal of Marine Research* 35:163–191. (118)
- Brown, N. L., 1968. An in situ salinometer for use in the deep ocean. In *ISA Marine Sciences Instrumentation* 4 (Jarvarg 1968), p. 563.
- Brown, N. L., 1974. A precision CTD microprofiler. In *Ocean 74 Record, 1974 IEEE Conference on Engineering in the Ocean Environment*, IEEE Publication 74 CHO 873-0 OEC, Institute of Electrical and Electronics Engineers, New York, 2, pp. 270–278. (267, 416, 418, 421)
- Brown, N. L., and B. V. Hamon, 1961. An inductive salinometer. *Deep-Sea Research* 8:65–75. (416)
- Brown, W., W. Munk, F. Snodgrass, B. Zetler, and H. Mofjeld, 1975. MODE bottom experiment. *Journal of Physical Oceanography* 5:75–85. (165, 305, 347, 348)
- Browning, K. A., and F. H. Ludlam, 1962. Airflow in convective storms. *Quarterly Journal of the Royal Meteorological Society* 88:117–135. (500)
- Bryan, K., 1960. The instability of a two-layered system enclosed between horizontal, coaxially rotating plates. *Journal of Meteorology* 17:446–455. (466, 469, 476)
- Bryan, K., 1963. A numerical investigation of a nonlinear model of a wind-driven ocean. *Journal of the Atmospheric Sciences* 20:594–606. (89, 90, 155, 156)
- Bryan, K., 1969. Climate and the ocean circulation. III. The ocean model. *Monthly Weather Review* 97:806–827. (174)
- Bryan, K., and M. D. Cox, 1968a. A nonlinear model of an ocean driven by wind and differential heating: Part I. Description of the three-dimensional velocity and density fields. *Journal of the Atmospheric Sciences* 25:945–967. (118)
- Bryan, K., and M. D. Cox, 1968b. A nonlinear model of an ocean driven by wind and differential heating: Part II. An analysis of the heat, vorticity and energy balance. *Journal of the Atmospheric Sciences* 25:968–978. (118)
- Bryan, K., S. Manabe, and R. C. Pacanowski, 1975. A global ocean-atmosphere climate model. Part II. The oceanic circulation. *Journal of Physical Oceanography* 5:30–46. (182)
- Bryden, H. L., 1977. Geostrophic comparisons from moored measurements of current and temperature during the Mid-Ocean Dynamics Experiment. *Deep-Sea Research* 24:667–681. (397, 407)
- Bryden, H., 1979. Poleward heat flux and conversion of available potential energy in Drake Passage. *Journal of Marine Research* 37:1–22. (359, 372)
- Bryden, H., and N. P. Fofonoff, 1977. Horizontal divergence and vorticity estimates from velocity and temperature measurements in the MODE region. *Journal of Physical Oceanography* 7:329–337. (372)

- Buchan, A., 1895. Report on oceanic circulation, based on the observations made on board H.M.S. Challenger, and other observations. In *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1872–76, A Summary of the Scientific Results, Second Part, Appendix [Physics and Chemistry, Part VIII]*, 38 pp. (9)
- Buchan, A., 1897. Specific gravities and oceanic circulation. *Transactions of the Royal Society of Edinburgh* 38:317–342. (199)
- Buchanan, J. Y., 1877. On the distribution of salt in the ocean, as indicated by the specific gravity of its waters. *Journal of the Royal Geographical Society* 47:72–86. (71, 72)
- Buchanan, J. Y., 1884. Report on the specific gravity of samples of ocean-water, observed on board H.M.S. Challenger, during the years 1873–1876. In *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1873–76, Physics and Chemistry*, 1:2, 46 pp. (9)
- Buchanan, J. Y., 1888. The exploration of the Gulf of Guinea. *Scottish Geographical Magazine* 4:177–200, 233–251. (185)
- Buchanan, J. Y., 1913. On the land slopes separating continents and ocean basins. *Collected Papers*, Cambridge University Press, London, 1:39, 31 pp. (199)
- Buchwald, V., 1968. The diffraction of Kelvin waves at a corner. *Journal of Fluid Mechanics* 31:193–205. (299)
- Budyko, M. I., 1956. *Teplovoy Balans Zemnoi Poverkhnosti*. Gidrometeorologicheskoe Izdatel'stvo, Leningrad, 255 pp. (*The Heat Balance of the Earth's Surface*, N. A. Stepanova, translator, PB 131692, Office of Technical Services, Department of Commerce, Washington, D.C., 1958, 259 pp.) (490)
- Budyko, M. I., 1963. *Atlas Teplovogo Balansa Zemnogo Shara* (*Atlas of the Heat Balance of the Globe*). Mezhdovedomstvennyi Geofizicheskii Komitet pri Presidiume Akademii Nauk SSSR, Glavnaya Geofizicheskaya Observatoriya imeni A. I. Voeikova, Moscow, 5 pp., 69 plates. (58)
- Bue, C. D., 1970. Stream flow from the United States into the Atlantic Ocean during 1931–1960. *Contributions to the Hydrology of the United States. Geological Survey Water Supply Papers*, 1899-I, 36 pp. (232)
- Buff, H., 1850. *Zur Physik der Erde*. Friedrich Vieweg und Sohn, Braunschweig, 251 pp. (40)
- Bumpus, D., 1955. Investigation of climate and oceanographic factors influencing the environment of fish. *Oceanus* 4:1, 3–5. (212)
- Bumpus, D. F., 1956. Drift bottles are getting bigger. *Oceanus* 4:4, 22–24. (213)
- Bumpus, D. F., 1965. Residual drift along the bottom on the continental shelf in the Middle Atlantic Bight area. *Alfred C. Redfield 75th Anniversary Volume, Limnology and Oceanography* 10 (Supplement):R50–R53. (213)
- Bumpus, D. F., 1969. Reversals in the surface drift in the Middle Atlantic Bight area. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement): 17–23. (212, 213)
- Bumpus, D. F., 1973. A description of the circulation on the continental shelf of the east coast of the United States. *Progress in Oceanography* 6:111–157. (207, 213, 227, 228)
- Bumpus, D. F., J. Chase, C. Day, D. H. Frantz, Jr., D. D. Ketchum, and R. G. Walden, 1957. A new technique for studying non-tidal drift with results of experiments off Gay Head, Massachusetts, and in the Bay of Fundy. *Journal of the Fisheries Research Board of Canada* 14:931–944. (213)
- Bumpus, D. F., and L. M. Lauzier, 1965. Surface circulation on the continental shelf off eastern North America between Newfoundland and Florida. *Serial Atlas of the Marine Environment*, Folio 7, American Geographical Society, New York, 8 pp. + 8 plates. (212)
- Bunker, A. F., 1976. Computations of surface energy flux and annual air-sea interaction cycles of the North Atlantic Ocean. *Monthly Weather Review* 104:1122–1140. (186, 230, 232, 348, 490)
- Bunker, A. F., and L. V. Worthington, 1976. Energy exchange charts of the North Atlantic Ocean. *Bulletin of the American Meteorological Society* 57:670–678. (137)
- Burger, A. P., 1958. Scale consideration of planetary motions of the atmosphere. *Tellus* 10:195–205. (302, 508, 509, 510, 517)
- Burger, A. P., 1962. On the non-existence of critical wavelengths in a continuous baroclinic stability problem. *Journal of the Atmospheric Sciences* 19:30–38. (529)
- Burkov, V. A., R. P. Bulatov, and V. G. Neiman, 1973. Krupnomasshtabnye cherty tsirkulyatsii vod mirvogo okeana. *Okeanologiya* 13:395–403. (Large-scale features of water circulation in the world ocean. *Oceanology* 13:325–332.) (85, 87, 108)
- Burkov, V. A., and I. M. Ovchinnikov, 1960. Osobennosti struktury zonal'nykh potokov i meridional'noi tsirkulyatsii vod v tsentral'noi chasti Tikhogo okeana zimoi severnogo polushariya (Features of the structure of zonal flows and meridional circulation of water in the central part of the Pacific Ocean in the Northern Hemisphere winter). *Trudy Instituta Okeanologii, Akademiya Nauk SSSR* 40:93–107. (83)
- Burling, R. W., 1959. The spectrum of waves at short fetches. *Deutsche Hydrographische Zeitschrift* 12:45–64, 96–117. (491, 492, 493)
- Burt, W. V., and E. M. Agee, 1977. Buoy and satellite observations of mesoscale cellular convection during AMTEX 75. *Boundary-Layer Meteorology* 12:3–24. (215)
- Burton, J. D., 1975. Radionuclides in the marine environment. In *Chemical Oceanography*, J. P. Riley and G. Skirrow, eds., Academic Press, London, 1, pp. 91–191. (435)
- Buscaglia, J. L., 1971. On the circulation of the Intermediate Water in the southwestern Atlantic Ocean. *Journal of Marine Research* 29:245–255. (82, 84)
- Busch, N. E., 1977. Fluxes in the surface boundary-layer over the sea. In *Modelling and Prediction of the Upper Layers of the Ocean*, E. Kraus, ed., Pergamon Press, Oxford, pp. 72–91. (485, 487)
- Bush, K., and S. L. Kupferman, 1980. Wind stress direction and the alongshore pressure gradient in the Middle Atlantic Bight. *Journal of Physical Oceanography* 10:469–471. (229)
- Businger, J. A., and S. J. S. Khalsa, 1978. On the structure of convective elements in the air near the surface. In *Turbulent Fluxes through the Sea Surface, Wave Dynamics, and Prediction*, A. Favre and K. Hasselmann, eds., Plenum Press, New York, pp. 5–19. (498)
- Busse, F. H., 1969. On Howard's upper bound for heat transport by turbulent convection. *Journal of Fluid Mechanics* 37:457–477. (387)

- Busse, F. H., 1978. Non-linear properties of thermal convection. *Reports on Progress in Physics*, 41:1929–1967. (387)
- Butman, B., and M. Noble, 1978. Bottom currents and bottom sediment mobility in the offshore Middle Atlantic Bight 1976–77. Chapter 2 in *Geological Studies of the Middle Atlantic OCS for the Period July 1, 1976–June 30, 1977*, Report by the U.S. Geological Survey to the Bureau of Land Management, 53 pp. (226)
- Butman, B., and M. Noble, 1979. Observations of currents and sediment movement on Georges Bank. In draft of final report, *Geological Studies of the Georges Bank OCS for the Period 1 October 1977–30 September 1978*, Report by the U.S. Geological Survey to the Bureau of Land Management. (226)
- Butman, B., M. Noble, and D. A. Folger, 1979. Long-term observations of bottom current and bottom sediment movement on the Mid-Atlantic Continental Shelf. *Journal of Geophysical Research* 84:1187–1205. (218, 222, 225)
- Buy's Ballot, 1857. Note sur le rapport de l'intensité et de la direction du vent avec les écarts simultanés du baromètre. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 45:765–768. See also "Afwijkingen in Europa. Écarts en Europe. 1857", *Meteorologische Waarnemingen in Nederland en Zigne Bezittingen, en Afwijkingen van Temperatuur en Barometerstand op Vele Plaatsen in Europa* (re-titled as *Jaarboek. Nederlands Meteorologisch Instituut*) 1857: 175–271. (508)
- Buzyna, G., and G. Veronis, 1971. Spin-up of a stratified fluid: theory and experiment. *Journal of Fluid Mechanics* 50:579–608. (476)
- Bye, J. A. T., and G. Veronis, 1979. A correction to the Sverdrup transport. *Journal of Physical Oceanography* 9:649–651. (151)
- Cacchione, D., and C. Wunsch, 1974. Experimental study of internal waves over a slope. *Journal of Fluid Mechanics* 66:223–239. (261)
- Cairns, J. L., and G. O. Williams, 1976. Internal wave observations from a midwater float, 2. *Journal of Geophysical Research* 81:1943–1950. (265, 272, 286, 339, 340, 419)
- Caldwell, D. R., R. E. Snodgrass, and M. H. Wimbush, 1969. Sensors in the deep sea. *Physics Today* 22:34–42. (425)
- Caldwell, D. R., and C. W. van Atta, 1970. Characteristics of Ekman boundary layer instabilities. *Journal of Fluid Mechanics* 44:79–95. (464)
- Caldwell, D. R., C. W. van Atta, and K. N. Holland, 1972. A laboratory study of the turbulent Ekman boundary layer. *Geophysical Fluid Dynamics* 3:125–160. (149)
- Caldwell, D. R., S. D. Wilcox, and M. Matsler, 1975. A relatively simple freely-falling probe for small-scale temperature gradients. *Limnology and Oceanography* 20:1035–1042. (419)
- Callahan, J. E., 1972. The structure and circulation of Deep Water in the Antarctic. *Deep-Sea Research* 19:563–575. (44, 84, 106)
- Cameron, W., 1951. On the transverse forces in a British Columbia inlet. *Transactions of the Royal Society of Canada, Series 3* 45:1–8. (203)
- Cameron, W. M., and D. W. Pritchard, 1963. Estuaries. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 2: The Composition of Sea-Water, Comparative and Descriptive Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 306–324. (202, 204)
- Cane, M., 1979a. The response of an equatorial ocean to simple wind stress patterns: I. Model formulation and analytic results. *Journal of Marine Research* 37:233–252. (527)
- Cane, M. A., 1979b. The response of an equatorial ocean to simple wind stress patterns; II. Numerical results. *Journal of Marine Research* 37:253–299. (191)
- Cane, M., and E. Sarachik, 1976. Forced baroclinic ocean motions: I. The linear equatorial unbounded case. *Journal of Marine Research* 34:629–665. (185, 526)
- Cane, M., and E. Sarachik, 1977. Forced baroclinic ocean motions: II. The linear equatorial bounded case. *Journal of Marine Research* 35:395–432. (185, 526)
- Cane, M., and E. Sarachik, 1979. Forced baroclinic ocean motions: III. The linear equatorial basin case. *Journal of Marine Research* 37:355–398. (185, 527)
- Cannon, G. A., 1966. Tropical waters in the western Pacific Ocean, August–September 1957. *Deep-Sea Research* 13:1139–1148. (83)
- Cannon, G. A., 1971. Statistical characteristics of velocity fluctuations at intermediate scales in a coastal plain estuary. *Journal of Geophysical Research* 76:5852–5858. (205)
- Cannon, G. A., and C. C. Ebbesmeyer, 1978. Winter replacement of bottom water in Puget Sound. In *Estuarine Transport-Processes*, B. Kjerfve, ed., University of South Carolina Press, Columbia, South Carolina, pp. 229–238. (206)
- Cannon, G. A., and N. P. Laird, 1978. Variability of currents and water properties from year-long observations in a fjord estuary. In *Hydrodynamics of Estuaries and Fjords*, J. C. J. Nihoul, ed., Elsevier, Amsterdam, pp. 515–535. (206)
- Cannon, G. A., and D. Pritchard, 1971. A bi-axial propeller current-meter system for fixed-mount applications. *Journal of Marine Research* 29:181–190. (205)
- Carmack, E. C., 1973. Silicate and potential temperature in the deep and bottom waters of the western Weddell Sea. *Deep-Sea Research* 20: 927–932. (17, 18)
- Carmack, E. C., 1977. Water characteristics of the Southern Ocean south of the Polar Front. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, pp. 15–41. (456)
- Carmack, E. C., and K. Aagaard, 1973. On the deep water of the Greenland Sea. *Deep-Sea Research* 20:687–715. (251, 258)
- Carmack, E. C., and T. D. Foster, 1975. On the flow of water out of the Weddell Sea. *Deep-Sea Research* 22:711–724. (17, 20)
- Carmack, E. C., and P. D. Killworth, 1978. Formation and interleaving of abyssal water masses off Wilkes Land, Antarctica. *Deep-Sea Research* 25:357–369. (22, 262)
- Carpenter, J., G. Jeffreys, and W. Thomson, 1869. Preliminary report of the scientific exploration of the deep sea in H. M. Surveying-vessel "Porcupine", during the summer of 1869. *Proceedings of the Royal Society of London* 18:397–492. (8, 22)
- Cartwright, D. E., 1969. Extraordinary tidal currents near St. Kilda. *Nature* 223:928–932. (326)

- Cartwright, D. E., 1972. Secular changes in the oceanic tides at Brest, 1711–1936. *Geophysical Journal* 30:433–449. (351)
- Cartwright, D. E., 1977. Ocean tides. *Reports on Progress in Physics* 40:665–708. (292, 293, 294, 322, 323, 329, 424)
- Cartwright, D. E., B. D. Zetler, and B. V. Hamon, 1979. Pelagic Tidal Constants. *Publication Scientifique, Association Internationale d'Océanographie Physique, U.G.G.I.*, No. 30, Paris, 65 pp. (323)
- Cazenave, A., S. Daillet, and K. Lambeck, 1977. Tidal studies from the perturbations in satellite orbits. *Philosophical Transactions of the Royal Society of London A* 284:595–606. (323)
- Cerasoli, C. P., 1975. Free shear layer instability due to probes in rotating source-sink flows. *Journal of Fluid Mechanics* 72:559–586. (464)
- Chan, L. H., D. Drummond, J. M. Edmond, and B. Grant, 1977. On the barium data from the Atlantic GEOSECS Expedition. *Deep-Sea Research* 24:613–649. (29, 448)
- Chan, L. H., J. M. Edmond, R. F. Stallard, W. S. Broecker, Y. C. Chung, R. F. Weiss, and T.-L. Ku, 1976. Radium and barium at GEOSECS stations in the Atlantic and Pacific. *Earth and Planetary Science Letters* 32:258–267. (444)
- Chan, S.-K., 1971. Infinite Prandtl number turbulent convection. *Studies in Applied Mathematics* 50:13–49. (387, 388)
- Chandrasekhar, S., 1961. *Hydrodynamic and Hydromagnetic Stability*. Oxford University Press, London, 652 pp. (386)
- Chapman, S., and R. S. Lindzen, 1970. *Atmospheric Tides: Thermal and Gravitational*. Gordon & Breach, New York, 200 pp. (295)
- Charney, J. G., 1947. The dynamics of long waves in a baroclinic westerly current. *Journal of Meteorology* 4:135–163. (169, 506, 508, 529)
- Charney, J. G., 1948. On the scale of atmospheric motions. *Geofysiske Publikasjoner* 17:2, 17 pp. (508)
- Charney, J. G., 1949. On a physical basis for numerical prediction of large-scale motions in the atmosphere. *Journal of Meteorology* 6:371–385. (524)
- Charney, J. G., 1955a. The generation of ocean currents by wind. *Journal of Marine Research* 14:477–498. (148)
- Charney, J. G., 1955b. The Gulf Stream as an inertial boundary layer. *Proceedings of the National Academy of Sciences of the U.S.A.* 41:731–740. (125, 154, 506)
- Charney, J. G., 1955c. The use of the primitive equations of motion in numerical weather prediction. *Tellus* 7:22–26. (508)
- Charney, J. G., 1960. Non-linear theory of a wind-driven homogeneous layer near the equator. *Deep-Sea Research* 6:303–310. (189, 190)
- Charney, J. G., 1962. Integration of the primitive and balance equations. In *Proceedings of the International Symposium on Numerical Weather Prediction in Tokyo, November 7–13, 1960*, S. Syono et al., eds., The Meteorological Society of Japan, Tokyo, pp. 131–152. (508)
- Charney, J. G., 1966. Some remaining problems in numerical weather prediction. In *Advances in Numerical Weather Prediction*, Travelers Research Center, Inc., Hartford, Connecticut, pp. 61–70. (543)
- Charney, J. G., 1969. The Intertropical Convergence Zone and the Hadley circulation of the atmosphere. In *Proceedings, WMO-IUGG Symposium in Numerical Weather Prediction*, Tokyo, 26/11–4/12, 1968, Japan Meteorological Agency, Tokyo, 3, pp. 73–79. (506, 526)
- Charney, J. G., 1971a. Geostrophic turbulence. *Journal of the Atmospheric Sciences* 28:1087–1095. (346, 371, 372, 543, 544)
- Charney, J. G., 1971b. Tropical cyclogenesis and the formation of the intertropical convergence zone. In *Mathematical Problems in the Geophysical Sciences, Part 1, Geophysical Fluid Dynamics. Lectures in Applied Mathematics*, 13, American Mathematical Society, pp. 355–368. (506)
- Charney, J. G., 1973. Planetary fluid dynamics. In *Dynamic Meteorology*, P. Morel, ed., D. Reidel, Dordrecht, Boston, pp. 128–141. (506, 507, 517)
- Charney, J. G., and J. G. DeVore, 1979. Multiple-flow equilibria in the atmosphere and blocking. *Journal of the Atmospheric Sciences* 36:1205–1216. (534, 539)
- Charney, J. G., and P. G. Drazin, 1961. Propagation of planetary-scale disturbances from the lower into the upper atmosphere. *Journal of Geophysical Research* 66:83–109. (345, 524, 533)
- Charney, J. G., and A. Eliassen, 1949. A numerical method for predicting the perturbations of the middle latitude westerlies. *Tellus* 1:38–54. (140, 506, 522, 525)
- Charney, J. G., and S. L. Spiegel, 1971. Structure of wind-driven equatorial currents in homogeneous oceans. *Journal of Physical Oceanography* 1:149–160. (190)
- Charney, J. G., and M. Stern, 1962. On the stability of internal baroclinic jets in a rotating atmosphere. *Journal of the Atmospheric Sciences* 19:159–172. (169, 172, 508, 524, 529, 531)
- Charney, J. G., and D. Straus, 1980. Form drag instability and multiple equilibria in baroclinic, orographically forced planetary wave systems. *Journal of the Atmospheric Sciences* 37: (534, 538, 539)
- Charnock, H., 1951. Energy transfer between the atmosphere and the ocean. *Science Progress* 39:80–95. (487)
- Charnock, H., 1955. Wind stress on a water surface. *Quarterly Journal of the Royal Meteorological Society* 81:639–640. (487)
- Charnock, H., 1958a. Wind generated water waves. *Science Progress* 46:487–501. (495)
- Charnock, H., 1958b. A note on empirical wind-wave formulae. *Quarterly Journal of the Royal Meteorological Society* 84:443–447. (491)
- Charnock, H., 1965. A preliminary study of the directional spectrum of short-period internal waves. In *Second United States Navy Symposium on Military Oceanography, The Proceedings of the Symposium*, U.S. Naval Ordnance Laboratory White Oak, Silver Springs, Maryland, 1, pp. 175–178. (265)
- Charnock, H., and T. H. Ellison, 1967. The boundary-layer in relation to large-scale motions of the atmosphere and ocean. In *Report of the Study Conference on The Global Atmospheric Research Programme (GARP) Held at Stockholm 28 June–11 July 1967*, ICSU/IUGG Committee on Atmospheric Sciences and COSPAR, Appendix IV, 16 pp. (496)

- Charnock, H., J. R. D. Francis, and P. A. Sheppard, 1956. An investigation of wind structure in the Trades: Anegada 1953. *Philosophical Transactions of the Royal Society of London A* 249:179–234. (503)
- Chase, J., 1959. Wind induced changes in the water column along the east coast of the United States. *Journal of Geophysical Research* 64:1013–1032. (212)
- Chase, J., 1969. Surface salinity along the east coast of the United States. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement):25–29. (212)
- Chen, C. F., D. G. Briggs, and R. A. Wirtz, 1971. Stability of thermal convection in a salinity gradient due to lateral heating. *International Journal of Heat and Mass Transfer* 14:57–65. (252)
- Cheney, R. E., and P. L. Richardson, 1976. Observed decay of a cyclonic Gulf Stream ring. *Deep-Sea Research* 23:143–155. (132, 508, 527)
- Ching, J. K. S., 1975. Determining the drag coefficient from vorticity, momentum, and mass budget analyses. *Journal of the Atmospheric Sciences* 32:1898–1908. (490)
- Chu, T. Y., and R. J. Goldstein, 1973. Turbulent convection in a horizontal layer of water. *Journal of Fluid Mechanics* 60:141–159. (391)
- Chuang, W.-S., D.-P. Wang, and W. C. Boicourt, 1979. Low-frequency current variability on the southern Mid-Atlantic Bight. *Journal of Physical Oceanography* 9:1144–1154. (218, 219, 222)
- Chung, Y.-C., 1976. A deep ^{226}Ra maximum in the northeast Pacific. *Earth and Planetary Science Letters* 32:249–257. (445)
- Chung, Y.-C., and H. Craig, in press. The distribution of ^{226}Ra and its relationship with barium and silicate in the Pacific. *Earth and Planetary Science Letters*. (445, 448)
- Clarke, A. J., 1977. Observational and numerical evidence for wind-forced coastal trapped long waves. *Journal of Physical Oceanography* 7:231–247. (222)
- Clarke, M. R., 1977. A brief review of sampling techniques and tools of marine biology. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, pp. 439–465. (396)
- Clarke, R. A., 1971. Solitary and cnoidal planetary waves. *Geophysical Fluid Dynamics* 2:343–354. (516)
- Clarke, R. A., and J. C. Gascard, 1979. Deep convection and the formation of Labrador Sea Water. Abstract (only) in *IAPSO Program for the XVII General Assembly of the International Association for the Physical Sciences of the Ocean and the International Union of Geodesy and Geophysics*, IAPSO Secretariat, P.O. Box 7325, San Diego, California, p. 54. (41)
- Clarke, R. A., H. Hill, R. F. Reiniger, and B. A. Warren, 1980. Current system south and east of the Grand Banks of Newfoundland. *Journal of Physical Oceanography* 10:25–65. (26, 28, 85, 137, 138)
- Clarke, R. A., and R. F. Reiniger, 1973. The Gulf Stream at 49°30'W. *Deep-Sea Research* 20:627–641. (26)
- Clarke, R. H., 1970. Observational studies in the atmospheric boundary-layer. *Quarterly Journal of the Royal Meteorological Society* 96:91–114. (502)
- Clarke, W. B., M. A. Beg, and H. Craig, 1969. Excess ^3He in the sea: evidence for terrestrial primordial helium. *Earth and Planetary Science Letters* 6:213–220. (444)
- Clarke, W. B., M. A. Beg, and H. Craig, 1970. Excess ^3He at the North Pacific GEOSECS station. *Journal of Geophysical Research* 75:7676–7678. (444)
- CLIMAP Project Members, 1976. The surface of the ice age earth. *Science* 191:1131–1137. (348)
- Clowes, A. J., 1934. Hydrology of the Bransfield Strait. *Discovery Reports* 9:1–64. (15)
- Clowes, A. J., 1950. An introduction to the hydrology of South African waters. *Investigational Report, Fisheries and Marine Biological Survey Division, Department of Commerce and Industries, Union of South Africa*, No. 12, 42 pp., 20 charts. (82)
- Coaker, S. A., 1977. The stability of a Rossby wave. *Geophysical and Astrophysical Fluid Dynamics* 9:1–17. (535)
- Coats, D. A., 1979. The determination of absolute velocity from the density field in the northeastern Pacific Ocean. M.S. Thesis, University of California at San Diego, 56 pp. (91)
- Cochrane, J. D., 1958. The frequency distribution of water characteristics in the Pacific Ocean. *Deep-Sea Research* 5:111–127. (42, 44, 46, 47, 49, 50, 57)
- Cochrane, J. D., 1963. Equatorial Undercurrent and related currents off Brazil in March and April, 1963. *Science* 142:669–671. (82)
- Cochrane, J. D., 1969. Low sea-surface salinity off northeastern South America in summer 1964. *Journal of Marine Research* 27:327–334. (82)
- Cochrane, J. D., F. J. Kelly, and C. R. Olling, 1979. Subthermocline countercurrents in the western equatorial Atlantic Ocean. *Journal of Physical Oceanography* 9:724–738. (186)
- Colebrook, J. M., 1972. Variability in the distribution and abundance of the plankton. *ICNAF Special Publication No. 8*:167–186. (382)
- Colebrook, J. M., 1976. Trends in the climate of the North Atlantic Ocean over the past century. *Nature* 263:576–577. (59)
- Colin de Verdière, A., 1977. Quasigeostrophic flows and turbulence in a rotating homogeneous fluid. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, W.H.O.I. Reference No. 78-27, 171 pp. (473, 474, 544)
- Committee on Geodesy, 1979. *Requirements for a Dedicated Gravity Satellite*. National Academy of Sciences, Washington, D.C. (428)
- Connary, S. D., and M. Ewing, 1974. Penetration of Antarctic Bottom Water from the Cape Basin into the Angola Basin. *Journal of Geophysical Research* 79:463–469. (29)
- Cooper, L. H. N., 1952. Factors affecting the distribution of silicate in the North Atlantic Ocean and the formation of North Atlantic Deep Water. *Journal of the Marine Biological Association of the United Kingdom* 30:511–526. (22, 40, 41)
- Cooper, L. H. N., 1955a. Deep water movements in the North Atlantic as a link between climatic changes around Iceland and biological productivity of the English Channel and Celtic Sea. *Journal of Marine Research* 14:347–362. (22, 44, 58, 72)

- Cooper, L. H. N., 1955b. Hypotheses connecting fluctuations in Arctic climate with biological productivity of the English Channel. *Papers in Marine Biology and Oceanography, Deep-Sea Research*, 3 (Supplement):212–223. (22)
- Cornish, V., 1898. On sea beaches and sand banks. *Journal of the Royal Geographical Society* 11:528–543. (199)
- Cowles, R. P., 1930. A biological study of the offshore waters of Chesapeake Bay. *Bulletin of the United States Bureau of Fisheries* 46:277–381. (200)
- Cox, C. S., 1962. Internal waves. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 1: *Physical Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 752–763. (264)
- Cox, C. S., and C. L. Johnson, 1979. Inter-relations of micro-processes, internal waves, and large scale ocean features. (Unpublished manuscript.) (276)
- Cox, C. S., and H. Sandstrom, 1962. Coupling of internal and surface waves in water of variable depth. *Journal of the Oceanographical Society of Japan, 20th Anniversary Volume*: 499–513. (331)
- Cox, M. D., 1975. A baroclinic numerical model of the world ocean: preliminary results. In *Numerical Models of Ocean Circulation*, National Academy of Sciences, Washington, D.C., pp. 107–120. (90)
- Cox, M. D., 1976. Equatorially trapped waves and the generation of the Somali Current. *Deep-Sea Research* 23:1139–1152. (192)
- Cox, M. D., 1980. Generation and propagation of 30-day waves in a numerical model of the Pacific. *Journal of Physical Oceanography*. (193)
- Cox, R. A., 1963. The salinity problem. *Progress in Oceanography* 1:243–261. (416)
- Craig, H., 1957. The natural distribution of radiocarbon and the exchange time of carbon dioxide between atmosphere and sea. *Tellus* 9:1–17. (449)
- Craig, H., 1969. Abyssal carbon and radiocarbon in the Pacific. *Journal of Geophysical Research* 74:5491–5506. (440, 449)
- Craig, H., and L. I. Gordon, 1965. Deuterium and oxygen-18 variations in the ocean and marine atmosphere. In *Stable Isotopes in Oceanographic Studies and Paleotemperatures, Proceedings Spoleto Conference, July 1965*, E. Tongiorgi, ed., Consiglio Nazionale delle Ricerche e Sigli, V. Lischi e Figli, Pisa, pp. 9–130. (448)
- Craig, H., and D. Lal, 1961. The production rate of natural tritium. *Tellus* 13:85–105. (440)
- Craig, R. A., 1946. Measurements of temperature and humidity in the lowest 1000 feet of the atmosphere over Massachusetts Bay. *Papers in Physical Oceanography and Meteorology* 10:1, 47 pp. (500, 501)
- Craik, A. D. D., 1977. The generation of Langmuir circulations by an instability mechanism. *Journal of Fluid Mechanics* 81:209–223. (242)
- Craik, A. D. D., and S. Leibovich, 1976. A rational model of Langmuir circulations. *Journal of Fluid Mechanics* 73:401–426. (478)
- Crapper, P. F., 1975. Measurements across a diffusive interface. *Deep-Sea Research* 22:537–545. (254)
- Crapper, P. F., and P. F. Linden, 1974. The structure of turbulent density interfaces. *Journal of Fluid Mechanics* 65:45–63. (243)
- Crawford, W. R., and T. R. Osborn, 1980. Microstructure measurements in the Atlantic Equatorial Undercurrent during GATE. *Deep-Sea Research* 26(supp. ©1979). (282, 283, 284)
- Crease, J., 1962. Velocity measurements in the deep water of the western North Atlantic, summary. *Journal of Geophysical Research* 67:3173–3176. (358, 507)
- Crease, J., 1965. The flow of Norwegian Sea Water through the Faroe Bank Channel. *Deep-Sea Research* 12:143–150. (22)
- Cromwell, T., 1953. Circulation in a meridional plane in the central equatorial Pacific. *Journal of Marine Research* 12:196–213. (190, 195)
- Cromwell, T., 1960. Pycnoclines created by mixing in an aquarium tank. *Journal of Marine Research* 18:73–82. (242)
- Cromwell, T., R. B. Montgomery, and E. D. Stroup, 1954. Equatorial undercurrent in Pacific Ocean revealed by new methods. *Science* 119:648–649. (185, 189)
- Csanady, G. T., 1967. On the resistance law of a turbulent Ekman layer. *Journal of the Atmospheric Sciences* 24:467–471. (502)
- Csanady, G. T., 1972. Frictional currents in the mixed layer at the sea surface. *Journal of Physical Oceanography* 2:498–508. (148, 149)
- Csanady, G. T., 1974. Barotropic currents over the continental shelf. *Journal of Geophysical Research* 4:357–371. (223)
- Csanady, G. T., 1976. Mean circulation in shallow seas. *Journal of Geophysical Research* 81:5389–5399. (228, 378)
- Csanady, G. T., 1978. The arrested topographic wave. *Journal of Physical Oceanography* 8:47–62. (223, 228)
- Csanady, G. T., 1979. The pressure field along the western margin of the North Atlantic. *Journal of Geophysical Research* 84:4905–4915. (228)
- Csanady, G. T., 1980. Longshore pressure gradients caused by offshore wind. *Journal of Geophysical Research* 85:1076–1084. (218, 223)
- Cushing, D. H., and D. S. Tungate, 1963. Studies on a *Calanus* patch. I. The identification of a *Calanus* patch. *Journal of the Marine Biological Association of the United Kingdom* 43:327–337. (376, 378)
- Dahl, O., 1969. The capability of the Aanderaa recording and telemetering instrument. *Progress in Oceanography* 5:103–106. (405)
- Dahlen, J. M., N. K. Chhabra, J. F. McKenna, J. R. Scholten, J. T. Shillingford, F. J. Siraco, and W. E. Toth, 1977. Draper Laboratory profiling current and CTD meter. *Technical Report Charles Stark Draper Laboratory R-1095*, 122 pp. (424)
- Daley, R., 1978. Variational non-linear normal mode initialization. *Tellus* 30:201–217. (509)
- Damon, P. E., J. C. Lerman, and A. Long, 1978. Temporal fluctuations of atmospheric ^{14}C : Causal factors and implications. *Annual Review of Earth and Planetary Sciences* 6:457–460. (439)
- Dantzler, H. L., Jr., 1976. Geographic variations in intensity of the North Atlantic and North Pacific oceanic eddy fields. *Deep-Sea Research* 23:783–794. (71, 361)

- Dantzler, H. L., Jr., 1977. Potential energy maxima in the tropical and subtropical North Atlantic. *Journal of Physical Oceanography* 7:512–519. (359)
- Darwin, G. H., 1886. On the dynamical theory of the tides of long period. *Proceedings of the Royal Society of London* 41:337–342. (344)
- Darwin, G. H., 1911a. *The Tides and Kindred Phenomena in the Solar System*. John Murray, London, 437 pp. (318)
- Darwin, G. H., 1911b. Tide. *Encyclopedia Britannica*, 11th ed. (293, 318, 319)
- Davidson, K. L., 1974. Observational results on the influence of stability and wind-wave coupling on momentum transfer and turbulent fluctuations over ocean waves. *Boundary-Layer Meteorology* 6:305–331. (489)
- Davis, R. E., 1972. On the prediction of the turbulent flow over a wavy boundary. *Journal of Fluid Mechanics* 52:287–306. (494)
- Davis, R. E., 1975. Statistical methods. In *Dynamics and the Analysis of MODE-1: Report of the MODE-1 Dynamics Group*, Massachusetts Institute of Technology, Cambridge, Massachusetts, pp. 1–26. (Unpublished document.) (431)
- Davis, R. E., 1976. Predictability of sea surface temperature and sea level pressure anomalies over the North Pacific Ocean. *Journal of Physical Oceanography* 6:249–266. (351, 355, 372)
- Davis, R. E., 1978a. Predictability of sea level pressure anomalies over the North Pacific Ocean. *Journal of Physical Oceanography* 8:233–246. (351, 355)
- Davis, R. E., 1978b. On estimating velocity from hydrographic data. *Journal of Geophysical Research* 83:5507–5509. (397)
- Davis, R. E., and A. Acrivos, 1967. The stability of oscillatory internal waves. *Journal of Fluid Mechanics* 30:723–736. (275)
- Davis, R., and R. Weller, 1978. Propeller current sensors. In *Instruments and Methods in Air-Sea Interaction*, preprint volume for NATO School, Ustaoset, Norway, April 1978, NATO Science Committee, 13 pp. (404)
- Dawson, W. B., 1897. Survey of tides and currents in Canadian waters. *Proceedings of the Royal Society of Canada* 1:31–39. (199)
- Dawson, W. B., 1913. *The Currents in the Gulf of St. Lawrence*. Department of the Naval Service, Ottawa, Canada, 45 pp. (208)
- Deacon, E. L., 1953. Vertical profiles of mean wind in the surface layers of the atmosphere. *Geophysical Memoirs* 11:91, 68 pp. (486)
- Deacon, E. L., and E. K. Webb, 1962. Small-scale interactions. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 1: *Physical Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 43–87. (488)
- Deacon, G. E. R., 1937. The hydrology of the Southern Ocean. *Discovery Reports* 15:1–124. (10, 72)
- Deacon, G. E. R., 1976. The cyclonic circulation in the Weddell Sea. *Deep-Sea Research* 23:125–126. (17)
- Deacon, G. E. R., and J. A. Moorey, 1975. The boundary region between currents from the Weddell Sea and Drake Passage. *Deep-Sea Research* 22:265–268. (15)
- Deacon, M., 1971. *Scientists and the Sea 1650–1900: A Study of Marine Science*. Academic Press, London and New York, 445 pp. (xxvii, 8, 40)
- Deardorff, J. W., 1972. Parameterisation of the planetary boundary layer for use in general circulation models. *Monthly Weather Review* 100:93–106. (496)
- Defant, A., 1931. Die ozeanische Zirkulation. Chap. 9 of *Physik des Meeres*, in *Handbuch der Experimental Physik*, 25, *Geophysik, II. Teil, Physik des Fester Erdkörpers und des Meeres*, G. Angenheister, ed., Akademische Verlagsgesellschaft, Leipzig, pp. 671–686. (10)
- Defant, A., 1936. Schichtung und Zirkulation des Atlantischen Ozeans. Die Troposphäre. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs—und Vermessungsschiff "Meteor" 1925–1927*, 6:1st Part, 3, pp. 289–411. (43, 82)
- Defant, A., 1938. Aufbau und Zirkulation des Atlantischen Ozeans. *Sitzungsberichte der Preussischen Akademie der Wissenschaften, Physikalisch-mathematische Klasse, Jahrgang* 1938: 145–171. (22, 72)
- Defant, A., 1941a. Quantitative Untersuchungen zur Statik und Dynamik des Atlantischen Ozeans. Die relative Topographie einzelner Drückflächen im Atlantischen Ozean. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs—und Vermessungsschiff "Meteor" 1925–1927*, 6:2nd Part, 4, pp. 183–190. (75, 78, 85, 90, 91, 108)
- Defant, A., 1941b. Quantitative Untersuchungen zur Statik und Dynamik des Atlantischen Ozeans. Die absolute Topographie des physikalischen Meeressniveaus und der Drückflächen sowie die Wasserbewegungen im Raum des Atlantischen Ozeans. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs—und Vermessungsschiff "Meteor" 1925–1927*, 6:2nd Part, 1, pp. 191–260. (75, 78, 79, 80, 83, 91, 108)
- Defant, A., 1950. On the origin of internal tide waves in the open sea. *Journal of Marine Research* 9:111–119. (331)
- Defant, A., 1961a. *Physical Oceanography*, 2. Pergamon Press, New York, 598 pp. (264)
- Defant, A., 1961b. *Physical Oceanography*, 1. Pergamon Press, New York, 729 pp. (505)
- Degens, E. T., and D. A. Ross, eds., 1969. *Hot Brines and Recent Heavy Metal Deposits in the Red Sea: A Geophysical and Geochemical Account*. Springer-Verlag, Berlin, 600 pp. (252)
- Degens, E. T., R. P. von Herzen, H.-K. Wong, W. G. Deuser, and H. W. Jannasch, 1973. Lake Kivu: Structure, chemistry and biology of an East African rift lake. *Geologische Rundschau* 62:245–277. (256)
- De Leonibus, P. S., 1963. Power spectra of surface wave heights estimated from recordings made from a submerged hovering submarine. In *Ocean Wave Spectra: Proceedings of a Conference*, Prentice-Hall, Englewood Cliffs, New Jersey, pp. 243–249. (492)
- De Leonibus, P. S., 1971. Momentum flux and wave spectra observations from an ocean tower. *Journal of Geophysical Research* 76:6506–6527. (489)
- Denman, K. L., and M. Miyake, 1973. Upper layer modification at Ocean Station Papa: Observations and simulation. *Journal of Physical Oceanography* 3:185–196. (245)

- Desaubies, Y. J. F., 1973. Internal waves near the turning point. *Geophysical Fluid Dynamics* 5:143–154. (291)
- Desaubies, Y. J. F., 1975. A linear theory of internal wave spectra and coherences near the Väisälä frequency. *Journal of Geophysical Research* 80:895–899. (272, 291)
- Desaubies, Y. J. F., and M. C. Gregg, 1978. Observations of internal wave vertical velocities by a free-fall vehicle. *Deep-Sea Research* 25:933–946. (419, 420)
- de Szoeke, R. A., 1975. Some effects of bottom topography on baroclinic stability. *Journal of Marine Research* 33:93–122. (538)
- de Szoeke, R. A., and P. B. Rhines, 1976. Asymptotic regimes in mixed-layer deepening. *Journal of Marine Research* 34:111–116. (243)
- Detrick, R. S., D. L. Williams, J. D. Mudie, and J. G. Slater, 1974. The Galapagos spreading center: Bottom-water temperatures and the significance of geothermal heating. *Geophysical Journal of the Royal Astronomical Society* 38:627–637. (35)
- Diaz, H. F., 1980. Meteorological conditions associated with the 1976 New York anoxia episode. In *Oxygen Depletion and Associated Benthic Mortalities in New York Bight*, 1976, R. Swanson and C. Sindermann, eds., NOAA Professional Paper, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland. (225)
- Dickinson, R. E., 1978. Rossby waves—long period oscillations of oceans and atmospheres. *Annual Review of Fluid Mechanics* 10:159–196. (520)
- Dietrich, G., 1937. I. Die Lage der Meeresoberfläche im Druckfeld von Ozean und Atmosphäre, mit besonderer Berücksichtigung des westlichen Nordatlantischen Ozeans und des Golfes von Mexiko. II. Über Bewegung und Herkunft des Golfstromwassers. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge. A. Geographisch-naturwissenschaftliche Reihe*, 33, 1–51 and 52–91. (211)
- Dietrich, G., 1944. Die Schwingungssysteme der halb-und eintägigen Tiden in den Ozeanen. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge. A. Geographisch-naturwissenschaftliche Reihe*, 41, 7–68. (318)
- Dietrich, G., 1956. Überströmung des Island-Färöer Rückens in Bodennähe nach Beobachtungen mit dem Forschungsschiff "Anton Dohrn" 1955–56. *Deutsche Hydrographische Zeitschrift* 9:78–89. (22)
- Dietrich, G., 1957a. Ozeanographische Probleme der deutschen Forschungsfahrten im Internationalen Geophysikalischen Jahr 1957/58. *Deutsche Hydrographische Zeitschrift* 10:39–61. (22, 41)
- Dietrich, G., 1957b. Schichtung and Zirkulation der Irminger-See in Juni 1955. *Berichte der Deutsche Wissenschaftlichen Kommission für Meeresforschung, Neue Folge* 14:255–312. (22, 23)
- Dillon, T. M., and D. R. Caldwell, 1978. Catastrophic events in a surface mixed layer. *Nature* 276: 601–602. (242)
- Dobson, F., 1971. Measurements of atmospheric pressure on wind-generated sea waves. *Journal of Fluid Mechanics* 48:91–127. (494)
- Donelan, M. A., 1978. Whitecaps and momentum transfer. In *Turbulent Fluxes through the Sea Surface, Wave Dynamics, and Prediction*, A. Favre and K. Hasselmann, eds., Plenum Press, New York, pp. 273–287. (495)
- Donn, W. L., J. G. Patullo, and D. M. Shaw, 1964. Sea-level fluctuations and long waves. In *Research in Geophysics*, 2: *Solid Earth and Interface Phenomena*, H. Odishaw, ed., MIT Press, Cambridge, Massachusetts, pp. 243–269. (353, 357)
- Douglas, H. P., 1930. Current measurements in the Strait of Gibraltar made in H. M. S. "Goldfinch" in 1905. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 67:7–14. (199)
- Drazin, P. G., 1970. Non-linear baroclinic instability of a continuous zonal flow. *Quarterly Journal of the Royal Meteorological Society* 96:667–676. (532)
- Drazin, P. G., 1972. Non-linear baroclinic instability of a continuous zonal flow of a viscous fluid. *Journal of Fluid Mechanics* 55:577–588. (532)
- Dreisigacker, E., and W. Roether, 1978. Tritium and strontium-90 in North Atlantic surface water. *Earth and Planetary Science Letters* 38:301–312. (446)
- Drever, R. G., and T. B. Sanford, 1970. A free-fall electromagnetic current meter—instrumentation. In *Proceedings of the IERE Conference on "Electronic Engineering in Ocean Technology"*, Univ. Coll. Swansea, 21–24 Sept. 1970, Institute of Electrical and Radio Engineers, London, pp. 353–370. (422)
- Druffel, E. M., and T. W. Linick, 1978. Radiocarbon in annual coral rings of Florida. *Geophysical Research Letters* 5:913–916. (439)
- Drygalski, E. von, 1904. *Zum Kontinent des eisigen Südens*. Georg Reimer, Berlin, 668 pp. (29)
- Duffy, D. G., 1978. The stability of a nonlinear, finite-amplitude, neutrally stable Eady wave. *Journal of the Atmospheric Sciences* 35:1619–1625. (534)
- Düing, W., P. Hisard, E. Katz, J. Meincke, L. Miller, K. V. Moroshkin, G. Philander, A. A. Ribnikov, K. Voigt, and R. Weisberg, 1975. Meanders and long waves in the equatorial Atlantic. *Nature* 257:280–284. (186)
- Düing, W., and D. Johnson, 1972. High resolution current profiling in the Straits of Florida. *Deep-Sea Research* 19:259–274. (424)
- Düing, W., C. N. K. Mooers, and T. N. Lee, 1977. Low-frequency variability in the Florida Current and relations to atmospheric forcing from 1972–1974. *Journal of Marine Research* 35:129–161. (121, 347, 358)
- Durney, B. R., 1977. The influence of mesoscale topography on the stability and growth rates of a two-layer model of the open ocean. *Geophysical and Astrophysical Fluid Dynamics* 9:115–128. (538)
- Dyer, K. R., 1973. *Estuaries: A Physical Introduction*. John Wiley & Sons, London, 140 pp. (203, 205)
- Dyer, K. R., 1977. Lateral circulation effects in estuaries. In *Estuaries, Geophysics, and the Environment*, C. B. Officer, panel chairman, National Academy of Sciences, Washington, D.C., pp. 22–29. (205, 206)
- Eady, E. T., 1949. Long waves and cyclone waves. *Tellus* 1:33–52. (169, 173, 506, 508, 519, 529, 532)

- Eckart, C., 1948. An analysis of the stirring and mixing processes in incompressible fluids. *Journal of Marine Research* 7:265–275. ⟨239, 267⟩
- Eckart, C., 1951. Surface waves in water of variable depth. *Marine Physical Laboratory of the Scripps Institution of Oceanography, Wave Report No. 100, SIO Reference Series 51-12*, 99 pp. ⟨307, 309, 317⟩
- Eckart, C., 1953. The generation of waves over a water surface. *Journal of Applied Physics* 24:1485–1494. ⟨494⟩
- Eckart, C., 1960. *Hydrodynamics of Oceans and Atmospheres*. Pergamon Press, Macmillan, New York, 290 pp. ⟨268, 295⟩
- Eckart, C., 1961. Internal waves in the ocean. *The Physics of Fluids* 4:791–799. ⟨272⟩
- Edmond, J. M., 1974. On the dissolution of carbonate and silicate in the deep ocean. *Deep-Sea Research* 21:455–480. ⟨448⟩
- Edmond, J. M., Y. Chung, and J. G. Slater, 1971. Pacific Bottom Water: penetration east around Hawaii. *Journal of Geophysical Research* 76:8089–8097. ⟨35⟩
- EG&G, 1978. Summary of physical oceanographic observations near the site of the proposed Atlantic generating station, offshore of Little Egg Inlet, New Jersey, 1972 through 1976. A report to the Public Service Electric and Gas Company, Newark, New Jersey, 365 pp. ⟨217, 218, 219, 225, 226, 230⟩
- Ekman, F. L., 1876. On the general causes of the ocean-currents. *Nova Acta Regiae Societatis Scientiarum Upsaliensis, Serie 3* 10:6, 52 pp. ⟨199⟩
- Ekman, V. W., 1899. Ein Beitrag zur Erklärung und Berechnung des Stromverlaufs an Flussmündungen. *Översigt af Kongliga Vetenskaps-Akademiens Förhandlingar* 56:479–507. ⟨199⟩
- Ekman, V. W., 1902. Om jordrotationens inverkan på vindströmmar i havet. *Nyt Magazin for Naturvidenskaberne* 40:37–63. ⟨525⟩
- Ekman, V. M., 1905. On the influence of the earth's rotation on ocean-currents. *Arkiv för Matematik, Astronomi och Fysik* 2:11, 52 pp. ⟨xxiv, 140, 147, 463, 525⟩
- Ekman, V. W., 1906. Beiträge zur Theorie der Meeresströmungen. *Annalen der Hydrographie und Maritimen Meteorologie* 34:423–430. ⟨140⟩
- Ekman, V. W., 1923. Über Horizontalzirkulation bei windzeugten Meeresströmungen. *Arkiv för Matematik, Astronomi och Fysik* 17:26, 74 pp. ⟨xxiv, 38, 72, 74⟩
- Ekman, V. W., 1931. On internal waves. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 76:5–34. ⟨332⟩
- Ekman, V. W., 1934. Review of: Georg Wüst. "Das Bodenwasser und die Gliederung der Atlantischen Tiefsee". *Journal du Conseil* 9:102–104. ⟨41, 82⟩
- Ekman, V. W., 1953. Studies on ocean currents. Results of a cruise on board the "Armauer Hansen" in 1930 under the leadership of Bjørn Helland-Hansen. Part I and Part II. *Geofysiske Publikasjoner* 19:1, 106 pp. and 122 pp. ⟨265⟩
- Ekman, V. W., and B. Helland-Hansen, 1931. Measurement of ocean currents. Experiments in the North Atlantic. *Kungliga Fysiografiska Sällskapets i Lund Förhandlingar* 1:1–7. ⟨265⟩
- Elder, J. W., 1969. The temporal development of a model of high Rayleigh number convection. *Journal of Fluid Mechanics* 35:417–437. ⟨498⟩
- Eliassen, E., 1960. On the initial development of frontal waves. *Publikationer fra det Danske Meteorologiske Institut, Meddelelser*, 13, 107 pp. ⟨529⟩
- Eliassen, A., 1949. The quasi-static equations of motion with pressure as independent variable. *Geofysiske Publikasjoner* 17:3, 44 pp. ⟨508⟩
- Eliassen, A., 1952. Slow thermally or frictionally controlled meridional circulation in a circular vortex. *Astrophysica Norvegica* 5:19–60. ⟨509⟩
- Eliassen, A., and E. Palm, 1960. On the transfer of energy in stationary mountain waves. *Geofysiske Publikasjoner* 22:3, 23 pp. ⟨345, 533⟩
- Ellett, D. J., and D. G. Roberts, 1973. The overflow of Norwegian Sea Deep Water across the Wyville-Thomson Ridge. *Deep-Sea Research* 20:819–835. ⟨22⟩
- Elliott, A. J., 1978. Observations of the meteorologically induced circulation in the Potomac estuary. *Estuarine and Coastal Marine Science* 6:285–300. ⟨206⟩
- Elliott, J. A., 1972. Microscale pressure fluctuation near waves being generated by the wind. *Journal of Fluid Mechanics* 54:427–448. ⟨494⟩
- Elliott, J. A., and N. S. Oakey, 1975. Horizontal coherence of temperature microstructure. *Journal of Physical Oceanography* 5:506–515. ⟨283⟩
- Ellis, H., 1751. A letter to the Rev. Dr. Hales, F.R.S. from Captain Henry Ellis, F.R.S. dated Jan. 7, 1950–51, at Cape Monte Africa, Ship Earl of Halifax. *Philosophical Transactions of the Royal Society of London* 47:211–214. ⟨7⟩
- Ellison, T. H., 1956. Atmospheric turbulence. In *Surveys in Mechanics*, G. K. Batchelor and R. M. Davies, eds., Cambridge University Press, London, pp. 400–430. ⟨487, 502⟩
- Ellison, T. H., and J. S. Turner, 1959. Turbulent entrainment in stratified flows. *Journal of Fluid Mechanics* 6:423–448. ⟨241, 260⟩
- El-Sayed, S. Z., 1971. Observations on phytoplankton bloom in the Weddell Sea. In *Antarctic Research Series, 17: Biology of the Antarctic Seas IV*, G. A. Llano and I. E. Wallen, eds., American Geophysical Union, Washington, D.C., pp. 301–312. ⟨380⟩
- Emery, K. O., and E. Uchupi, 1972. Western North Atlantic Ocean: Topography, rocks, structure, water, life, and sediments. *American Association of Petroleum Geologists Memoir No. 17*, 532 pp. ⟨208⟩
- Eppley, R. W., E. H. Renger, E. L. Venrick, and M. M. Mullin, 1973. A study of plankton dynamics and nutrient cycling in the central gyre of the North Pacific Ocean. *Limnology and Oceanography* 18:534–551. ⟨377⟩
- Epstein, S., and T. K. Mayeda, 1953. Variation of O¹⁸ content of waters from natural sources. *Geochimica et Cosmochimica Acta* 4:213–224. ⟨448⟩
- Eriksen, C. C., 1978. Measurements and models of fine structure, internal gravity waves, and wave breaking in the deep ocean. *Journal of Geophysical Research* 83:2989–3009. ⟨249, 258, 271, 287, 405⟩

- Eriksen, C. C., 1980. Evidence for a continuous spectrum of equatorial waves in the Indian Ocean. *Journal of Geophysical Research.* 272, 291.
- Errico, R. M., 1979. The partitioning of energy between geostrophic and ageostrophic modes in a simple model. Ph.D. Thesis, Massachusetts Institute of Technology, Cambridge, Massachusetts. 509, 543.
- Ertel, H., 1942. Ein neuer hydrodynamischer Wirbelsatz, *Meteorologische Zeitschrift* 59:277–282. 142.
- Evans, G. T., 1978. Biological effects of vertical-horizontal interactions. In *Spatial Pattern in Plankton Communities*, J. H. Steele, ed., Plenum Press, New York, pp. 157–180. 378.
- Ewing, G. C., 1950. Relation between band slicks at the surface and internal waves in the sea. *Science* 111:91–94. 265.
- Ewing, M., and J. L. Worzel, 1948. Long-range sound transmission. In *Propagation of Sound in the Ocean*, The Geological Society of America Memoir 27:3, 35 pp. 412.
- Eyriés, M., 1968. Marégraphes de grandes profondeurs. *Cahiers Océanographiques* 20:355–368. 323, 424, 425.
- Faller, A. J., 1960. Further examples of stationary planetary flow patterns in bounded basins. *Tellus* 12:159–171. 12, 466, 467, 468, 472, 473.
- Faller, A. J., 1963. An experimental study of the instability of the laminar Ekman boundary layer. *Journal of Fluid Mechanics* 15:560–576. 464, 466.
- Faller, A. J., 1969. The generation of Langmuir circulations by the eddy pressure of surface waves. *Limnology and Oceanography* 14:504–513. 477.
- Faller, A. J., 1978. Experiments with controlled Langmuir circulations. *Science* 201:618–620. 242, 476.
- Faller, A. J., and E. A. Caponi, 1978. Laboratory studies of wind-driven Langmuir circulations. *Journal of Geophysical Research* 83:3617–3633. 477.
- Faller, A. J., and R. Kaylor, 1967. Instability of the Ekman spiral with applications to the planetary boundary layers. *Boundary Layers and Turbulence, The Physics of Fluids* 10 (Supplement):S212–S219. 464.
- Faller, A. J., and D. L. Porter, 1976. A note on eastern boundary currents in a laboratory analogue of the ocean circulation. *Tellus* 28:88–89. 468.
- Faller, A. J., and W. S. von Arx, 1958. The modeling of fluid flow on a planetary scale. In *Proceedings of the Seventh Hydraulics Conference, June 16–18, 1958*, A. Toch and G. R. Schneider, eds., State University of Iowa, *Studies in Engineering Bulletin*, 39, pp. 53–72. 466.
- Fandry, C. B., and L. M. Leslie, 1972. A note on the effect of latitudinally varying bottom topography on the wind-driven ocean circulation. *Tellus* 24:164–167. 28.
- Fandry, C., and R. D. Pillsbury, 1979. On the estimation of absolute geostrophic volume transport applied to the Antarctic Circumpolar Current. *Journal of Physical Oceanography* 9:449–455. 431, 432.
- Farmer, D. M., 1975. Penetrative convection in the absence of mean shear. *Quarterly Journal of the Royal Meteorological Society* 101:869–891. 245.
- Farmer, D. M., 1976. The influence of wind on the surface layer of a stratified inlet: Part II. Analysis. *Journal of Physical Oceanography* 6:941–952. 206.
- Farmer, D. M., and T. R. Osborn, 1976. The influence of wind on the surface layer of a stratified inlet: Part I. Observations. *Journal of Physical Oceanography* 6:931–940. 206.
- Farrell, W. E., 1972a. Deformation of the earth by surface loads. *Reviews of Geophysics and Space Physics* 10:761–797. 296.
- Farrell, W. E., 1972b. Global calculations of tidal loading. *Nature* 23:238. 297, 328.
- Farrell, W. E., 1979. Earth tides. *Reviews of Geophysics and Space Physics* 17:1442–1446. 323.
- Farrington, G. C., and J. L. Bryant, 1979. Fast ionic transport in solids. *Science* 204:1371–1379. 401.
- Fasham, M. J. R., 1978. The application of some stochastic processes to the study of plankton patchiness. In *Spatial Pattern in Plankton Communities*, J. H. Steele, ed., Plenum Press, New York, pp. 131–156. 382.
- Fasham, M. J. R., and P. R. Pugh, 1976. Observations on the horizontal coherence of chlorophyll *a* and temperature. *Deep-Sea Research* 23:527–538. 380.
- Fedorov, K. N., 1976. *Tonkaya Termokhalinnaya Struktura Vod Okeana*. Gidrometeoizdat, Leningrad. [The Thermohaline Finestructure of the Ocean, D. A. Brown, translator, J. S. Turner, tech. ed., Pergamon Press, Oxford, 1978, 170 pp.] 252, 257.
- Fejér, L., 1916. Über trigonometrische Polynome. *Journal für reine und angewandte Mathematik* 146:53–74. 389.
- Ferrel, W., 1856. An essay on the winds and the currents of the ocean, *Nashville Journal of Medicine and Surgery* 11: Nos. 4 and 5; republished in *Popular Essays on the Movements of the Atmosphere, Professional Papers of the Signal Service*, No. 12 (1882), pp. 7–19. See also "The motions of fluids and solids relative to the earth's surface," *Runkle's Mathematical Monthly*, 1858–1860; republished in *Professional Papers of the Signal Service*, No. 8 (1882), 51 pp. Both papers were published in an anthology compiled by Marcel Brillouin entitled *Memoires Originaux sur la Circulation Générale de l'Atmosphère*, Paris, 1900. 508.
- Fettis, H. F., 1955. On the integration of a class of differential equations occurring in boundary layers and other hydrodynamic problems. In *Proceedings of Fourth Midwestern Conference on Fluid Mechanics, Purdue University, Engineering Experimental Station, Research Series No. 128*, pp. 93–114. 149.
- Feynman, R. P., R. B. Leighton, and M. Sands, 1964. *The Feynman Lectures on Physics*, 2. Addison-Wesley, Reading, Mass., pp. 41–111. 396.
- Fflowcs Williams, J. E., 1969. Hydrodynamic noise. *Annual Review of Fluid Mechanics* 1:197–222. 509.
- Fiadeiro, M. E., and H. Craig, 1978. Three-dimensional modeling of tracers in the deep Pacific Ocean: I. Salinity and oxygen. *Journal of Marine Research* 36:323–355. 81, 449.
- Fiedler, F., and H. A. Panofsky, 1970. Atmospheric scales and spectral gaps. *Bulletin of the American Meteorological Society* 51:1114–1119. 214.
- Fieux, M., and H. Stommel, 1975. Preliminary look at feasibility of using marine reports of sea surface temperature for documenting climatic change in the Western North Atlantic. *Journal of Marine Research* 33 (Supplement):83–95. 374.

- Filloux, J. H., 1969. Bourdon tube deep-sea tide gauges. In *International Symposium on Tsunamis and Tsunami Research*, W. M. Adams, ed., University of Hawaii Press, Honolulu, pp. 223–228. (323)
- Filloux, J. H., 1970. Deep-sea tide gauge with optical readout of bourdon tube rotations. *Nature* 226:936–937. (425)
- Filloux, J. H., 1973a. Tidal patterns and energy balance in the Gulf of California. *Nature* 243:217–221. (325)
- Filloux, J. H., 1973b. Techniques and instrumentation for study of natural electromagnetic induction at sea. *Physics of the Earth and Planetary Interiors* 7:323–338. (426)
- Filloux, J. H., 1974. Electric field recording on the sea floor with short span instruments. *Journal of Geomagnetism and Geoelectricity* 26:269–279. (426)
- Findlater, J., T. N. J. Harrower, G. A. Howkins, and H. L. Wright, 1966. Surface and 900 mb wind relationships. *Meteorological Office Scientific Paper* No. 23, H. M. Stationery Office, London, 41 pp. (503)
- Findlay, A. G., 1853. Oceanic currents, and their connection with the proposed Central-America canals. *Journal of the Royal Geographical Society* 23:217–242. (208)
- FINE, 1978. Review Papers of Equatorial Oceanography—FINE Workshop Proceedings. Nova/N.Y.I.T. University Press, Fort Lauderdale, pp. various. (184)
- Firing, E., and R. C. Beardsley, 1976. The behavior of a barotropic eddy on a β -plane. *Journal of Physical Oceanography* 6:57–65. (474)
- Fischer, H. B., 1972. Mass transport mechanisms in partially stratified estuaries. *Journal of Fluid Mechanics* 53:672–687. (205)
- Fischer, H. B., 1973. Longitudinal dispersion and turbulent mixing in open-channel flow. *Annual Review of Fluid Mechanics* 5:59–78. (240)
- Fischer, H. B., 1976. Mixing and dispersion in estuaries. *Annual Review of Fluid Mechanics* 8:107–133. (240)
- Fisher, A., Jr., 1972. Entrainment of shelf water by the Gulf Stream northeast of Cape Hatteras. *Journal of Geophysical Research* 77:3248–3255. (213)
- Fjeldstad, J. E., 1933. Interne Wellen. *Geofysiske Publikasjoner* 10:6, 35 pp. (191)
- Fjørtoft, R., 1950. Application of integral theorems in deriving criteria of stability for laminar flows and for the baroclinic circular vortex. *Geofysiske Publikasjoner* 17:6, 52 pp. (529, 531)
- Fjørtoft, R., 1953. On the changes in the spectral distribution of kinetic energy for twodimensional, nondivergent flow. *Tellus* 5:225–230. (346, 535, 543, 544)
- Flagg, C. N., 1977. The kinematics and dynamics of the New England continental shelf and shelf/slope front. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, WHOI Ref. 77-67, 207 pp. (218, 219, 222, 226)
- Flatté, S. M., ed., R. Dashen, W. H. Munk, K. M. Watson, and F. Zachariasen, 1979. *Sound Transmission through a Fluctuating Ocean*. Cambridge University Press, London, 299 pp. (265)
- Flattery, T. W., 1967. Hough functions. Ph.D. Thesis, University of Chicago, Chicago, Illinois. (297)
- Fleming, J. A., H. U. Sverdrup, C. C. Ennis, S. L. Seaton, and W. C. Hendrix, 1945. Observations and results in physical oceanography. Graphical and tabular summaries. In *Scientific Results of Cruise VII of the Carnegie during 1928–1929 under Command of Captain J. P. Ault, Oceanography—I-B*, Carnegie Institution of Washington Publication 545, 315 pp. (78, 79, 85)
- Flierl, G. R., 1977. The application of linear quasi-geostrophic dynamics to Gulf Stream rings. *Journal of Physical Oceanography* 7:365–379. (137, 373)
- Flierl, G. R., 1978. Models of vertical structure and the calibration of two-layer models. *Dynamics of Atmospheres and Oceans* 2:341–381. (182, 183, 529)
- Flierl, G. R., 1979a. A simple model for the structure of warm and cold core rings. *Journal of Geophysical Research* 84:781–785. (137)
- Flierl, G. R., 1979b. Baroclinic solitary waves with radial symmetry. *Dynamics of Atmospheres and Oceans* 3:15–38. (345, 515)
- Flierl, G. R., V. Kamenkovich, and A. R. Robinson, 1975. Gulf Stream meandering and Gulf Stream rings. In *Dynamics and the Analysis of Mode I: Report of the MODE-1 Dynamics Group*, Massachusetts Institute of Technology, Cambridge, Mass., pp. 113–135. (Unpublished document.) (524)
- Flierl, G. R., V. D. Larichev, J. C. McWilliams, and G. M. Reznik, 1980. The dynamics of baroclinic and barotropic solitary eddies. *Dynamics of Atmospheres and Oceans*. (511)
- Fofonoff, N. P., 1954. Steady flow in a frictionless homogeneous ocean. *Journal of Marine Research* 13:254–262. (117, 141, 153, 154, 341, 531)
- Fofonoff, N. P., 1956. Some properties of sea water influencing the formation of Antarctic bottom water. *Deep-Sea Research* 4:32–35. (257)
- Fofonoff, N. P., 1962a. Dynamics of ocean currents. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 1: *Physical Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 323–395. (122, 154, 159)
- Fofonoff, N. P., 1962b. Physical properties of sea water. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 1: *Physical Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 3–30. (183)
- Fofonoff, N. P., 1969. Spectral characteristics of internal waves in the ocean. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement):58–71. (265, 285)
- Fofonoff, N. P., and Y. Ercan, 1967. Response characteristics of a Savonius rotor current meter. *W.H.O.I. Technical Report* 67-33, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 36 pp. (404, 406)
- Fofonoff, N. P., and R. B. Montgomery, 1955. The equatorial undercurrent in the light of the vorticity equation. *Tellus* 7:518–521. (191)
- Folger, D., B. Butman, H. Knebel, and R. Sylvester, 1978. Environmental hazards on the Atlantic outer continental shelf of the United States. *Offshore Technology Conference* (papers presented at the 10th Annual Offshore Technology Conference, Houston, Texas, May 8–11, 1978), Paper OTC 3313. (225)

- Ford, W. L., J. R. Longard, and R. E. Banks, 1952. On the nature, occurrence and origin of cold low salinity water along the edge of the Gulf Stream. *Journal of Marine Research* 11:281–293. ⟨212, 233⟩
- Ford, W. L., and A. R. Miller, 1952. The surface layers of the Gulf Stream and adjacent waters. *Journal of Marine Research* 11:267–280. ⟨212, 213, 233⟩
- Foster, T. D., 1965. Onset of convection in a layer of fluid cooled from above. *The Physics of Fluids* 8:1770–1774. ⟨243⟩
- Foster, T. D., 1971. Intermittent convection. *Geophysical Fluid Dynamics* 2:201–217. ⟨243⟩
- Foster, T. D., 1972. An analysis of the cabbeling instability in sea water. *Journal of Physical Oceanography* 2:294–301. ⟨257⟩
- Foster, T. D., and E. C. Carmack, 1976a. Frontal zone mixing and Antarctic Bottom Water formation in the southern Weddell Sea. *Deep-Sea Research* 23:301–317. ⟨17, 19, 20⟩
- Foster, T. D., and E. C. Carmack, 1976b. Temperature and salinity structure in the Weddell Sea. *Journal of Physical Oceanography* 6:36–44. ⟨257⟩
- Fowlis, W. W., and P. J. Martin, 1975. A rotating laser Doppler velocimeter and some new results on the spin-up experiments. *Geophysical Fluid Dynamics* 7:67–78. ⟨476⟩
- Fox, M. J. H., 1976. On the nonlinear transfer of energy in the peak of a gravity-wave spectrum. II. *Proceedings of the Royal Society of London A* 348:467–483. ⟨494⟩
- Fox, M. J. H., 1978. On the nonlinear transfer of energy in the peak of a gravity wave spectrum. In *Turbulent Fluxes through the Sea-Surface, Wave Dynamics, and Prediction*, A. Favre and K. Hasselmann, eds., Plenum Press, New York, pp. 319–334. ⟨494⟩
- Francis, J. R. D., H. Stommel, H. G. Farmer, and D. Parson, 1953. Observations of turbulent mixing processes in a tidal estuary. *W.H.O.I. Technical Report* 53-22, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 20 pp. ⟨205⟩
- Frankignoul, C. J., 1972. Stability of finite amplitude internal waves in a shear flow. *Geophysical Fluid Dynamics* 4:91–99. ⟨291⟩
- Frankignoul, C., and K. Hasselmann, 1977. Stochastic climate models, part II. Application to sea-surface temperature anomalies and thermocline variability. *Tellus* 29:289–305. ⟨355⟩
- Frankignoul, C., and P. Müller, 1979. Quasi-geostrophic response of an infinite β -plane ocean to stochastic forcing by the atmosphere. *Journal of Physical Oceanography* 9:104–127. ⟨217, 347, 348, 355, 515⟩
- Freeland, G. L., and D. J. P. Swift, 1979. Surficial sediments. *MESA New York Bight Atlas Monograph No. 10*, New York Sea Grant Institute, Albany, New York, 200 pp. ⟨208⟩
- Freeland, G. L., D. J. P. Swift, W. L. Stubblefield, and A. E. Cok, 1976. Surficial sediments of the NOAA-MESA study areas in the New York Bight. In *Middle Atlantic Continental Shelf and the New York Bight*, M. G. Gross, ed., American Society of Limnology and Oceanography, Special Symposia, 2, pp. 90–101. ⟨208⟩
- Freeland, H. J., P. B. Rhines, and T. Rossby, 1975. Statistical observations of the trajectories of neutrally buoyant floats in the North Atlantic. *Journal of Marine Research* 33:383–404. ⟨165, 304, 371⟩
- Frey, H. R., 1978. Northeastward drift in the northern Mid-Atlantic Bight during late spring and summer 1976. *Journal of Geophysical Research* 83:503–504. ⟨225⟩
- Friehe, C. A., and K. F. Schmitt, 1976. Parameterizations of air-sea interface fluxes of sensible heat and moisture by bulk aerodynamic formulas. *Journal of Physical Oceanography* 6:801–809. ⟨487⟩
- Fu, L.-L., 1980. Observations and models of inertial waves in the deep ocean. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, 202 pp. ⟨272⟩
- Fu, L.-L., and G. Flierl, 1980. Nonlinear energy and enstrophy transfers in a realistically stratified ocean. *Dynamics of Atmosphere and Oceans*. ⟨371, 534⟩
- Fu, L.-L., and C. Wunsch, 1979. Recovery of Array III Clusters A and B. In *POLYMODE News No. 60*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts. [Unpublished document.] ⟨370, 372, 373⟩
- Fuglister, F. C., 1947. Average monthly sea surface temperatures of the western North Atlantic Ocean. *Papers in Physical Oceanography and Meteorology* 10:2, 25 pp. ⟨348, 357⟩
- Fuglister, F. C., 1951. Annual variations in current speeds in the Gulf Stream System. *Journal of Marine Research* 10:119–127. ⟨116, 357⟩
- Fuglister, F. C., 1954. Average temperature and salinity at a depth of 200 meters in the North Atlantic. *Tellus* 6:46–58. ⟨71⟩
- Fuglister, F. C., 1960. Atlantic Ocean Atlas of Temperature and Salinity Profiles and Data from the International Geophysical Year of 1957–1958. *Woods Hole Oceanographic Institution Atlas Series* 1:209 pp. ⟨6, 7, 25, 28, 29, 43, 93, 348, 349, 358⟩
- Fuglister, F. C., 1963. Gulf Stream '60. *Progress in Oceanography* 1:265–373. ⟨112, 123, 125, 126, 127, 131, 359⟩
- Fuglister, F. C., 1972. Cyclonic rings formed by the Gulf Stream 1965–66. In *Studies in Physical Oceanography: A Tribute to Georg Wüst on his 80th Birthday*, A. L. Gordon, ed., Gordon and Breach, New York, 1, pp. 137–168. ⟨125, 132⟩
- Fuglister, F. C., and L. V. Worthington, 1951. Some results of a multiple ship survey of the Gulf Stream. *Tellus* 3:1–14. ⟨212⟩
- Fultz, D., 1953. A survey of certain thermally and mechanically driven systems of meteorological interest. In *Fluid Models in Geophysics. Proceedings of the First Symposium on the Use of Models in Geophysical Fluid Dynamics*, R. R. Long, ed., Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., pp. 27–63. ⟨466, 469, 476⟩
- Gall, R., 1976. A comparison of linear baroclinic instability theory with the eddy statistics of a general circulation model. *Journal of the Atmospheric Sciences* 33:349–373. ⟨174, 183⟩
- Gamble, J. C., J. M. Davies, and J. H. Steele, 1977. Loch Ewe bag experiment, 1974. *Bulletin of Marine Science* 27:146–175. ⟨382⟩
- Gandin, L. S., 1965. *Objective Analysis of Meteorological Fields*. Israel Program for Scientific Translation, Jerusalem, 242 pp. ⟨431⟩
- Gardner, G. B., and J. D. Smith, 1978. Turbulent mixing in a salt wedge estuary. In *Hydrodynamics of Estuaries and*

- Fjords, J. C. J. Nihoul, ed., Elsevier, Amsterdam, pp. 79–106. (205)
- Gargett, A. E., 1976. An investigation of the occurrence of oceanic turbulence with respect to finestructure. *Journal of Physical Oceanography* 6:139–156. (250, 258)
- Gargett, A. E., 1978. Microstructure and finestructure in an upper ocean frontal regime. *Journal of Geophysical Research* 83:5123–5134. (250, 258)
- Garratt, J. R., 1977. Review of drag coefficients over oceans and continents. *Monthly Weather Review* 105:915–929. (487, 488, 489, 490)
- Garrett, C., 1973. The effect of internal wave strain on vertical spectra of fine-structure. *Journal of Physical Oceanography* 3:83–85. (281)
- Garrett, C., 1974. Tides in gulfs. *Deep-Sea Research* 22:23–35. (326)
- Garrett, C. J. R., 1976. Generation of Langmuir circulations by surface waves—a feedback mechanism. *Journal of Marine Research* 34:117–130. (242)
- Garrett, C., 1979. Mixing in the ocean interior. *Dynamics of Atmospheres and Oceans* 3:239–265. (267, 286)
- Garrett, C., and D. Greenberg, 1977. Predicting changes in tidal regimes: The open boundary problem. *Journal of Physical Oceanography* 7:173–181. (326)
- Garrett, C. J. R., and W. H. Munk, 1971. The age of the tide and the Q of the oceans. *Deep-Sea Research* 18:493–503. (322, 323)
- Garrett, C., and W. Munk, 1972a. Oceanic mixing by breaking internal waves. *Deep-Sea Research* 19:823–832. (248, 288, 337)
- Garrett, C. J. R., and W. H. Munk, 1972b. Space-time scales of internal waves. *Geophysical Fluid Dynamics* 3:225–264. (265, 285, 414)
- Garrett, C. J. R., and W. H. Munk, 1975. Space-time scales of internal waves: A progress report. *Journal of Geophysical Research* 80:291–297. (265, 285)
- Garrett, C., and W. Munk, 1979. Internal waves in the ocean. *Annual Review of Fluid Mechanics* 11:339–369. (265, 285)
- Garvine, R. A., 1977. River plumes and estuary fronts. In *Estuaries, Geophysics, and the Environment*, C. B. Officer, panel chairman, National Academy of Sciences, Washington, D.C., pp. 30–35. (206)
- Gates, L., 1968. A numerical study of transient Rossby waves in a wind-driven homogeneous ocean. *Journal of the Atmospheric Sciences* 25:3–22. (341)
- Gates, W. L., 1976. Modeling the ice-age climate. *Science* 191:1138–1144. (348, 350)
- Geisler, J. E., and R. E. Dickinson, 1975. Critical level absorption of barotropic Rossby waves in a north-south flow. *Journal of Geophysical Research* 80:3805–3811. (548)
- Gent, P. R., 1974. Baroclinic instability of a slowly varying zonal flow. *Journal of the Atmospheric Sciences* 31:1983–1994. (529)
- Gent, P. R., 1975. Baroclinic instability of a slowly varying zonal flow. Part 2. *Journal of the Atmospheric Sciences* 32: 2094–2102. (529)
- Gent, P. R., and P. A. Taylor, 1976. A numerical model of the air flow above water waves. *Journal of Fluid Mechanics* 77:105–128. (494)
- Geraghty, J., D. Miller, F. Van der Leeden, and F. Troise, 1973. *Water Atlas of the United States*. Water Information Center, East Port Washington, Long Island, New York, 88 pp. (230)
- Gibson, C. H., 1980. Fossil temperature, salinity, and vorticity turbulence. In *Marine Turbulence*, J. C. J. Nihoul, ed., Elsevier, Amsterdam. (282, 284)
- Giletti, B. F., F. Bozan, and J. L. Kulp, 1958. The geochemistry of tritium. *Transactions of the American Geophysical Union* 39:807–818. (440)
- Gill, A. E., 1968. Similarity theory and geostrophic adjustment. *Quarterly Journal of the Royal Meteorological Society* 94:586–588. (502)
- Gill, A. E., 1973. Circulation and bottom water production in the Weddell Sea. *Deep-Sea Research* 20:111–140. (17, 20, 21, 40, 257, 456)
- Gill, A. E., 1974. The stability of planetary waves on an infinite beta-plane. *Geophysical Fluid Dynamics* 6:29–47. (534, 535)
- Gill, A. E., 1975a. Models of equatorial currents. In *Numerical Models of Ocean Circulation*, National Academy of Sciences, Washington, D.C., pp. 181–203. (184)
- Gill, A. E., 1975b. Evidence for mid-ocean eddies in weather ship records. *Deep-Sea Research* 22:647–652. (355)
- Gill, A. E., and K. Bryan, 1971. Effects of geometry on the circulation of a three-dimensional southern-hemisphere ocean model. *Deep-Sea Research* 18:685–721. (89)
- Gill, A. E., and A. J. Clarke, 1974. Wind-induced upwelling, coastal currents and sea-level changes. *Deep-Sea Research* 21:325–345. (358)
- Gill, A. E., J. S. A. Green, and A. J. Simmons, 1974. Energy partition in the large-scale ocean circulation and the production of mid-ocean eddies. *Deep-Sea Research* 21:499–528. (141, 173, 182, 347, 372, 529, 532)
- Gill, A. E., and P. P. Niiler, 1973. The theory of the seasonal variability in the ocean. *Deep-Sea Research* 20:141–178. (355, 357)
- Gill, A. E., and R. L. Parker, 1970. Contours of “ $h \operatorname{cosec} \theta$ ” for the world’s oceans. *Deep-Sea Research* 17:823–824. (151)
- Gill, A. E., and E. Schumann, 1974. The generation of long shelf waves by the wind. *Journal of Physical Oceanography* 4:83–90. (223)
- Gill, A. E., and J. S. Turner, 1976. A comparison of seasonal thermocline models with observation. *Deep-Sea Research* 23:391–401. (244, 245)
- Gilmour, A. E., 1979. Ross Ice Shelf temperatures. *Science* 203:438–439. (21)
- Godfrey, J. S., 1973. On the dynamics of the western boundary current in Bryan and Cox’s [1968] numerical model ocean. *Deep-Sea Research* 20:1043–1058. (118, 119)
- Godin, G., 1965. Some remarks on the tidal motion in a narrow rectangular sea of constant depth. *Deep-Sea Research* 12:461–468. (324)

- Gold, E., 1933. Maximum day temperatures and the tephigram ($t\phi$ diagram). *Meteorological Office Professional Notes* 5:63, 9 pp. (497)
- Goldsbrough, G., 1933. Ocean currents produced by evaporation and precipitation. *Proceedings of the Royal Society of London A* 141:512–517. (339, 340)
- Gonella, J., 1971. The drift current from observations made on the Bouée Laboratoire. *Cahiers Océanographiques* 23:19–33. (148)
- Gonella, J., 1972. A rotary-component method for analyzing meteorological and oceanographic vector time series. *Deep-Sea Research* 19:833–846. (272)
- Goody, R. M., and A. R. Robinson, 1966. A discussion of the deep circulation of the atmosphere of Venus. *Astrophysical Journal* 146:339–355. (505)
- Gordeev, R., B. Kagan, and E. Polyakov, 1977. The effects of loading and self-attraction on global ocean tides: The model and the results of a numerical experiment. *Journal of Physical Oceanography* 7:161–170. (297)
- Gordon, A. L., 1971. Oceanography of Antarctic waters. In *Antarctic Oceanology I*, J. L. Reid, ed., *Antarctic Research Series*, 15, pp. 169–203. (20, 21)
- Gordon, A. L., 1974. Varieties and variability of Antarctic Bottom Water. In *Processus de Formation des Eaux Océaniques Profondes, Colloques Internationaux du C.N.R.S.* No. 215, pp. 33–47. (15, 20)
- Gordon, A. L., 1975a. An Antarctic oceanographic section along 170°E. *Deep-Sea Research* 22:357–377. (20, 21)
- Gordon, A. L., 1975b. General ocean circulation. In *Numerical Models of Ocean Circulation*, National Academy of Sciences, Washington, D.C., pp. 39–53. (456)
- Gordon, A. L., 1978. Deep Antarctic convection west of Maud Rise. *Journal of Physical Oceanography* 8:600–612. (22)
- Gordon, A. L., D. T. Georgi, and H. W. Taylor, 1977. Antarctic Polar Front Zone in the western Scotia Sea—summer 1975. *Journal of Physical Oceanography* 7:309–328. (257)
- Gordon, A. L., and E. Molinelli, 1975. *USNS Eltanin Southern Ocean Oceanographic Atlas*. Lamont-Doherty Geological Observatory and Department of Geological Sciences of Columbia University, Palisades, New York, 91 plates. (20)
- Gordon, A. L., and W. D. Nowlin, 1978. The basin waters of the Bransfield Strait. *Journal of Physical Oceanography* 8:258–264. (15)
- Gordon, A. L., and P. Tchernia, 1972. Waters of the continental margin off Adélie Coast, Antarctica. In *Antarctic Oceanology II: The Australian-New Zealand Sector*, D. E. Hayes, ed., *Antarctic Research Series*, 19, pp. 59–69. (21)
- Gordon, C. M., 1974. Intermittent momentum transport in a geophysical boundary layer. *Nature* 248:392. (205)
- Gould, W. J., 1976. Instrumentation for MODE-I. *Oceanus* 19:3, 54–64. (213, 342, 428, 431, 432)
- Gould, W. J., W. J. Schmitz, Jr., and C. Wunsch, 1974. Preliminary field results for a mid-ocean dynamics experiment (MODE-0). *Deep-Sea Research* 21:911–932. (359)
- Grant, H. L., R. W. Stewart, and A. Moilliet, 1962. Turbulence spectra from a tidal channel. *Journal of Fluid Mechanics* 12:241–268. (250)
- Grant, W. D., and O. J. Madsen, 1979. Combined wave and current interaction with a rough bottom. *Journal of Geophysical Research* 84:1797–1807. (218)
- Green, J. S. A., 1960. A problem in baroclinic stability. *Quarterly Journal of the Royal Meteorological Society* 86:237–251. (169, 173, 529)
- Green, J. S. A., 1970. Transfer properties of the large-scale eddies and the general circulation of the atmosphere. *Quarterly Journal of the Royal Meteorological Society* 96:157–185. (507)
- Greenwalt, D., and C. M. Gordon, 1978. Short-term variability in the bottom boundary layer of the deep ocean. *Journal of Geophysical Research* 83:4713–4716. (259)
- Greenspan, H. P., 1963. A note concerning topography and inertial currents. *Journal of Marine Research* 21:147–154. (139)
- Greenspan, H. P., and L. N. Howard, 1963. On a time-dependent motion of a rotating fluid. *Journal of Fluid Mechanics* 17:385–404. (476, 525)
- Gregg, M. C., 1975. Microstructure and intrusions in the California Current. *Journal of Physical Oceanography* 5:253–278. (257, 258, 279, 280, 281)
- Gregg, M. C., 1976a. Temperature and salinity microstructure in the Pacific Equatorial Undercurrent. *Journal of Geophysical Research* 81:1180–1196. (244)
- Gregg, M. C., 1976b. Microstructure: Signature of mixing in the ocean. *Naval Research Reviews* 29:11, 1–21. (414)
- Gregg, M. C., 1977. A comparison of finestructure spectra from the main thermocline. *Journal of Physical Oceanography* 7:33–40. (282, 283)
- Gregg, M. C., and C. S. Cox, 1971. Measurements of oceanic microstructure of temperature and electrical conductivity. *Deep-Sea Research* 18:925–934. (419)
- Gregg, M. C., and C. S. Cox, 1972. The vertical microstructure of temperature and salinity. *Deep-Sea Research* 19:355–376. (267)
- Gregg, M. C., C. S. Cox, and P. W. Hacker, 1973. Vertical microstructure measurements in the central North Pacific. *Journal of Physical Oceanography* 3:458–469. (279, 290)
- Gregg, M. C., T. Meagher, A. Pederson, and E. Aagaard, 1978. Low noise temperature microstructure measurements with thermistors. *Deep-Sea Research* 25:843–856. (419)
- Griffiths, R. W., 1979. Transports through thermohaline interfaces in a viscous fluid and a porous medium. Ph.D. Thesis, Australian National University. (256)
- Grimshaw, R. H. J., 1975. A note on the β -plane approximation. *Tellus* 27:351–357. (143)
- Groen, P., 1948. Contribution to the theory of internal waves. *Mededelingen en Verhandelingen van het Koninklijk Nederlands Meteorologisch Instituut, De Bilt, B* 2:11, 23 pp. (265)
- Grose, P. L., and J. S. Mattson, eds., 1977. The ARGO MERCCHANT oil spill, a preliminary scientific report. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland, 133 pp. (226)
- Gross, M. G., R. L. Swanson, and H. M. Stanford, 1976. Man's impact on the middle Atlantic continental shelf and the New York Bight—Symposium summary. In *Middle Atlantic Continental Shelf and the New York Bight*, M. G. Gross, ed.,

- American Society of Limnology and Oceanography, Special Symposia, 2, pp. 1–13. (213)
- Groves, G. W., 1955. Day to day variations of sea level. Ph.D. Thesis, Scripps Institution of Oceanography, University of California at Los Angeles. (191)
- Groves, G. W., and E. J. Hannan, 1968. Time series regression of sea level on weather. *Reviews of Geophysics and Space Physics* 6:129–134. (351)
- Groves, G. W., and B. D. Zetler, 1964. The cross spectrum of sea level at San Francisco and Honolulu. *Journal of Marine Research* 22:265–275. (351)
- Gupta, S. R., and G. J. Hills, 1956. A precision electrode-less conductance cell for use at audio frequencies. *Journal of Scientific Instruments* 33:313–314. (416)
- Haas, L. W., 1977. The effect of the spring-neap tidal cycle on the vertical salinity structure of the James, York, and Rappahannock Rivers, Virginia, U.S.A. *Estuarine and Coastal Marine Science* 5:485–496. (206)
- Hachey, H. B., 1934. Movements resulting from mixing of stratified waters. *Journal of the Biological Board of Canada* 1:133–143. (201)
- Hacker, P. W., 1973. The mixing of heat deduced from temperature fine structure measurements in the Pacific Ocean and Lake Tahoe. Ph.D. Thesis, University of California at San Diego, 121 pp. (283)
- Hager, J. G., 1977. Kinetic energy exchange in the Gulf Stream. *Journal of Geophysical Research* 82:1718–1724. (118)
- Hahne, A., A. Volz, D. H. Enhalt, H. Cosatto, W. Roether, W. Weiss, and B. Kromer, 1978. Depth profiles of chlorofluoromethanes in the Norwegian Sea. *Pure and Applied Geophysics* 116:575–582. (447)
- Haidvogel, D. B., and W. R. Holland, 1978. The stability of ocean currents in eddy-resolving general circulation models. *Journal of Physical Oceanography* 8:393–413. (182)
- Haight, F. J., 1938. Currents in Narragansett Bay, Buzzards Bay, Nantucket and Vineyard Sounds. *U.S. Coast and Geodetic Survey Special Publication No.* 208, 103 pp. (200)
- Haight, F. J., 1942. Coastal currents along the Atlantic coast of the United States. *U.S. Coast and Geodetic Survey Special Publication No.* 230, 73 pp. (212)
- Haight, F. J., H. E. Finnegan, and G. L. Anderson, 1930. Tides and currents in Chesapeake Bay and tributaries. *U.S. Coast and Geodetic Survey Special Publication No.* 162, 143 pp. (200, 201)
- Hall, R. E., 1976. Scattering of Rossby waves by topography in a stratified ocean. Ph.D. Thesis, University of California at San Diego, 116 pp. (345)
- Halliwell, G. R., 1978. The space-time structure and variability of the shelf water/slope water and Gulf Stream surface thermal fronts and warm-core eddies, off the Northeast United States. M.S. Thesis, University of Delaware, Newark, 195 pp. (218)
- Hallock, Z. R., 1977. Wind forced equatorial waves in the Atlantic Ocean. *Technical Report, Rosenstiel School of Marine and Atmospheric Science, University of Miami, TR77-2*, Miami, Florida, 152 pp. (193)
- Halpern, D., 1971. Semidiurnal internal tides in Massachusetts Bay. *Journal of Geophysical Research* 76:6573–6584. (332)
- Halpern, D., 1978. Moored current measurements in the upper ocean. In *Instruments and Methods in Air-Sea Interaction*, preprint volume for NATO School, Ustaoset, Norway, April 1978, NATO Science Committee, 17 pp. (404, 405)
- Halpern, D., and R. D. Pillsbury, 1976. Influence of surface waves upon subsurface current measurements in shallow water. *Limnology and Oceanography* 21:611–616. (405)
- Hamon, B. V., 1955. A temperature-salinity-depth recorder. *Journal du Conseil* 21:72–73. (415)
- Hamon, B. V., 1956. A portable temperature-chlorinity bridge for estuarine investigations and sea water analysis. *Journal of Scientific Instruments* 33:329–333. (416)
- Hamon, B. V., 1958. The effect of pressure on the electrical conductivity of sea water. *Journal of Marine Research* 16:83–89. (416)
- Hamon, B. V., 1962. The spectrum of mean sea level at Sydney, Coff's Harbor, and Lord Howe Island. *Journal of Geophysical Research* 67: 5147–5155. (358)
- Hamon, B. V., and N. L. Brown, 1958. A temperature-chlorinity-depth recorder for use at sea. *Journal of Scientific Instruments* 35:452–458. (415)
- Han, G., D. V. Hansen, and A. Cantillo, 1980. Diagnostic model of water and oxygen transport in the New York Bight. In *Oxygen Depletion and Associated Benthic Mortalities in New York Bight, 1976*, C. R. Swanson and C. S. Sindermann, eds., NOAA Professional Paper, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland. (225)
- Hanna, S. R., 1969. The thickness of the planetary boundary layer. *Atmospheric Environment* 3: 519–536. (500)
- Hansen, D. V., 1965. Currents and mixing in the Columbia River estuary. In *Marine Technology Society and American Society of Limnology and Oceanography, Joint Conference on Ocean Science and Ocean Engineering*, pp. 943–955. (205)
- Hansen, D. V., 1970. Gulf Stream meanders between Cape Hatteras and the Grand Banks. *Deep-Sea Research* 17:495–511. (123, 126, 127, 129, 534)
- Hansen, D. V., and M. Rattray, Jr., 1965. Gravitational circulation in straits and estuaries. *Journal of Marine Research* 23:104–122. (203, 204, 206)
- Hansen, D. V., and M. Rattray, Jr., 1966. New dimensions in estuary classification. *Limnology and Oceanography* 11:319–326. (202)
- Hansen, W., 1949. Die halbtägigen Gezeiten im Nordatlantischen Ozean. *Deutsche Hydrographische Zeitschrift* 2:44–51. (328)
- Harden Jones, F. R., 1968. *Fish Migration*. Arnold, London, 325 pp. (378)
- Hardy, A. C., and E. R. Gunther, 1935. The plankton of the South Georgia whaling grounds and adjacent waters, 1926–1927. *Discovery Reports*, 11, 1–456. (376, 378)
- Harris, R. A., 1907. Manual of Tides, Part V: Currents, shallow-water tides, meteorological tides, and miscellaneous matters. In *Report of the Superintendent of the Coast and Geodetic Survey Showing the Progress of the Work from July 1*,

- 1906, to June 30, 1907, Department of Commerce and Labor, Washington, Appendix 6, pp. 231–545. (200)
- Harrison, D. E., 1979a. On the equilibrium linear basin response to fluctuating winds and mesoscale motions in the ocean. *Journal of Geophysical Research* 84:1221–1224. (348, 359)
- Harrison, D. E., 1979b. Eddies and the general circulation of numerical model gyres: An energetic perspective. *Reviews of Geophysics and Space Physics* 17:969–979. (346, 507)
- Harrison, D. E., and A. R. Robinson, 1978. Energy analysis of open regions of turbulent flows—mean eddy energetics of a numerical ocean circulation experiment. *Dynamics of Atmospheres and Oceans* 2:185–211. (507, 529)
- Hart, J. E., 1972. A laboratory study of baroclinic instability. *Geophysical Fluid Dynamics* 3:181–209. (476)
- Hart, J. E., 1979a. Finite amplitude baroclinic instability. *Annual Review of Fluid Mechanics* 11:147–172. (174, 532)
- Hart, J. E., 1979b. Barotropic quasigeostrophic flow over anisotropic mountains: multiple equilibria and bifurcation. *Journal of the Atmospheric Sciences* 36:1736–1746. (537, 540)
- Harvey, R. R., and W. Patzert, 1976. Deep current measurements suggest long waves in the eastern equatorial Pacific Ocean. *Science* 193:883–884. (186, 191, 193)
- Hasse, L., 1968. Zur Bestimmung der vertikalen Transporte von Impuls und fühlbarer Wärme in der wassernähen Luftschicht über. See *Hamburger Geophysikalischen Einzelschriften* 11, 70 pp. [On the determination of the vertical transports of momentum and heat in the atmospheric boundary layer at sea, J. F. T. Saur, translator, W. H. Quinn and L. Hasse, eds., 1970, *Technical Report 188, Reference 70-22*, Department of Oceanography, Oregon State University, 55 pp.] (489)
- Hasselmann, K., 1966. Feynman diagrams and interaction rules of wave-wave scattering processes. *Reviews of Geophysics* 4:1–32. (494)
- Hasselmann, K., 1974. On the spectral dissipation of ocean waves due to white capping. *Boundary-Layer Meteorology* 6:107–127. (495)
- Hasselmann, K., T. P. Barnett, E. Bouws, H. Carlson, D. E. Cartwright, K. Enke, J. A. Ewing, H. Gienapp, D. E. Hasselmann, P. Kruseman, A. Meerburg, P. Müller, D. J. Olbers, K. Richter, W. Sell, and H. Walden, 1973. Measurements of wind-wave growth and swell decay during the Joint North Sea Wave Project (JONSWAP). *Deutsche Hydrographische Zeitschrift, Ergänzungsheft Reihe A* 12, 95 pp. (491, 493)
- Hastenrath, S., and P. J. Lamb, 1977. *Climatic Atlas of the Tropical Atlantic and Eastern Pacific Oceans*. University of Wisconsin Press, Madison, 105 pp. (186)
- Hasunuma, K., and K. Yoshida, 1978. Splitting of the Subtropical Gyre in the Western North Pacific. *Journal of the Oceanographical Society of Japan* 34:160–172. (85)
- Haurwitz, B., 1940a. The motion of atmospheric disturbances on a spherical earth. *Journal of Marine Research* 3:254–267. (xv, 344)
- Haurwitz, B., 1940b. The motion of atmospheric disturbances. *Journal of Marine Research* 3:35–50. (506)
- Haurwitz, B., 1950. Internal waves of tidal character. *Transactions of the American Geophysical Union* 31:47–52. (331)
- Haurwitz, B. H., H. Stommel, and W. H. Munk, 1959. On the thermal unrest in the ocean. In *The Atmosphere and the Sea in Motion. Scientific Contributions to the Rossby Memorial Volume*, B. Bolin, ed., Rockefeller Institute Press, New York, pp. 74–94. (290, 364)
- Haury, L. R., M. G. Briscoe, and M. H. Orr, 1979. Tidally generated internal wave packets in Massachusetts Bay. *Nature* 278:312–317. (266, 378)
- Hawkins, H. F., and D. T. Rubsam, 1968. Hurricane Hilda 1964. II. Structure and budgets of the hurricane on October 1, 1964. *Monthly Weather Review* 96:617–636. (490)
- Hay, J. S., 1955. Some observations of air flow over the sea. *Quarterly Journal of the Royal Meteorological Society* 81:307–319. (487)
- Hayes, S. P., 1978. Temperature fine structure observations in the tropical North Pacific Ocean. *Journal of Geophysical Research* 83:5099–5104. (282)
- Hayes, S. P., 1979a. Benthic current observations at DOMES sites A, B and C in the tropical North Pacific Ocean. In *Marine Geology of the Central Pacific Manganese Nodule Province*, J. Bischoff and D. Z. Piper, eds., Plenum Press, New York, pp. 83–112. (363, 371)
- Hayes, S. P., 1979b. Variability of current and bottom pressure across the continental shelf in the northeast Gulf of Alaska. *Journal of Physical Oceanography* 9:88–103. (425)
- Hayes, S., and D. Halpern, 1976. Variability of the semidiurnal internal tide during coastal upwelling. *Mémoires de la Société Royale des Sciences de Liège, Sixième Série* 10:175–186. (334)
- Hecht, A., and P. Hughes, 1971. Observations of temperature fluctuations in the upper layers of the Bay of Biscay. *Deep-Sea Research* 18:663–684. (335)
- Heezen, B. C., R. D. Gerard, and M. Tharp, 1964. The Vema Fracture Zone in the equatorial Atlantic. *Journal of Geophysical Research* 69:733–739. (29)
- Heinmiller, R. H., 1968. Acoustic release systems. *W.H.O.I. Technical Report 68-48*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 19 pp. (408)
- Heinmiller, R. H., 1976a. The Woods Hole Buoy Project moorings—1960 through 1974. *W.H.O.I. Technical Report 76-53*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 73 pp. (407, 410)
- Heinmiller, R. H., 1976b. Mooring operations techniques of the Buoy Project at the Woods Hole Oceanographic Institution, *W.H.O.I. Technical Report 76-69*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 94 pp. (409, 410, 411)
- Heinmiller, R. H., Jr., and D. A. Moller, 1974. Failure of a moored array in a Gulf-Stream eddy. *Marine Technology Society Journal* 8:7, 35–38. (407)
- Heiskanen, W., 1921. Über den Einfluss der Gezeiten auf die Säkuläre Acceleration des Mondes. *Annales Academiae Scientiarum Fennicae A* 18:2, 84 pp. (323)
- Helland-Hansen, B., 1916. Nogen hydrografiske metoder. In *Forhandlinger ved de 16 Skandinaviske Naturforskerermøte*, pp. 357–359. (42)
- Helland-Hansen, B., and F. Nansen, 1909. The Norwegian Sea. Its physical oceanography based upon the Norwegian researches 1900–1904. *Report on Norwegian Fishery and Ma-*

- rine-Investigations* 2 (1909):2, 390 pp., 28 plates. (72, 73, 199, 233, 343)
- Helland-Hansen, B., and F. Nansen, 1920. Temperature variations in the North Atlantic Ocean and in the atmosphere. *Smithsonian Miscellaneous Collection* 70:4, 408 pp. (344)
- Helland-Hansen, B., and F. Nansen, 1926. The eastern North Atlantic. *Geofysiske Publikasjoner* 4:2, 76 pp., 71 plates. (10, 43, 72, 73, 111)
- Helmholtz, H. von, 1888. Über atmosphaerische Bewegungen. *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin, Jahrgang 1888*: 647–663. (529)
- Helmholtz, H. von, 1889. Über atmosphaerische Bewegungen. Zweite Mittheilung. *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin, Jahrgang 1889*: 761–780. (504)
- Hendershott, M. C., 1972. The effects of solid earth deformation on global ocean tides. *Geophysical Journal of the Royal Astronomical Society* 29:389–402. (297, 322, 329)
- Hendershott, M., 1973. Inertial oscillations of tidal period. *Progress in Oceanography* 6:1–27. (328, 329)
- Hendershott, M., 1977. Numerical models of ocean tides. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 6: *Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 47–95. (328, 329)
- Hendershott, M., and W. Munk, 1970. Tides. *Annual Review of Fluid Mechanics* 2:205–224. (328)
- Hendershott, M. C., and A. Speranza, 1971. Co-oscillating tides in long, narrow bays; the Taylor problem revisited. *Deep-Sea Research* 18:959–980. (324)
- Hendry, R., 1977. Observations of the semidiurnal internal tide in the western North Atlantic Ocean. *Philosophical Transactions of the Royal Society of London A* 286:1–24. (335, 337, 338)
- Hendry, R. M., and A. J. Hartling, 1979. A pressure-induced direction error in nickel-coated Aanderaa current meters. *Deep-Sea Research* 26:327–335. (406)
- Hermann, F., 1967. The T-S diagram analysis of the water masses over the Iceland-Faroe Ridge and in the Faroe Bank Channel. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 157:139–149. (23)
- Herring, J. R., 1963. Investigation of problems in thermal convection. *Journal of the Atmospheric Sciences* 20:325–338. (174, 387)
- Herring, J. R., 1977. On the statistical theory of two-dimensional topographic turbulence. *Journal of the Atmospheric Sciences* 34:1731–1750. (178)
- Herring, J. R., 1980. Statistical theory of quasigeostrophic turbulence. *Journal of the Atmospheric Sciences*. (543)
- Hickey, B., 1975. The relationship between fluctuations in sea level, wind stress and sea surface temperature in the equatorial Pacific. *Journal of Physical Oceanography* 5:460–475. (192)
- Hicks, B. B., 1972. Some evaluations of drag and bulk transfer coefficients over water bodies of different sizes. *Boundary-Layer Meteorology* 3:201–213. (489)
- Hicks, S. D., 1959. The physical oceanography of Narragansett Bay. *Limnology and Oceanography* 4:316–327. (200)
- Hidaka, K., 1949. Mass transport in ocean currents and lateral mixing. *Journal of Marine Research* 8:1932–1936. (140, 151)
- Hide, R., 1958. An experimental study of thermal convection in a rotating liquid. *Philosophical Transactions of the Royal Society of London A* 250:441–478. (469, 476)
- Hide, R., and P. W. White, 1980. *Orographic Effects in Planetary Flows*. GARP Publication Series, World Meteorological Organization, Geneva. (522)
- Hidy, G. M., 1972. A view of recent air-sea interaction research. *Bulletin of the American Meteorological Society* 53:1083–1102. (488)
- Hill, H. W., and R. R. Dickson, 1978. Long-term changes in North Sea hydrography. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 172:310–334. (376, 382)
- Hisard, P., J. Merle, and B. Voituriez, 1970. The equatorial undercurrent at 170°E in March and April, 1967. *Journal of Marine Research* 28:281–303. (185, 191)
- Hoare, R. A., 1968. Thermohaline convection in Lake Vanda, Antarctica. *Journal of Geophysical Research* 73:607–612. (252)
- Hodnett, P. F., 1978. On the advective model of the thermocline circulation. *Journal of Marine Research* 36:185–198. (159)
- Hoeber, H., 1969. Wind-, Temperatur- und Feuchteprofile in der wassernahen Luftschicht über den äquatorialen Atlantik. *Meteor-Forschungsergebnisse, Reihe B*, No. 3, 1–26. (489)
- Hoffert, M. I., and W. S. Broecker, 1978. Apparent vertical eddy diffusion rates in the pycnocline of the Norwegian Sea as determined from the vertical distribution of tritium. *Geophysical Research Letters* 5:502–504. (459)
- Hogg, N. G., 1972. Steady flow past an island with application to Bermuda. *Geophysical Fluid Dynamics* 4:55–81. (522)
- Hogg, N. G., 1973. On the stratified Taylor column. *Journal of Fluid Mechanics* 58:517–537. (522)
- Hogg, N. G., 1976. On spatially growing baroclinic waves in the ocean. *Journal of Fluid Mechanics* 78:217–235. (370)
- Hogg, N. G., 1980. Observations of internal Kelvin waves trapped round Bermuda. *Journal of Physical Oceanography*. (358)
- Hogg, N. G., E. J. Katz, and T. B. Sanford, 1978. Eddies, islands, and mixing. *Journal of Geophysical Research* 83:2921–2938. (261, 282, 287)
- Högström, U., 1974. A field study of the turbulent fluxes of heat, water vapour and momentum at a 'typical' agricultural site. *Quarterly Journal of the Royal Meteorological Society* 100:624–639. (485)
- Holland, J. Z., and E. M. Rasmusson, 1973. Measurements of the atmospheric mass, energy, and momentum budgets over a 500-kilometer square of tropical ocean. *Monthly Weather Review* 101:44–55. (503)
- Holland, W. R., 1967. On the wind-driven circulation in an ocean with bottom topography. *Tellus* 19:582–600. (151)

- Holland, W. R., 1973. Baroclinic and topographic influences on the transport in western boundary currents. *Geophysical Fluid Dynamics* 4:187–210. ⟨121, 142, 179, 180⟩
- Holland, W. R., 1978. The role of mesoscale eddies in the general circulation of the ocean—numerical experiments using a wind-driven quasi-geostrophic model. *Journal of Physical Oceanography* 8:363–392. ⟨133, 134, 142, 182, 507⟩
- Holland, W. R., and A. D. Hirschman, 1972. A numerical calculation of the circulation in the North Atlantic Ocean. *Journal of Physical Oceanography* 2:336–354. ⟨89⟩
- Holland, W. R., and L. B. Lin, 1975a. On the generation of mesoscale eddies and their contribution to the oceanic general circulation. I. A preliminary numerical experiment. *Journal of Physical Oceanography* 5:642–657. ⟨89, 132, 346⟩
- Holland, W. R., and L. B. Lin, 1975b. On the generation of mesoscale eddies and their contribution to the oceanic general circulation. II. A parameter study. *Journal of Physical Oceanography* 5:658–669. ⟨132, 346⟩
- Holland, W. R., and P. B. Rhines, 1980. An example of eddy induced ocean circulation. *Journal of Physical Oceanography*. ⟨142, 179⟩
- Holley, E. R., D. R. F. Harleman, and H. B. Fischer, 1970. Dispersion in homogeneous estuary flow. *Proceedings of the American Society of Civil Engineers, Journal of the Hydraulics Division* 96:1691–1709. ⟨206⟩
- Holloway, G., 1978. A spectral theory of nonlinear barotropic motion above irregular topography. *Journal of Physical Oceanography* 8:414–427. ⟨178⟩
- Holloway, G., and M. C. Hendershott, 1977. Stochastic closure for non-linear Rossby waves. *Journal of Fluid Mechanics* 82:747–765. ⟨346, 543⟩
- Holopainen, E. O., 1970. An observational study of the energy balance of the stationary disturbances in the atmosphere. *Quarterly Journal of the Royal Meteorological Society* 94:626–644. ⟨507⟩
- Holton, J. R., 1965. The influence of viscous boundary layers on transient motions in a stratified rotating fluid: Part I; Part II. *Journal of the Atmospheric Sciences* 22:402–411; 535–540. ⟨527⟩
- Holton, J. R., 1975. *The Dynamic Meteorology of the Stratosphere and Mesosphere*. Meteorological Monographs, 15, No. 37, American Meteorological Society, Boston, Massachusetts, 218 pp. ⟨344, 345, 520, 524⟩
- Holton, J. R., and R. S. Lindzen, 1972. An updated theory for the quasi-biennial cycle of the tropical stratosphere. *Journal of the Atmospheric Sciences* 29:1076–1080. ⟨532⟩
- Hopfinger, E. J., and J.-A. Toly, 1976. Spatially decaying turbulence and its relation to mixing across density interfaces. *Journal of Fluid Mechanics* 78:155–175. ⟨242⟩
- Hoskins, B. J., 1975. The geostrophic momentum approximation and the semi-geostrophic equations. *Journal of the Atmospheric Sciences* 32:233–242. ⟨508⟩
- Hough, S. S., 1897. On the application of harmonic analysis to the dynamical theory of the tides.—Part I. On Laplace's "Oscillations of the First Species", and on the dynamics of ocean currents. *Philosophical Transactions of the Royal Society of London A* 189:201–257. ⟨296, 297, 339, 344⟩
- Hough, S. S., 1898. On the application of harmonic analysis to the dynamical theory of the tides—Part II. On the general integration of Laplace's dynamical equations. *Philosophical Transactions of the Royal Society of London A* 191:139–185. ⟨296, 344⟩
- Howard, L. N., 1963. Heat transport by turbulent convection. *Journal of Fluid Mechanics* 17:405–432. ⟨387⟩
- Howard, L. N., 1964a. Convection at high Rayleigh number. In *Proceedings of the Eleventh International Congress Applied Mechanics, Munich*. H. Görtler, ed., Springer-Verlag, Berlin, pp. 1109–115. ⟨255⟩
- Howard, L. N., 1964b. The number of unstable modes in hydrodynamic stability problems. *Journal de Mécanique* 3:433–443. ⟨531⟩
- Howard, L. N., 1972. Bounds on flow quantities. *Annual Review of Fluid Mechanics* 4:473–494. ⟨388⟩
- Howe, M. R., 1962. Some direct measurements of the non-tidal drift on the continental shelf between Cape Cod and Cape Hatteras. *Deep-Sea Research* 9:445–455. ⟨212, 213⟩
- Howe, M. R., and R. I. Tait, 1972. The role of temperature inversions in the mixing processes of the deep ocean. *Deep-Sea Research* 19:781–791. ⟨258⟩
- Hsueh, Y., and C. Y. Peng, 1978. A diagnostic model of continental shelf circulation. *Journal of Geophysical Research* 83:3033–3041. ⟨223⟩
- Huang, N. E., C. D. Leitao, and C. G. Parra, 1978. Large-scale Gulf Stream frontal study using Geos 3 radar altimeter data. *Journal of Geophysical Research* 83:4673–4682. ⟨374⟩
- Hughes, B. A., 1978. The effect of internal waves on surface wind waves. 2. Theoretical analysis. *Journal of Geophysical Research* 83:455–465. ⟨265⟩
- Humboldt, A. de. 1814. *Voyage aux Régions Equinoxiales du Nouveau Continent, Fait en 1799–1804 par Al. de Humboldt et A. Bonpland. Part I, Relation Historique*, 1, F. Schoell, Paris. (Personal Narrative of Travels to the Equinoctial Regions of the New Continent during the Years 1799–1804 by Alexander de Humboldt and Aimé Bonpland, H. M. Williams, translator, 3rd ed., 1822, Longman, Hurst, Rees, Orme and Brown, London, 1, 293 pp.) ⟨8⟩
- Humboldt, A. de, 1831. *Fragmens de Géologie et de Climatologie Asiatiques*. A. Pihan Delaforest, Paris, 2 volumes, 640 pp. ⟨8, 40⟩
- Humboldt, A. von, 1845. *Kosmos. Entwurf einer Physischen Weltbeschreibung*, 1, J. G. Cotta'scher, Stuttgart und Tübingen 493 pp. (Cosmos: A Sketch of a Physical Description of the Universe, E. C. Otté, translator, 1877, Harper and Brothers, New York, 1, 375 pp.) ⟨8⟩
- Hunkins, K., 1966. Ekman drift currents in the Arctic Ocean. *Deep-Sea Research* 13:607–620. ⟨148⟩
- Hunkins, K. L., 1974. Subsurface eddies in the Arctic Ocean. *Deep-Sea Research* 21:1017–1033. ⟨359, 371⟩
- Huntsman, A. C., 1924. Oceanography. In *Handbook of the British Association for the Advancement of Science*, University of Toronto Press, Toronto, pp. 274–290. ⟨233⟩
- Huppert, H. E., 1971. On the stability of a series of double-diffusive layers. *Deep-Sea Research* 18:1005–1021. ⟨254⟩
- Huppert, H. E., and K. Bryan, 1976. Topographically generated eddies. *Deep-Sea Research* 23:655–680. ⟨370⟩

- Huppert, H. E., and P. F. Linden, 1979. On heating a stable salinity gradient from below. *Journal of Fluid Mechanics* 95:431–464. ⟨251⟩
- Huppert, H. E., and P. C. Manins, 1973. Limiting conditions for salt-fingering at an interface. *Deep-Sea Research* 20:315–323. ⟨255⟩
- Huppert, H. E., and J. S. Turner, 1972. Double-diffusive convection and its implications for the temperature and salinity structure of the ocean and Lake Vanda. *Journal of Physical Oceanography* 2:456–461. ⟨255⟩
- Huppert, H. E., and J. S. Turner, 1978. On melting icebergs. *Nature* 271:46–48. ⟨252⟩
- Hurlburt, H. E., J. Kindle, and J. J. O'Brien, 1976. A numerical simulation of the onset of El Niño. *Journal of Physical Oceanography* 6:621–631. ⟨192⟩
- Hurlburt, H. E., and J. D. Thompson, 1976. A numerical model of the Somali Current. *Journal of Physical Oceanography* 6:646–664. ⟨192⟩
- Ianello, J. P., 1977. Tidally induced residual currents in estuaries of constant breadth and depth. *Journal of Marine Research* 35:755–786. ⟨206⟩
- Ibbetson, A., and N. Phillips, 1967. Some laboratory experiments on Rossby waves in a rotating annulus. *Tellus* 19:81–87. ⟨165, 474, 475⟩
- Ichiye, T., 1972. Experimental circulation modeling within the Gulf and the Caribbean. In *Contributions on the Physical Oceanography of the Gulf of Mexico*, L. R. A. Capurro and J. L. Reid, eds., Texas A & M University Oceanographic Studies, 2, Gulf Publishing Co., Houston, Texas, pp. 213–226. ⟨475⟩
- IDOE, 1976. *International Decade of Ocean Exploration Progress Report No. 5*. National Science Foundation, Washington, D.C. ⟨430⟩
- Imberger, J., R. Thompson, and C. Fandry, 1976. Selective withdrawal from a finite rectangular tank. *Journal of Fluid Mechanics* 78:489–512. ⟨253⟩
- Iooss, G., H. B. Nielsen, and H. True, 1978. Bifurcation of the stationary Ekman flow into a stable periodic flow. *Archive for Rational Mechanics and Analysis* 68:227–256. ⟨464⟩
- Irish, J., W. Munk, and F. Snodgrass, 1971. M_2 amphidrome in the northeast Pacific. *Geophysical Fluid Dynamics* 2:355–360. ⟨326, 327, 399, 425⟩
- Irish, J. D., and F. E. Snodgrass, 1972. Australian Antarctic tides. In *Antarctic Oceanology II: The Australian-New Zealand Sector*, D. E. Hayes, ed., *Antarctic Research Series*, 19, pp. 101–116. ⟨425⟩
- Iselin, C. O'D., 1936. A study of the circulation of the western North Atlantic. *Papers in Physical Oceanography and Meteorology* 4:4, 101 pp. ⟨43, 78, 113, 118, 123, 133, 137, 211, 233⟩
- Iselin, C. O'D., 1939a. The influence of vertical and lateral turbulence on the characteristics of the waters at mid-depths. *Transactions of the American Geophysical Union* 20:414–417. ⟨57, 58, 59, 236⟩
- Iselin, C. O'D., 1939b. Some physical factors which may influence the productivity of New England's coastal waters. *Journal of Marine Research* 2:74–85. ⟨211, 233⟩
- Iselin, C. O'D., 1940a. Preliminary report on long-period variations in the transport of The Gulf Stream System. *Papers in Physical Oceanography and Meteorology* 8:1, 40 pp. ⟨114, 344, 357⟩
- Iselin, C. O'D., 1940b. The necessity of a new approach to the study of the circulation on the continental shelf. *Transactions of the American Geophysical Union* 21:347–348. ⟨211⟩
- Iselin, C. O'D., 1955. Coastal currents and the fisheries. *Papers in Marine Biology and Oceanography, Deep-Sea Research* 3 (Supplement):474–478. ⟨212⟩
- ISOS, 1978. DRAKE 79—the 1979 ISOS experiment in the Drake Passage. Available from the ISOS Office, Department of Oceanography, Texas A & M University, College Station, Texas. (Unpublished manuscript.) ⟨432⟩
- Israeli, M., 1972. On trapped modes of rotating fluids in spherical shells. *Studies in Applied Mathematics* 51:219–237. ⟨295⟩
- Ivers, W. D., 1975. The deep circulation in the northern North Atlantic, with especial reference to the Labrador Sea. Ph.D. Thesis, University of California at San Diego, 179 pp. ⟨84, 93, 108⟩
- Jacobs, S. S., A. F. Amos, and P. M. Bruchhausen, 1970. Ross Sea oceanography and Antarctic Bottom Water formation. *Deep-Sea Research* 17:935–962. ⟨21⟩
- Jacobs, S. S., and D. T. Georgi, 1977. Observations on the southwest Indian/Antarctic Ocean. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, pp. 43–84. ⟨21, 29⟩
- Jacobs, S. S., A. L. Gordon, and J. L. Ardai, 1979. Circulation and melting beneath the Ross Ice Shelf. *Science* 203:439–443. ⟨21⟩
- Jacobs, W. C., 1951. Large scale aspects of energy transformation over the ocean. In *Compendium of Meteorology*, T. F. Malone, ed., American Meteorological Society, Boston, Massachusetts, pp. 1057–1070. ⟨490⟩
- Jacobsen, A. W., 1948. An instrument for recording continuously the salinity, temperature, and depth of sea water. *Transactions of the American Institute of Electrical Engineers* 67:714–722. ⟨415⟩
- Jacobsen, J. P., 1909. Der Libellenstrommesser. *Publications de Circonference; Conseil Permanent International pour l'Exploration de la Mer*, No. 51, 20 pp. ⟨203⟩
- Jacobsen, J. P., 1916. Contribution to the hydrography of the Atlantic. *Meddelelser fra Kommissionen for Havundersøgelse. Serie: Hydrografi* 2:5, 24 pp. ⟨22⟩
- Jacobsen, J. P., 1929. Contribution to the hydrography of the North Atlantic: The "Dana" Expedition 1921–22. In *The Danish "Dana"-Expeditions 1920–22 in the North Atlantic and the Gulf of Panama, Oceanographical Reports Edited by the "Dana"-Committee*, 1, 3, 98 pp. ⟨74, 76, 85⟩
- Jacobsen J. P., 1930. Remarks on the determination of the movement of the water and intermixing of the watersheets in a vertical direction. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 64:59–68. ⟨201⟩
- Jacobsen, R. A., 1973. More staying power for small batteries. *Machine Design* 45:30, 136–148. ⟨401⟩
- Jeffreys, H., 1921. Tidal friction in shallow seas. *Philosophical Transactions of the Royal Society of London A* 221:237–264. ⟨323⟩

- Jeffreys, H., 1925. On the formation of waves by wind. *Proceedings of the Royal Society of London A* 110:341–347. (494)
- Jeffreys, H., 1926. On the dynamics of geostrophic winds. *Quarterly Journal of the Royal Meteorological Society* 52:85–104. (343, 506)
- Jenkins, W. J., and W. B. Clarke, 1976. The distribution of He³ in the western Atlantic Ocean. *Deep-Sea Research* 23:481–494. (444, 445)
- Jevons, W. S., 1857. On the cirrus form of cloud. *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, Fourth Series* 14:22–35. (xx)
- Johnson, C. L., C. S. Cox, and B. Gallagher, 1978. The separation of wave-induced and intrusive oceanic finestructure. *Journal of Physical Oceanography* 8:846–860. (282, 283, 286)
- Johnson, D. A., 1972. Eastward flowing bottom currents along the Clipperton Fracture Zone. *Deep-Sea Research* 19:253–257. (36)
- Johnson, D. A., and J. E. Damuth, 1979. Deep thermohaline flow and current-controlled sedimentation in the Amirante Passage: western Indian Ocean. *Marine Geology* 33: 1–44 (32)
- Johnson, E. S., and B. A. Warren, 1979. Density-diffusive model of the Ninetyeast Ridge Current. *Journal of Physical Oceanography* 9:1288–1293. (33, 37)
- Johnstone, J., 1923. *An Introduction to Oceanography with Special Reference to Geography and Geophysics*. University Press of Liverpool, Liverpool, 351 pp. (199)
- Jones, I. S. F., and B. C. Kenney, 1977. The scaling of velocity fluctuations in the surface layer. *Journal of Geophysical Research* 82:1392–1396. (495)
- Jones, R., and W. B. Hall, 1973. A simulation model for studying the population dynamics of some fish species. In *The Mathematical Theory of the Dynamics of Biological Populations*, M. S. Bartlett and R. W. Hiorns, eds., Academic Press, London, pp. 35–39. (382)
- Jones, S., 1978. Interactions and instabilities of barotropic and baroclinic Rossby waves in a rotating, two-layer fluid. *Geophysical and Astrophysical Fluid Dynamics* 11:49–60. (534)
- Jones, S., 1979. Rossby wave interactions and instabilities in a rotating, two-layer fluid on a beta-plane. Part I: Resonant interactions. *Geophysical and Astrophysical Fluid Dynamics* 11:289–322. (345)
- Jones, W. L., 1968. Reflexion and stability of waves in stably stratified fluids with shear flow: a numerical study. *Journal of Fluid Mechanics* 34:609–624. (274)
- Joyce, T. M., W. Zenk, and J. M. Toole, 1978. The anatomy of the Antarctic Polar Front in the Drake Passage. *Journal of Geophysical Research* 83:6093–6113. (257)
- Julian, P. R., and A. K. Clive, 1974. The direct estimation of spatial wave number spectra of atmospheric variables. *Journal of the Atmospheric Sciences* 31:1526–1539. (544)
- Kaimal, J. C., and J. A. Businger, 1970. Case studies of a convective plume and a dust devil. *Journal of Applied Meteorology* 9:612–620. (498, 499)
- Kamenkovich, V. M., 1973. *Osnovy Dinamiki Okeana*. Gidrometeoizdat, Leningrad, 238 pp. [Fundamentals of Ocean Dynamics, Elsevier, Amsterdam, 1977, 249 pp.] (183)
- Kamenkovich, V. M., and G. M. Reznik, 1972. K teorii statcionarykh vetrovyykh techenii v dvusloinoi zhidkosti. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 8:419–434. (A contribution to the theory of stationary wind-driven currents in a two-layer liquid. *Izvestiya, Academy of Sciences USSR, Atmospheric and Oceanic Physics* 8:238–245.) (158)
- Kantha, L. H., O. M. Phillips, and R. S. Azad, 1977. On turbulent entrainment at a stable density interface. *Journal of Fluid Mechanics* 79:753–768. (241)
- Kao, T. W., 1976. Principal stage of wake collapse in a stratified fluid: two-dimensional theory. *The Physics of Fluids* 19:1071–1074. (253)
- Kato, H., and O. M. Phillips, 1969. On the penetration of a turbulent layer into stratified fluid. *Journal of Fluid Mechanics* 37:643–665. (241)
- Katsaros, K. B., 1978. Turbulent free convection in fresh and salt water: some characteristics revealed by visualization. *Journal of Physical Oceanography* 8:613–626. (243)
- Katsaros, K. B., W. G. Liu, J. A. Businger, and J. E. Tillman, 1977. Heat transport and thermal structure in the interfacial boundary layer measured in an open tank of water in turbulent free convection. *Journal of Fluid Mechanics* 83:311–335. (243)
- Katz, E., 1973. Profile of an isopycnal surface in the main thermocline of the Sargasso Sea. *Journal of Phsyical Oceanography* 3:448–457. (265)
- Katz, E. J., R. Belevitsch, J. Bruce, V. Bubnov, J. Cochrane, W. Düing, P. Hisard, H.-U. Lass, J. Meincke, A. deMesquita, L. Miller, and A. Rybnikov, 1977. Zonal pressure gradient along the equatorial Atlantic. *Journal of Marine Research* 35:293–307. (186, 193)
- Kawai, H., 1966. A generalized potential vorticity in the ocean. *Kyoto University, Geophysical Institute, Special Contributions* 6:79–93. (82)
- Kazanskii, A. B., and A. S. Monin, 1960. O turbulentom rezhime vyshe prezemnogo sloya vozdukha. *Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya*, 1960 g.:165–168. [A turbulent regime above the ground atmospheric layer. *Bulletin (Izvestiya) Academy of Sciences, USSR, Geophysics Series*, 1960: 110–112.] (502)
- Kazanskii, A. B., and A. S. Monin, 1961. O dinamicheskom vzaimodeistvii mezhdu atmosferoi i poverkhnost'yu zemli. *Izvestiya, Akademii Nauk SSSR, Seriya Geofizicheskaya*, 1961 g.:786–788. [On the dynamic interaction between the atmosphere and the earth's surface. *Bulletin (Izvestiya) Academy of Sciences, USSR, Geophysics Series*, 1961: 514–515.] (502)
- Keeling, C. D., 1973. The Carbon dioxide cycle: Reservoir models to depict the exchange of atmospheric carbon dioxide with the oceans and land plants. In *Chemistry of the Lower Atmosphere*, S. I. Rasool, ed., Plenum Press, New York, pp. 251–329. (449)
- Keeling, C. D., and B. Bolin, 1967. The simultaneous use of chemical tracers in oceanic studies. I. General theory of reservoir models. *Tellus* 19:556–581. (449)
- Keeling, C. D., and B. Bolin, 1968. The simultaneous use of chemical tracers in oceanic studies. II. A three-reservoir model of the North and South Pacific Oceans. *Tellus* 20:17–54. (449)
- Keffer, T., and P. Niiler, 1978. Recovery of POLYMODE Array III, Cluster C in North Atlantic Equatorial Current. In *PO-*

- LYMODE News No. 56, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts. (Unpublished document.) (372)
- Keldysh, M. V., 1977. Venus exploration with the Venera 9 and Venera 10 spacecraft. *Icarus* 30:605–625. (506)
- Keller, J. B., and G. Veronis, 1969. Rossby waves in the presence of random currents. *Journal of Geophysical Research* 74:1941–1951. (345)
- Ketchum, B. H., 1950. Hydrographic factors involved in the dispersion of pollutants introduced into tidal waters. *Journal of the Boston Society of Civil Engineers* 37:296–314. (202, 212)
- Ketchum, B. H., 1951. The exchanges of fresh and salt water in tidal estuaries. *Journal of Marine Research* 10:18–38. (202)
- Ketchum, B. H., and N. Corwin, 1964. The persistence of “winter” water on the continental shelf south of Long Island, New York. *Limnology and Oceanography* 9:467–475. (212)
- Ketchum, B. H., and D. J. Keen, 1955. The accumulation of river water over the continental shelf between Cape Cod and Chesapeake Bay. *Papers in Marine Biology and Oceanography, Deep-Sea Research* 3 (Supplement):346–357. (212, 214)
- Ketchum, B. H., A. C. Redfield, and J. C. Ayers, 1951. The oceanography of the New York Bight. *Papers in Physical Oceanography and Meteorology* 12:1, 46 pp. (212)
- Keulegan, G. H., 1949. Interfacial stability and mixing in stratified flows. *Journal of Research of the National Bureau of Standards* 43:487–500. (203)
- Killworth, P. D., 1974. A baroclinic model of motions on Antarctic continental shelves. *Deep-Sea Research* 21:815–837. (456)
- Killworth, P. D., 1977. Mixing on the Weddell Sea continental slope. *Deep-Sea Research* 24:427–448. (20, 22, 257, 260)
- Killworth, P. D., 1979. On “chimney” formations in the ocean. *Journal of Physical Oceanography* 9:531–554. (22)
- Killworth, P. D., 1980. Barotropic and baroclinic instability in rotating stratified fluids. *Dynamics of Atmospheres and Oceans* 4:143–184. (529)
- Killworth, P. D., and P. C. Manins, 1980. A model of confined thermal convection driven by nonuniform heating from below. *Deep-Sea Research*. (505)
- Kim, K., 1978. Instability of baroclinic Rossby waves; energetics in a two-layer ocean. *Deep-Sea Research* 25:795–814. (345, 534)
- Kinsman, B., 1960. Surface waves at short fetches and low wind speed—a field study. *Chesapeake Bay Institute of the Johns Hopkins University Technical Report* 19, Reference 60-1, Baltimore, Maryland, pp. various. (491, 492)
- Kirwan, A. D., 1963. Circulation of Antarctic Intermediate Water deduced through isentropic analysis. *Reference No. 63-34 F, Texas A & M University, College Station, Texas*, 34 pp. (83, 85)
- Kirwan, A. D., Jr., G. McNally, S. Pazan, and R. Wert, 1979. Analysis of surface current response to wind. *Journal of Physical Oceanography* 9:401–412. (426, 427)
- Kitaigorodskii, S. A., 1960. O raschete tolshchiny sloya vetrovogo peremeshivaniya v okeane. *Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya* 1960 g.:425–431. [On the computation of the thickness of the wind-mixing layer in the ocean. *Bulletin (Izvestiya) Academy of Sciences, USSR, Geophysics Series* 1960: 284–287.] (243)
- Kitaigorodskii, S. A., 1962. Nekotorye prilozheniya metodov teorii podobiya pri analize vetrovogo volneniya kak veroyatnostnogo protsessa. *Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya* 1962 g.:105–117. [Applications of the theory of similarity to the analysis of wind-generated wave motion as a stochastic process. *Bulletin (Izvestiya) Academy of Sciences, USSR, Geophysics Series* 1962:73–80.] (491)
- Kitaidorodskii, S. A., 1970. *Fizika Vzaimodesitviya Atmosfery i Okeana*. Gidrometeorologicheskoe Izdatel'stvo, Lenigrad. [The Physics of Air-Sea Interaction, A. Baruch, translator, P. Greenberg, ed., Israel Program for Scientific Translation, Jerusalem, 1973, 237 pp.] (487)
- Kitaigorodskii, S. A., O. A. Kuznetsov, and G. N. Panim, 1973. O koefitsientakh sопротивления, теплопроводности и испарения над морской поверхностью в атмосфере. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 9:1135–1141. [Coefficients of drag, sensible heat, and evaporation in the atmosphere over the surface of a sea. *Izvestiya, Academy of Sciences USSR, Atmospheric and Oceanic Physics* 9:644–647.] (489)
- Kitaigorodskii, S. A., and S. S. Strekalov, 1962. K analizu spektrov vetrovogo volneniya. I. *Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya* 9:1221–1228. [Contribution to an analysis of the spectra of wind-caused wave action. I. *Bulletin (Izvestiya) Academy of Sciences, USSR, Geophysics Series* 1962:765–769.] (493)
- Knauss, J. A., 1960. Measurements of the Cromwell Current. *Deep-Sea Research* 6:265–286. (429)
- Knauss, J. A., 1962a. On some aspects of the deep circulation of the Pacific. *Journal of Geophysical Research* 67:3943–3954. (35, 36)
- Knauss, J. A., 1962b. Observations of internal waves of tidal period made with neutrally buoyant floats. *Journal of Marine Research* 20:111–118. (332)
- Knauss, J. A., 1963. Equatorial current systems. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 2: The Composition of Sea-Water, Comparative and Descriptive Oceanography*, M. N. Hill, ed., Wiley, Interscience, New York, pp. 235–252. (184, 185)
- Knauss, J. A., 1969. A note on the transport of the Gulf Stream. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement):117–123. (118, 131)
- Knudsen, M., 1899. Hydrography. In *The Danish Ingolf-Expedition 1: Part 1*, pp. 23–161. (22)
- Knudsen, M., ed., 1901. *Hydrographical Tables*. G. E. C. Gad, Copenhagen, 63 pp. (209)
- Koczy, F. F., 1958. Natural radium as a tracer in the ocean. In *Proceedings of International Conference on the Peaceful Uses of Atomic Energy*. 2nd, Geneva 18:351–357. (444)
- Koenuma, K., 1939. On the hydrography of the southwestern part of the North Pacific and the Kuroshio. *Imperial Marine Observatory Memoirs* 7:41–114. (74, 85)
- Koh, R. C. Y., and N. H. Brooks, 1975. Fluid mechanics of waste-water disposal in the ocean. *Annual Review of Fluid Mechanics* 7:187–211. (260)
- Kolla, V., L. Henderson, and P. E. Biscaye, 1976. Clay mineralogy and sedimentation in the western Indian Ocean. *Deep-Sea Research* 23:949–961. (29)

- Kolla, V., L. Sullivan, S. S. Streeter, and M. G. Langseth, 1976. Spreading of Antarctic Bottom Water and its effects on the floor of the Indian Ocean inferred from bottom-water potential temperature, turbidity, and sea floor photography. *Marine Geology* 21:171–189. (29)
- Kondo, J., 1975. Air-sea bulk transfer coefficients in diabatic conditions. *Boundary-Layer Meteorology* 9:91–112. (489, 490)
- Kondo, J., Y. Fukinawa, and G. Naito, 1973. High-frequency components of ocean waves and their relation to the aerodynamic roughness. *Journal of Physical Oceanography* 3:197–202. (489)
- Kort, V. G., chief series editor, 1968. *Gidrologiya Tikhogo Okeana*. A. D. Dobrovolskii, editor-in-chief. *Tikhii Okean*, 2, Akademiya Nauk SSSR, Institut Okeanologii imeni P. P. Shirshova, Izdatel'stvo "Nauka", Moscow, 524 pp. (*The Pacific Ocean, "Hydrology of the Pacific Ocean"*, U. S. Naval Oceanographic Office, Washington, D.C., 788 pp. Available from National Technical Information Service, Springfield, Virginia.) (85, 88)
- Koshlyakov, M. N., and A. S. Monin, 1978. Synoptic eddies in the ocean. *Annual Review of Earth and Planetary Sciences* 6:495–523. (359)
- Koshlyakov, M. N., and V. G. Neiman, 1965. Nekotorye rezul'taty izmerenii i raschetov zonal'nykh techenii v ekvatorial'noi oblasti Tikhogo okeana. *Okeanologiya* 5:235–249. (Some results of measurements and calculations of zonal currents in the Pacific equatorial region. *Oceanology* 5:2, 37–49.) (83)
- Koske, P. H., 1972. Hydrographische Verhältnisse im Persischen Golf auf Grund von Beobachtungen von F. S. "Meteor" in Frühjahr 1965. *"Meteor" Forchungsergebnisse, Reihe A*, No. 11, 58–73. (26)
- Kossina, E., 1921. Die Tiefen des Weltmeeres. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge. A. Geographisch-naturwissenschaftliche Reihe*, 9, 70 pp. (50)
- Kotschin, N., 1932. On the stability of Margules surfaces of discontinuity. *Beiträge zur Physik der Freien Atmosphäre* 18:129–164. (529)
- Kozlov, V. F., 1966. Nekotorye tochnye resheniya nelineinogo uravneniya advektsii plotnosti v okeane. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 2:1205–1207. (Certain exact solutions of the nonlinear equation for density advection in the ocean. *Izvestiya, Academy of Sciences, USSR, Atmospheric and Oceanic Physics* 2:742–744.) (159)
- Kozlov, V. F., 1971. Nekotorye rezul'taty priblizhennogo rascheta tsirkulyatsii v Tikhom okeane. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR*, 7:421–430. (Some results of an approximate calculation of the circulation in the Pacific Ocean. *Izvestiya, Academy of Sciences, USSR, Atmospheric and Oceanic Physics* 7:278–282.) (89)
- Kraichnan, R. H., 1962. Turbulent thermal convection at arbitrary Prandtl numbers. *The Physics of Fluids* 5:1374–1389. (388)
- Kraichnan, R. H., 1967. Inertial ranges in two-dimensional turbulence. *The Physics of Fluids* 10:1417–1423. (346, 543)
- Kraichnan, R. H., 1975. Statistical dynamics of two-dimensional flow. *Journal of Fluid Mechanics* 67:155–175. (543)
- Kraus, E. B., ed., 1977. *Modelling and Prediction of the Upper Layers of the Ocean*. Pergamon Press, Oxford, 325 pp. (240, 346)
- Kraus, E. B., and J. S. Turner, 1967. A one-dimensional model of the seasonal thermocline: II. The general theory and its consequences. *Tellus* 19:98–106. (244, 245)
- Krishnamurti, R., 1978. Laboratory modelling of oceanic response to monsoonal winds. Presented at IUTAM-IUGG Symposium on Monsoon Dynamics at the Indian Institute of Technology, New Delhi, India, December, 1977. Technical Report No. 15 to the Office of Naval Research under Contract N-00014-75-C-0877, Florida State University, Tallahassee, Florida, 20 pp. Also in *Monsoon Dynamics*, J. Lighthill and R. P. Pearce, eds., 1980, Cambridge University Press, London. (473)
- Krishnamurti, R., and J. Y. Na, 1978. Experiments in ocean circulation modeling. *Geophysical and Astrophysical Fluid Dynamics* 11:13–21. (473)
- Krishnaswami, S., D. Lal, B. L. K. Somayajulu, F. S. Dixon, S. A. Stonecipher, and H. Craig, 1972. Silicon, radium, thorium and lead in sea water: In-situ extraction by synthetic fibre. *Earth and Planetary Science Letters* 16:84–90. (447)
- Krummel, O., 1911. *Handbuch der Ozeanographie*, 2. J. Engelhorns Nachf., Stuttgart, 766 pp. (40)
- Kuettner, J. P., 1971. Cloud bands in the earth's atmosphere. *Tellus* 23:404–425. (500)
- Kuksa, V. I., 1962. O formirovani i rasprostraneni promezhutochnogo sloya vody ponizhennoi solenosti v severnoi chasti Tikhogo okeana (On the formation and distribution of the intermediate layer of water of low salinity in the northern part of the Pacific Ocean). *Okeanologiya* 2:769–782. (83)
- Kuksa, V. I., 1963. Osnovnye zakonomernosti obrazovani i rasprostraneniya promezhutochnykh vod severnoi chasti Tikhogo okeana (Basic laws of the production and distribution of the intermediate waters in the northern part of the Pacific Ocean). *Okeanologiya* 3:30–43. (83)
- Kullenberg, G., 1972. Apparent horizontal diffusion in stratified vertical shear flow. *Tellus* 24:17–28. (378)
- Kuo, H.-H., 1978. Topographic effect on the deep circulation and the abyssal oxygen distribution. *Journal of Physical Oceanography* 8:428–436. (89)
- Kuo, H.-H., and G. Veronis, 1970. Distribution of tracers in the deep oceans of the world. *Deep-Sea Research* 17:29–46. (449)
- Kuo, H.-H., and G. Veronis, 1971. The source-sink flow in a rotating system and its oceanic analogy. *Journal of Fluid Mechanics* 45:441–466. (152, 470, 471, 472)
- Kuo, H.-H., and G. Veronis, 1973. The use of oxygen as a test for an abyssal circulation model. *Deep-Sea Research* 20:871–888. (12, 13, 14, 15, 26, 33, 449)
- Kuo, H.-L., 1949. Dynamic instability of two-dimensional non-divergent flow in a barotropic atmosphere. *Journal of Meteorology* 6:105–122. (169, 529)
- Kuo, H.-L., 1951. Dynamical aspects of the general circulation and the stability of zonal flow. *Tellus* 3:268–284. (529)
- Kuo, H.-L., 1952. Three-dimensional disturbances in a baroclinic zonal current. *Journal of Meteorology* 9:260–278. (169)

- Kuo, H.-L., 1973. Dynamics of quasi-geostrophic flows and instability theory. *Advances in Applied Mechanics* 13:248–330. (505, 520)
- Kuo, J., and R. Jachens, 1977. Indirect mapping of ocean tides by solving the inverse problems for tidal gravity observations. *Annals of Geophysics* 33:73–82. (323)
- Kupferman, S. L., and N. Garfield, 1977. Transport of low-salinity water at the slope water-Gulf Stream boundary. *Journal of Geophysical Research* 82:3481–3486. (213)
- Kupferman, S. L., H. D. Livingston, and V. T. Bowen, 1979. A mass balance for Cs¹³⁷ and Sr⁹⁰ in the North Atlantic Ocean. *Journal of Marine Research* 37:157–199. (446)
- Kutzbach, J. E., R. M. Chervin, and D. D. Houghton, 1977. Response of the NCAR general circulation model to prescribed changes in sea surface temperature. Part I: Mid-latitude changes. *Journal of the Atmospheric Sciences* 34:1200–1213. (355)
- Lachenbruch, A. H., and B. V. Marshall, 1968. Heat flow and water temperature fluctuations in the Denmark Strait. *Journal of Geophysical Research* 73:5829–5842. (24)
- Lacombe, H., 1971. Le Détrôit de Gibraltar, océanographie physique. In *Mémoire explicatif de la Carte géotechnique de Tanger au 1/25,000, Notes et Mémoires du Service Géologique du Maroc*, No. 222 bis, pp. 111–146. (25)
- Lafond, E. C., 1961. The isotherm follower. *Journal of Marine Research* 19:33–39. (264)
- Lafond, E. C., 1963. Detailed temperature structures of the sea off Baja California. *Limnology and Oceanography* 8:417–425. (265)
- Lai, D. Y., and P. L. Richardson, 1977. Distribution and movement of Gulf Stream rings. *Journal of Physical Oceanography* 7:670–683. (132, 137, 534)
- Laikhtman, D. L., 1961. *Fizika Pogranichnogo Sloya Atmosfery*. Gidrometeorologicheskoe Izdatel'stvo, Leningrad, 341 pp., 2nd ed., 1970. (*Physics of the Boundary Layer of the Atmosphere*, U.S. Department of Commerce, Washington, D.C.) (500)
- Lal, D., 1962. Cosmic ray produced radionuclides in the ocean. *Journal of the Oceanographical Society of Japan, 20th Anniversary Volume*: 600–614. (440)
- Lal, D., 1969. Characteristics of large-scale oceanic circulation as derived from the distribution of radioactive elements. In *Morning Review Lectures of the Second International Oceanographic Congress, Moscow, 1966*, United Nations Educational, Scientific, Cultural Organization, Place de Fontenoy, Paris, pp. 29–48. (440)
- Lamb, H., 1932. Hydrodynamics, 6th ed. Dover, New York, 738 pp. (147, 295, 296, 297, 298, 299, 307, 339, 344, 358)
- Lambeck, K., 1975. Effects of tidal dissipation in the oceans on the moon's orbit and the earth's rotation. *Journal of Geophysical Research* 80:2917–2925. (322)
- Lambeck, K., 1977. Tidal dissipation in the oceans: astronomical, geophysical and oceanographic consequences. *Philosophical Transactions of the Royal Society of London A* 287:545–594. (322)
- Lambert, R. B., and W. Sturges, 1977. A thermohaline staircase and vertical mixing in the thermocline. *Deep-Sea Research* 24:211–222. (258)
- Langmuir, I., 1938. Surface motion of water induced by wind. *Science* 87:119–123. (495)
- Laplace, P. S., 1775. Recherches sur plusieurs points du système du monde. *Mémoires de l'Académie Royale des Sciences de Paris* 88:75–182. Reprinted in *Oeuvres Complètes de Laplace*, Gauthier-Villars, Paris, 9 (1893). (295, 297, 344)
- Laplace, P. S., 1776. Recherches sur plusieurs points du système du monde. *Mémoires de l'Académie Royale des Sciences de Paris* 89:177–264. Reprinted in *Oeuvres Complètes de Laplace*, Gauthier-Villars, Paris, 9 (1893). (295, 297)
- Laplace, P. S., 1799. *Traité de Mécanique Céleste*, Tome Second, Première Part, Livre IV. Reprinted in *Oeuvres Complètes de Laplace*, 1878–1912, Gauthier-Villars, Paris, 14 volumes (see 4, pp. 294–298). (*Mécanique Céleste by the Marquis de Laplace, Translated with a Commentary*, N. Bowditch, translator, 1829–1839, Boston, 4 volumes.) (504)
- Larsen, J., 1977. Cotidal charts for the Pacific Ocean near Hawaii using f-plane solutions. *Journal of Physical Oceanography* 7:100–109. (327, 328)
- Lasker, R., 1978. The relation between oceanographic conditions and larval anchovy food in the California Current: Identification of factors contributing to recruitment failure. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 173:212–230. (381, 382)
- Lauder, B. E., 1976. Heat and mass transport. In *Turbulence*, P. Bradshaw, ed., Springer-Verlag, Berlin, pp. 232–287. (240)
- Laval, A. F., 1728. *Voyage de la Louisiane, Fait par Ordre du Roy en l'Année Mil Sept Cent Vingt . . . par le P. Laval de la Compagnie de Jésus, Professeur Royal de Mathématiques, et Maître d'Hydrographie . . . du Port de Toulon*. J. Mariette, Paris, 304, 96, 191 pp. (507)
- La Valle, L., and P. Di Girolamo, 1975. Determination of the geostrophic drag coefficient. *Tellus* 27:87–92. (503)
- Lavelle, J. W., P. E. Gadd, G. C. Han, D. A. Mayer, W. L. Stubblefield, and D. J. P. Swift, 1976. Preliminary results of coincident current meter and sediment transport observations for wintertime conditions on the Long Island inner shelf. *Geophysical Research Letters* 3:97–100. (218)
- Lavelle, J. W., R. A. Young, D. J. P. Swift, and T. L. Clarke, 1978. Near-bottom sediment concentration and fluid velocity measurements on the inner continental shelf, New York. *Journal of Geophysical Research* 93:6052–6062. (218)
- Lazier, J. R. N., 1973a. The renewal of Labrador Sea Water. *Deep-Sea Research* 20:341–353. (25, 84)
- Lazier, J. R. N., 1973b. Temporal changes in some fresh water temperature structures. *Journal of Physical Oceanography* 3:226–229. (281)
- Leaman, K. D., 1976. Observations of vertical polarization and energy flux of near-inertial waves. *Journal of Physical Oceanography* 6:894–908. (289)
- Leaman, K. D., and T. B. Sanford, 1975. Vertical energy propagation of internal waves; a vector spectral analysis of velocity profiles. *Journal of Geophysical Research* 80:1975–1978. (276)
- LeBlond, P., and L. Mysak, 1977. Trapped coastal waves and their role in shelf dynamics. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 6: Marine Modeling*, E. D. Goldberg, J. N. McCave, J. J. O'Brien, and J. H.

- Steele, eds., Wiley, Interscience, New York, pp. 459–495. (310, 311, 358)
- Lee, A. J., 1967. Temperature and salinity distributions as shown by sections normal to the Iceland-Faroe Ridge. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 157:100–135. (24)
- Lee, A. J., D. F. Bumpus, and L. M. Lauzier, 1965. The sea-bed drifter. A new instrument which indicates the residual current near the sea bed. *I.C.N.A.F. Research Bulletin* No. 2, 42–47. (213)
- Lee, A., and D. Ellett, 1965. On the contribution of overflow water from the Norwegian Sea to the hydrographic structure of the North Atlantic Ocean. *Deep-Sea Research* 12:129–142. (23)
- Lee, C., and R. Bearsley, 1974. The generation of long non-linear internal waves in a weakly stratified shear flow. *Journal of Geophysical Research* 79:453–462. (332)
- Lee, T. D., 1951. Difference between turbulence in a two-dimensional fluid and in a three-dimensional fluid. *Journal of Applied Physics* 22:524. (543)
- Lee, T. N., 1975. Florida Current spin-off eddies. *Deep-Sea Research* 22:753–765. (118)
- Lee, T. N., and P. A. Mayer, 1977. Low-frequency current variability and spin-off eddies along the shelf off southeast Florida. *Journal of Marine Research* 35:193–220. (118)
- Leetmaa, A., 1978. Fluctuating winds: an energy source for mesoscale motions. *Journal of Geophysical Research* 83:427–430. (348)
- Leetmaa, A., and A. F. Bunker, 1978. Updated charts of the mean annual wind stress, convergences in the Ekman Layers and Sverdrup transports in the North Atlantic. *Journal of Marine Research* 36:311–322. (125, 131, 139, 217, 228, 229)
- Leetmaa, A., P. Niiler, and H. Stommel, 1977. Does the Sverdrup Relation account for the Mid-Atlantic circulation? *Journal of Marine Research* 35:1–10. (xxiii, 74, 78, 85, 91, 345, 527)
- Legeckis, R., 1977a. Oceanic polar front in the Drake Passage—satellite observations during 1976. *Deep-Sea Research* 24:701–704. (426)
- Legeckis, R., 1977b. Long waves in the eastern equatorial Pacific Ocean: A view from a geostationary satellite. *Science* 197:1179–1181. (186, 193, 426)
- Legeckis, R., 1978. A survey of worldwide sea surface temperature fronts detected by environmental satellites. *Journal of Geophysical Research* 83:4501–4522. (112)
- Legeckis, R. V., 1979. Satellite observations of the influence of bottom topography on the seaward deflection of the Gulf Stream off Charleston, South Carolina. *Journal of Physical Oceanography* 9:483–497. (426)
- Leipper, D. F., 1970. A sequence of current patterns in the Gulf of Mexico. *Journal of Geophysical Research* 75:637–657. (113)
- Leith, C. E., 1971. Atmospheric predictability and two-dimensional turbulence. *Journal of the Atmospheric Sciences* 28:145–161. (543)
- Le Lacheur, E. A., and J. C. Sammons, 1932. Tides and currents in Long Island and Block Island Sounds. *U.S. Coast and Geodetic Survey Special Publication* No. 174, 187 pp. (201)
- Lemansson, L., and J. P. Rébert, 1973. Circulation dans la partie orientale de l'Atlantique Sud. *Documents Scientifiques, Centre de Recherches Océanographiques—Abidjan* 4:91–124. (83)
- Le Méhauté, B., 1976. *An Introduction to Hydrodynamics and Water Waves*. Springer-Verlag, New York, 315 pp. (432)
- Lenz, E., 1845. Bermerkungen ber die Temperatur des Weltmeeres in verschiedenen Tiefen. *Bulletin de la Classe Physico-Mathématique de l'Académie Impériale des Sciences de Saint-Pétersbourg* 5:67–74. (8, 40)
- Leonard, D. A., B. Caputo, R. L. Johnson, and F. E. Hoge, 1977. Experimental remote sensing of subsurface temperature in natural ocean water. *Geophysical Research Letters* 4:279–281. (428)
- Lettau, B., W. Brower, and R. Quayle, 1976. Marine climatology. *MESA New York Bight Atlas Monograph* 7, New York Sea Grant Institute, Albany, New York, 239 pp. (230)
- Lettau, H. H., 1959. Wind profile surface stress and geostrophic drag coefficients in the atmospheric surface layer. *Advances in Geophysics* 6:241–257. (502)
- Lettau, H. H., and B. Davidson, 1957. *Exploring the Atmosphere's First Mile*. Pergamon Press, Oxford, 587 pp. (500)
- Levitus, S., and A. H. Oort, 1977. Global analysis of oceanographic data. *Bulletin of the American Meteorological Society* 58:1270–1284. (89)
- Lewis, E. L., and N. P. Fofonoff, 1979. Notice to oceanographers—A practical salinity scale. *Journal of Physical Oceanography* 9:446. (418)
- Libbey, W., Jr., 1891. Report upon a physical investigation of the waters off the southern coast of New England, made during the summer of 1889, by the U.S. Fish Commission schooner *Grampus*. *Bulletin of the United States Fish Commission*, 9 (1889), 391–459. (208)
- Libbey, W., Jr., 1895. The relations of the Gulf Stream and the Labrador Current. In *Report of the Sixth International Geographical Congress, London*, 1895, pp. 461–474. (208)
- Lighthill, M. J., 1952. On sound generated aerodynamically. *Proceedings of the Royal Society of London A* 211:564–587. (509)
- Lighthill, M. J., 1967. On waves generated in dispersive systems by travelling forcing effects, with application to the dynamics of rotating fluids. *Journal of Fluid Mechanics* 27:725–752. (165)
- Lighthill, M. J., 1969. Dynamic response of the Indian Ocean to onset of the Southwest Monsoon. *Philosophical Transactions of the Royal Society of London A* 265:45–92. (165, 192, 340, 527, 533)
- Linden, P. F., 1973. On the structure of salt fingers. *Deep-Sea Research* 20:325–340. (252, 255)
- Linden, P. F., 1974. Salt fingers in a steady shear flow. *Geophysical Fluid Dynamics* 6:1–27. (255)
- Linden, P. F., 1975. The deepening of a mixed layer in a stratified fluid. *Journal of Fluid Mechanics* 71:385–405. (243)
- Linden, P. F., 1976. The formation and destruction of fine-structure by double-diffusive processes. *Deep-Sea Research* 23:895–908. (251, 252)
- Linden, P. F., 1978. The formation of banded salt-finger structure. *Journal of Geophysical Research* 83:2902–2912. (252)

- Linden, P. F., 1979. Mixing in stratified fluids. *Geophysical and Astrophysical Fluid Dynamics* 13:3–23. (247)
- Linden, P. F., and T. G. L. Shirtcliffe, 1978. The diffusive interface in double-diffusive convection. *Journal of Fluid Mechanics* 87:417–432. (255, 256, 385)
- Lindzen, R. S., 1967. Planetary waves on beta-planes. *Monthly Weather Review* 95:441–451. (324, 512, 513)
- Lindzen, R. S., and J. R. Holton, 1968. A theory of the quasi-biennial oscillation. *Journal of the Atmospheric Sciences* 25:1095–1107. (532)
- Lindzen, R. S., and K.-K. Tung, 1978. Wave overreflection and shear instability. *Journal of the Atmospheric Sciences* 35:1626–1632. (534)
- Lineikin, P. C., 1955. Ob opredelenii tolshchiny baroklinnogo sloya morya [On the determination of the thickness of the baroclinic layer of the ocean]. *Doklady Akademii Nauk SSSR* 101:461–464. (159)
- Lingenfelter, R. E., and R. Ramaty, 1970. Astrophysical and geophysical variations in C-14 production. In *Radiocarbon Variations and Absolute Chronology*, I. U. Olsen, ed., Wiley, Interscience, New York, and Almqvist & Wiksell, Stockholm, pp. 513–537. (435)
- Lipes, R. G., R. L. Bernstein, V. J. Cardone, K. B. Katsaros, E. G. Njoku, A. L. Riley, D. B. Boss, C. T. Swift, and F. J. Wentz, 1979. Seasat scanning multichannel microwave radiometer: Results of the Gulf of Alaska Workshop. *Science* 204:1415–1417. (427)
- Lipps, F. B., 1963. Stability of jets in a divergent barotropic fluid. *Journal of the Atmospheric Sciences* 20:120–129. (169, 347)
- Lisitzin, A. P., 1972. Sedimentation in the world ocean. *Society of Economic Paleontologists and Mineralogists Special Publication No. 17*, 218 pp. (59)
- Lisitzin, E., 1974. *Sea-Level Changes*. Elsevier, Amsterdam, 286 pp. (108)
- Long, R. R., 1951. The flow of a liquid past a barrier in a rotating spherical shell. *Journal of Meteorology* 8:207–221. (474)
- Longuet-Higgins, M. S., 1962. The statistical geometry of random surfaces. In *Hydrodynamic Stability: Proceedings of the Thirteenth Symposium on Applied Mathematics*, G. Birkhoff, R. Bellman, and C. C. Lin, eds., American Mathematical Society, Providence, Rhode Island, pp. 105–144. (491)
- Longuet-Higgins, M. S., 1964. Planetary waves on a rotating sphere. *Proceedings of the Royal Society of London A* 279:446–473. (165, 191, 301, 303, 344)
- Longuet-Higgins, M. S., 1965. Planetary waves on a rotating sphere II. *Proceedings of the Royal Society of London A* 284:40–68. (191, 344)
- Longuet-Higgins, M. S., 1966. Planetary waves on a hemisphere bounded by meridians of longitude. *Philosophical Transactions of the Royal Society of London A* 260:317–350. (165)
- Longuet-Higgins, M. S., 1968a. The eigenfunctions of Laplace's tidal equations over a sphere. *Philosophical Transactions of the Royal Society of London A* 262:511–607. (191, 297, 344)
- Longuet-Higgins, M. S., 1968b. On the trapping of waves along a discontinuity of depth in a rotating ocean. *Journal of Fluid Mechanics* 31:417–434. (310, 316)
- Longuet-Higgins, M. S., 1968c. Double Kelvin waves with continuous depth profiles. *Journal of Fluid Mechanics* 34:49–80. (358)
- Longuet-Higgins, M. S., 1969a. On wave breaking and the equilibrium spectrum of wind-generated waves. *Proceedings of the Royal Society of London A* 310:151–159. (288, 495)
- Longuet-Higgins, M. S., 1969b. On the trapping of long period waves around islands. *Journal of Fluid Mechanics* 37:773–784. (310, 358)
- Longuet-Higgins, M. S., 1969c. On the transport of mass by time-varying ocean currents. *Deep-Sea Research* 16:431–447. (345)
- Longuet-Higgins, M. S., 1976. On the nonlinear transfer of energy in the peak of a gravity-wave spectrum: a simplified model. *Proceedings of the Royal Society of London A* 347:311–328. (494)
- Longuet-Higgins, M. S., D. E. Cartwright, and N. D. Smith, 1963. Observations of the directional spectrum of sea waves using the motions of a floating buoy. In *Ocean Wave Spectra: Proceedings of a Conference*, Prentice-Hall, Englewood Cliffs, New Jersey, pp. 111–136. (492)
- Longuet-Higgins, M. S., and M. J. H. Fox, 1977. Theory of the almost-highest wave: the inner solution. *Journal of Fluid Mechanics* 80:721–741. (276)
- Longuet-Higgins, M. S., and A. E. Gill, 1967. Resonant interactions between planetary waves. *Proceedings of the Royal Society of London A* 299:120–140. (345, 346)
- Longuet-Higgins, M. S., and G. S. Pond, 1970. The free oscillations of fluid on a hemisphere bounded by meridians of longitude. *Philosophical Transactions of the Royal Society of London A* 266:193–223. (344)
- Longuet-Higgins, M. S., and J. S. Turner, 1974. An 'entraining plume' model of a spilling breaker. *Journal of Fluid Mechanics* 63:1–20. (242)
- Lonsdale, P., 1976. Abyssal circulation of the southeastern Pacific and some geological implications. *Journal of Geophysical Research* 81:1163–1176. (35)
- Lonsdale, P., 1977. Inflow of bottom water to the Panama Basin. *Deep-Sea Research* 24:1065–1101. (35, 36)
- Loosli, H. H., and H. Oeschger, 1968. Detection of ³⁹Ar in atmospheric argon. *Earth and Planetary Science Letters* 5:191–198. (447)
- Loosli, H. H., and H. Oeschger, 1979. Argon-39, carbon-14 and krypton-85 measurements in groundwater samples. In *Isotope Hydrology 1978*, International Atomic Energy Agency, Vienna, 2, pp. 931–953. (447)
- Lorenz, E. N., 1960. Energy and numerical weather prediction. *Tellus* 12:364–373. (508)
- Lorenz, E. N., 1962. Simplified dynamic equations applied to the rotating basin experiments. *Journal of the Atmospheric Sciences* 19:39–51. (532)
- Lorenz, E. N., 1963a. The mechanics of vacillation. *Journal of the Atmospheric Sciences* 20:448–464. (174, 532)
- Lorenz, E. N., 1963b. Deterministic nonperiodic flow. *Journal of the Atmospheric Sciences* 20:130–141. (387)

- Lorenz, E. N., 1967. *The Nature and Theory of the General Circulation of the Atmosphere*. World Meteorological Organization, Geneva, WMO No. 218, T. P. 115, 161 pp. (343, 396, 429, 507)
- Lorenz, E. N., 1972. Barotropic instability of Rossby wave motion. *Journal of the Atmospheric Sciences* 29:259–264. (345, 531, 534, 535)
- Lorenzen, C. J., 1966. A method for the continuous measurement of *in vivo* chlorophyll concentration. *Deep-Sea Research* 13:223–227. (376)
- Love, C. M., ed., 1972. *EASTROPAC Atlas. Volume 1: Physical Oceanographic and Meteorological Data from Principal Participating ships, First Survey Cruise, February–March 1967*. National Oceanic and Atmospheric Administration, National Marine Fisheries Service Circular 330, 12 + xii pp., 255 figures (83, 188)
- Lovelock, J. E., R. J. Maggs and R. J. Wade, 1974. Halogenated hydrocarbons in and over the Atlantic. *Nature* 241:194–195. (447)
- Lumley, J. L., 1978. Computational modeling of turbulent flows. *Advances in Applied Mechanics* 18:123–176. (240)
- Lupton, J. E., 1976. The ^3He distribution in deep water over the Mid-Atlantic Ridge. *Earth and Planetary Science Letters* 32:317–374. (444, 445)
- Lupton, J. E., and H. Craig, 1975. Excess ^3He in oceanic basalts: Evidence for terrestrial primordial helium. *Earth and Planetary Science Letters* 26:133–139. (444)
- Luther, D., 1980. Observations of long-period waves in the tropical oceans and atmosphere. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, 210 pp. (348)
- Lutjeharms, J. R. E., and D. J. Baker, Jr., 1979. Intensities and scales of motion in the Southern Ocean. *South African Journal of Science* 75:179–182. (359)
- Luyten, J. R., 1977. Scales of motion in the deep Gulf Stream and across the Continental Rise. *Journal of Marine Research* 35:49–74. (108, 121, 127, 128, 129, 373)
- Luyten, J. R., 1980. Recent observations in the equatorial Indian Ocean. In *Monsoon Dynamics*, J. Lighthill and R. P. Pearce, eds., Cambridge University Press, London. (429)
- Luyten, J. R., and A. R. Robinson, 1974. Transient Gulf Stream meandering. Part II: Analysis via a quasi-geostrophic time-dependent model. *Journal of Physical Oceanography* 4:256–269. (126)
- Luyten, J. R., and J. C. Swallow, 1976. Equatorial undercurrents. *Deep-Sea Research* 23:999–1001. (194, 421, 430)
- Lynn, R. J., and J. L. Reid, 1968. Characteristics and circulation of deep and abyssal waters. *Deep-Sea Research* 15:577–598. (41, 183)
- McAlister, E. D., and W. McLeish, 1969. Heat transfer in the top millimeter of the ocean. *Journal of Geophysical Research* 74:3408–3414. (243)
- McCartney, J. F., and P. L. Howard, 1976. Marine batteries—an overview. In *Marine Propulsion*, J. S. Sladky, Jr., ed., American Society of Mechanical Engineers, Ocean Engineering Division, New York 2, pp. 197–215. (401)
- McCartney, M. S., 1977. Subantarctic Mode Water. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. V. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, pp. 103–119. (55, 59)
- McCartney, M. S., 1980. The subtropical recirculation of Subantarctic Mode Water. *Journal of Marine Research*. (59)
- McClain, E. P., 1977. Recent progress in earth satellite data application to marine activities. In *Oceans '77 Conference Record*, Institute of Electrical and Electronics Engineers, New York, and Marine Technology Society, Washington, D.C., pp. 14A1–14A8. (426)
- McComas, C. H., 1977. Equilibrium mechanisms within the oceanic internal wave field. *Journal of Physical Oceanography* 7:836–845. (285)
- McComas, C. H., and F. P. Bretherton, 1977. Resonant interaction of oceanic internal waves. *Journal of Geophysical Research* 82:1397–1412. (274, 276, 277, 337)
- McCreary, J. P., 1976. Eastern tropical ocean response to changing wind systems: With application to El Niño. *Journal of Physical Oceanography* 6:632–645. (192)
- McCreary, J. P., 1977. Eastern ocean response to changing wind systems. Ph.D. Thesis, Scripps Institution of Oceanography, University of California at San Diego, 156 pp. (190, 193)
- McCreary, J. P., 1978. Eastern ocean response to changing wind systems. In *Review Papers of Equatorial Oceanography—FINE Workshop Proceedings*, Nova/N.Y.I.T. University Press, Fort Lauderdale, 21 pp. (193)
- McCreary, J. P., 1980. A linear stratified ocean model of the equatorial undercurrent. *Philosophical Transactions of the Royal Society of London*. (194, 195, 196)
- MCCullough, J. R., 1975. Vector-averaging current meter speed calibration and recording technique. *W.H.O.I. Technical Report 75-44*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 35 pp. (404)
- MCCullough, J. R., 1978a. Near-surface ocean current sensors: Problems and performance. In *Proceedings of a Working Conference on Current Measurements*, Technical Report DEL-SG-3-78, College of Marine Studies, University of Delaware, Newark, 372 pp. (404, 405)
- MCCullough, J. R., 1978b. Techniques of measuring currents near the ocean surface. In *Instruments and Methods in Air-Sea Interaction*, preprint volume for NATO School, Ustaoeset, Norway, April 1978, NATO Science Committee, 33 pp. (404, 405)
- McDougall, T. J., 1979. Measurements of turbulence in a zero-mean-shear mixed layer. *Journal of Fluid Mechanics* 94:409–431. (242)
- McDowell, S. E., 1977. A note on XBT accuracy. *Horizon* 2, No. 2, Technical Newsletter, Sippican Corporation, Marion, Massachusetts; also in *POLYMODE News* No. 29, 1977, unpublished document, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts. See also: A cautionary note on T-5 XBTs, in *POLYMODE News* No. 58, 1978. (414)
- McDowell, S. E., and H. T. Rossby, 1978. Mediterranean water: An intense mesoscale eddy off the Bahamas. *Science* 202:1085–1087. (371)
- McEwan, A. D., 1971. Degeneration of resonantly-excited standing internal gravity waves. *Journal of Fluid Mechanics* 50:431–448. (248)

- McEwan, A. D., 1973. Interactions between internal gravity waves and their traumatic effect on a continuous stratification. *Boundary-Layer Meteorology* 5:159–175. (248, 279, 291)
- McEwan, A. D., and R. M. Robinson, 1975. Parametric instability of internal gravity waves. *Journal of Fluid Mechanics* 67:667–687. (248)
- McGowan, J. A., 1971. Oceanic biogeography of the Pacific. In *The Micropaleontology of the Oceans*, B. M. Funnel and W. R. Reidel, eds., Cambridge University Press, London, pp. 3–74. (382)
- Machenhauer, B., 1977. On the dynamics of gravity oscillations in a shallow water model, with applications to normal mode initialization. *Contributions to Atmospheric Physics* 50:243–271. (509)
- Machta, L., 1972. The role of the oceans and biosphere in the carbon dioxide cycle. In *Nobel Symposium 20: The Changing Chemistry of the Oceans*, D. Dryssen and D. Jagner, eds., Almqvist & Wiksell, Stockholm, and Wiley, Interscience, New York, pp. 121–145. (449)
- McIntyre, M. E., 1970. On the non-separable baroclinic parallel flow instability problem. *Journal of Fluid Mechanics* 40:273–306. (529)
- McIntyre, M. E., 1980. Introduction to the generalized Lagrangian mean description of wave-mean flow interactions. *Pure and Applied Geophysics*. (533)
- Mackas, D. L., 1977. Horizontal spatial variability and co-variability of marine phytoplankton and zooplankton. Ph.D. Thesis, Dalhousie University, Halifax, 220 pp. (380)
- McKean, R. S., and T. E. Ewart, 1974. Temperature spectra in the deep ocean off Hawaii. *Journal of Physical Oceanography* 4:191–199. (265)
- McKee, W. D., 1972. Scattering of Rossby waves by partial barriers. *Geophysical Fluid Dynamics* 4:83–89. (345)
- McLellan, H. J., 1957. On the distinctness and origin of the Slope Water off the Scotian Shelf and its easterly flow south of the Grand Banks. *Journal of the Fisheries Research Board of Canada* 14:213–230. (123)
- McPhaden, J., and R. Knox, 1979. Equatorial Kelvin and inertio-gravity waves in zonal shear flow. *Journal of Physical Oceanography* 9:263–277. (193)
- McWilliams, J. C., 1975. Baroclinic instability and the MODE observations. In *Dynamics and the Analysis of MODE-I: Report of the MODE-I Dynamics Group*, Massachusetts Institute of Technology, Cambridge, Massachusetts, pp. 94–112. (Unpublished document.) (532)
- McWilliams, J. C., 1976. Maps from the Mid-Ocean Dynamics Experiment: Part II. Potential vorticity and its conservation. *Journal of Physical Oceanography* 6:828–846. (372, 545)
- McWilliams, J. C., 1977. On a class of stable, slightly geostrophic mean gyres. *Dynamics of Atmospheres and Oceans* 2:19–28. (531)
- McWilliams, J. C., and G. R. Flierl, 1976. Optimal, quasi-geostrophic wave analysis of MODE array data. *Deep-Sea Research* 23:285–300. (169)
- McWilliams, J. C., and G. R. Flierl, 1979. On the evolution of isolated, nonlinear vortices. *Journal of Physical Oceanography* 9:1155–1182. (510, 529)
- Madden, R., and P. Julian, 1972. Further evidence of global scale, five-day pressure waves. *Journal of the Atmospheric Sciences* 29:1464–1469. (348)
- Magnell, B., 1976. Salt fingers observed in the Mediterranean outflow region (34°N, 11°W) using a towed sensor. *Journal of Physical Oceanography* 6:511–523. (252)
- Malkus, W. V. R., 1963. Outline of a theory of turbulent convection. In *Theory and Fundamental Research in Heat Transfer*, American Society of Mechanical Engineers, Pergamon Press, Oxford, pp. 203–217. (392)
- Malkus, W. V. R., 1964. Boussinesq equations, Boussinesq energetics. In *Notes on the 1964 Summer Study Program in Geophysical Fluid Dynamics at the Woods Hole Oceanographic Institution, W.H.O.I. Reference No. 64-46*, Woods Hole, Massachusetts, 1, pp. 1–12. (385)
- Malkus, W. V. R., 1979. Turbulent velocity profiles from stability criteria. *Journal of Fluid Mechanics* 90:401–414. (391)
- Malkus, W. V. R., and G. Veronis, 1958. Finite amplitude convection. *Journal of Fluid Mechanics* 4:225–260. (391)
- Manins, P. C., 1976. Intrusion into a stratified fluid. *Journal of Fluid Mechanics* 74:547–560. (253)
- Manins, P. C., and J. S. Turner, 1978. The relation between the flux ratio and energy ratio in convectively mixed layers. *Quarterly Journal of the Royal Meteorological Society* 104:39–44. (245)
- Mann, C. R., 1967. The termination of the Gulf Stream and the beginning of the North Atlantic Current. *Deep-Sea Research* 14:337–359. (125, 137)
- Mann, C. R., 1969. Temperature and salinity characteristics of the Denmark Strait overflow. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 6 (Supplement):125–137. (23, 24)
- Mann, C. R., A. R. Coote, and D. M. Garner, 1973. The meridional distribution of silicate in the western Atlantic Ocean. *Deep-Sea Research* 20:791–801. (25)
- Mantyla, A. W., 1975. On the potential temperature in the abyssal Pacific Ocean. *Journal of Marine Research* 33:341–354. (35, 36)
- Marmer, H. A., 1925. Tides and currents in New York Harbor. *U.S. Coast and Geodetic Survey special Publication* No. 111, 198 pp. (200, 201)
- Marmorino, G. O., and D. R. Caldwell, 1976. Heat and salt transport through a diffusive thermohaline interface. *Deep-Sea Research* 23:59–67. (254, 255)
- Marsh, J. G., and E. S. Chang, 1978. 5' detailed gravimetric geoid in the northwestern Atlantic Ocean. *Marine Geodesy* 1:253–261. (374)
- Marsh, J. G., T. V. Martin, J. J. McCarthy, and P. S. Chovitz, 1980. Mean sea surface computation using GEOS-3 altimeter data. *Marine Geodesy* 3:359–378. (323)
- Marshall, S. M., and A. P. Orr, 1955. *The Biology of a Marine Copepod*. Oliver & Boyd, Edinburgh, 188 pp. (278)
- Martin, S., W. Simmons, and C. Wunsch, 1972. The excitation of resonant triads by single internal waves. *Journal of Fluid Mechanics* 53:17–44. (276)
- Martineau, D. P., 1953. The influence of the current systems and lateral mixing upon Antarctic Intermediate Water in the South Atlantic. *W.H.O.I. Technical Report* 53-72, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 12 pp. (84)

- Masuzawa, J., 1969. Subtropical Mode Water. *Deep-Sea Research* 16:463–472. (59, 83)
- Mather, J. R., H. Adams III, and G. A. Yoshioka, 1964. Coastal storms of the eastern United States. *Journal of Applied Meteorology* 3:693–706. (215)
- Matsuno, T., 1966. Quasi-geostrophic motions in the equatorial area. *Journal of the Meteorological Society of Japan, Series 2* 44:25–43. (191, 527)
- Matsuno, T., and K. Nakamura, 1979. The Eulerian and Lagrangian-mean meridional circulations in the stratosphere at the time of a sudden warming. *Journal of the Atmospheric Sciences* 36:640–654. (506)
- Matthäus, W., 1968. Zur Geschichte des Hochseepiegels. *Schriftenreihe für Geschichte der Naturwissenschaften, Technik, und Medizin* 12:101–112. (399, 424)
- Mattson, J. S., 1978. Chronology of events and oil slicks from the ARGO MERCHANT. In *In the Wake of the ARGO MERCHANT: Proceedings of a Symposium Held January 11–13, 1978*, Center for Ocean Management Studies, University of Rhode Island, pp. 15–18. (226)
- Maul, G., P. W. deWitt, A. Yanaway, S. R. Baig, 1978. Geostationary satellite observations of Gulf Stream meanders: infrared measurements and time series analysis. *Journal of Geophysical Research* 83:6123–6135. (113, 116)
- Maury, M. F., 1855. *The Physical Geography of the Sea and its Meteorology*, 1st ed. Harper & Bros., New York, 274 pp. Eighth ed. (1861) republished 1963, J. Leighly, ed., Harvard University Press, Cambridge, Massachusetts, 432 pp. (208, 343)
- Maxworthy, T., 1979. A note on the internal solitary waves produced by tidal flow over a three-dimensional ridge. *Journal of Geophysical Research* 84:338–346. (332)
- Maxworthy, T., and F. K. Browand, 1975. Experiments in rotating and stratified flows: oceanographic application. *Annual Review of Fluid Mechanics* 7:273–305. (248, 253)
- Mayer, D. A., D. V. Hansen, and S. M. Minton, 1980. A comparison of water movements in the New Jersey shelf during 1975 and 1976. In *Oxygen Depletion and Associated Benthic Mortalities in the New York Bight*, 1976, R. L. Swanson and C. J. Sinderman, eds., NOAA Professional Paper, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland. (225)
- Mayer, D. A., D. V. Hansen, and D. A. Ortman, 1979. Long-term current and temperature observations on the Middle Atlantic shelf. *Journal of Geophysical Research* 84:1776–1792. (214, 215, 216, 218, 219, 223, 224, 225, 226, 227)
- Mazeika, P. A., 1968. Eastward flow within the South Equatorial Current in the eastern South Atlantic. *Journal of Geophysical Research* 73:5819–5828. (83)
- MEDOC Group, 1970. Observation of formation of deep water in the Mediterranean Sea, 1969. *Nature* 227:1037–1040. (xxii, 22, 25)
- Meiss, J. D., N. Pomphrey, and K. M. Watson, 1979. Numerical analysis of weakly nonlinear wave turbulence. *Proceedings of the National Academy of Sciences of the U.S.A.* 76:2109–2113. (285)
- Mellor, G. L., and P. A. Durbin, 1975. The structure and dynamics of the ocean surface mixed layer. *Journal of Physical Oceanography* 5:718–728. (240)
- Menard, H. W., and S. M. Smith, 1966. Hypsometry of ocean basin provinces. *Journal of Geophysical Research* 71:4305–4325. (46, 50)
- Menzel, D. W., and J. H. Ryther, 1968. Organic carbon and the oxygen minimum in the South Atlantic Ocean. *Deep-Sea Research* 15:327–337. (81)
- Menzel, D. W., and J. H. Steele, 1978. The application of plastic enclosures to the study of pelagic marine biota. *Rapports et Proces-Verbaux des Reunions, Conseil Permanent International pour l'Exploration de la Mer* 173:7–12. (379)
- Merle, J., 1977. Seasonal variations of temperature and circulation in the upper layers of the equatorial Atlantic Ocean. Paper presented at GATE Workshop, Miami, 28 February–10 March, 1977. (Unpublished manuscript.) (185)
- Merle, J., 1978. Atlas hydrologique saisonnier de l'Ocean Atlantique Intertropical. *Travaux et Documents de l'O.R.S.T.O.M.*, No. 82, 184 pp. (82, 83)
- Merz, A., 1925. Die Deutsche Atlantische Expedition auf dem Vermessungs-und Forschungsschiff "Meteor". I. Bericht. *Sitzungsberichte der Preussischen Akademie der Wissenschaften, Physikalisch-mathematische Klasse, Jahrgang 1925*:562–586. (10)
- Merz, A., and G. Wust, 1922. Die Atlantische Vertikalzirkulation. *Zeitschrift der Gesellschaft für Erdkunde zu Berlin, Jahrgang 1922*:1–35. (9, 10, 11)
- Metcalf, W. G., 1969. Dissolved silicate in the deep North Atlantic. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* (16 (Supplement)):139–145. (25, 29, 59)
- Metcalf, W. G., B. C. Heezen, and M. C. Stalcup, 1964. The sill depth of the Mid-Atlantic Ridge in the equatorial region. *Deep-Sea Research* 11:1–10. (29)
- Meyers, G., 1979. Annual variation in the slope of the 14°C isotherm along the equator in the Pacific Ocean. *Journal of Physical Oceanography* 9:885–891. (186, 187)
- Mied, R. D., 1978. The instabilities of finite amplitude barotropic Rossby waves. *Journal of Fluid Mechanics* 86:225–246. (535)
- Miles, J. W., 1957. On the generation of surface waves by shear flows. *Journal of Fluid Mechanics* 3:185–204. (494)
- Miles, J. W., 1959. On the generation of surface waves by shear flows. Part 2. *Journal of Fluid Mechanics* 6:568–582. (494)
- Miles, J. W., 1963. On the stability of heterogeneous shear flows. *Journal of Fluid Mechanics* 16:209–227. (269)
- Miles, J. W., 1964. Free surface oscillations in a slowly rotating liquid. *Journal of Fluid Mechanics* 18:187–194. (298)
- Miles, J. W., 1974a. On Laplace's tidal equations. *Journal of Fluid Mechanics* 66:241–260. (295, 296, 297, 331)
- Miles, J. W., 1974b. Laplace's tidal questions revisited. In *Proceedings of the Seventh U.S. National Congress of Applied Mechanics, Boulder, Colorado, June 3–7, 1974*, pp. 27–38. (301)
- Millard, R. C., Jr., 1971. Wind measurements from buoys: A sampling scheme. *Journal of Geophysical Research* 76:5819–5828. (214)
- Millard, R., and H. Bryden, 1973. Spatially averaged MODE-I C.T.D. Stations. In *MODE Hot Line News No. 42*, Woods

- Hole Oceanographic Institution, Woods Hole, Massachusetts. (Unpublished document.) (520)
- Miller, A. R., 1950. A study of mixing processes over the edge of the continental shelf. *Journal of Marine Research* 9:145–160. (212)
- Miller, A. R., 1952. A pattern of surface coastal circulation inferred from surface salinity-temperature data and drift bottle recoveries. *W.H.O.I. Technical Report* 52-28, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 14 pp. + Appendix. (212)
- Miller, B. I., 1964. A study of the filling of Hurricane Donna (1960) over land. *Monthly Weather Review* 92:389–406. (490)
- Miller, G., 1966. The flux of tidal energy out of the deep oceans. *Journal of Geophysical Research* 71:2485–2489. (323)
- Miller, S., and C. Wunsch, 1973. The pole tide. *Nature (Physical Science)* 246:98–102. (339)
- Milliman, J. D., O. H. Pilkey, and D. A. Ross, 1972. Sediments of the continental margin off the eastern United States. *Geological Society of America Bulletin* 83:1315–1334. (208)
- Mitchell, H., 1859. Report of Assistant Henry Mitchell on the physical surveys of New York harbor and the coast of Long Island, with descriptions of apparatus for observing currents, &c. In *Report of the Superintendent of the Coast Survey, Showing the Progress of the Survey during the Year 1859*, Washington, Appendix No. 26, pp. 311–317. (200)
- Mitchell, H., 1889. Report on the results of the physical surveys of New York Harbor. In *Report of the Superintendent of the U.S. Coast and Geodetic Survey Showing the Progress of the Work during the Fiscal Year Ending with June, 1887*, Washington, Appendix No. 15, 301–311. (200)
- Mitsuyasu, H., 1966. Interactions between water waves and wind [I]. *Reports of the Research Institute of Applied Mechanics, Kyushu University* 14:67–88. (493)
- Miyake, M., M. Donelan, G. McBean, C. Paulson, F. Badgley, and E. Leavitt, 1970. Comparison of turbulent fluxes over water determined by profile and eddy correlation techniques. *Quarterly Journal of the Royal Meteorological Society* 96:132–137. (489)
- MODE-I, 1972a. The design of MODE-I—a report to the Scientific Council from the Array Committee. Massachusetts Institute of Technology, Cambridge, Massachusetts, 99 pp. (Unpublished document.) (430)
- MODE-I, 1972b. Dynamics and the design of MODE-I—a report to the Scientific Council by the MODE-I Theoretical Panel. Massachusetts Institute of Technology, Cambridge, Massachusetts. (Unpublished document.) (430)
- MODE-I, 1974. Instrument description and Intercomparison Report of the MODE-I Intercomparison Group. Massachusetts Institute of Technology, Cambridge, Massachusetts, 173 pp. (Unpublished Document.) (431)
- MODE-I, 1975. Dynamics and the Analysis of MODE-I: Report of the MODE-I Dynamics Group. Massachusetts Institute of Technology, Cambridge, Massachusetts, 250 pp. (Unpublished document.) (430)
- MODE-I Atlas Group, The, 1977. *Atlas of the Mid-Ocean Dynamics Experiment (MODE-I)*. V. Lee and C. Wunsch, eds., Massachusetts Institute of Technology, Cambridge, Massachusetts, 274 pp. (359)
- MODE Group, The, 1978. The Mid-Ocean Dynamics Experiment. *Deep-Sea Research* 25:859–910. (6, 359, 371, 374, 430, 431, 432)
- Molinari, R., and A. D. Kirwan, Jr., 1975. Calculations of differential kinematic properties from Lagrangian observations in the western Caribbean Sea. *Journal of Physical Oceanography* 5:483–491. (426)
- Moller, L., 1929. Die Zirkulation des Indischen Ozeans. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge. A. Geographisch-naturwissenschaftliche Reihe*, 21, 48 pp. (10)
- Monin, A. S., V. M. Kamenkovich, and V. G. Kort, 1974. *Izmenchivost Mirovogo Okeana*. Gidrometeoizdat, Lenigrad, 261 pp. [Variability of the Oceans, J. J. (sic) Lumley, ed., 1977, Wiley, Interscience, New York, 241 pp.] (250)
- Monin, A. S., and A. M. Obukhov, 1954. Osnovnye zakonomernosti turbulentnogo peremeshivaniya v prizemnom atmosfery. *Trudy Geofizicheskogo Instituta Akademii Nauk SSSR* 24:163–187. (Basic laws of turbulent mixing in the ground layer of the atmosphere, Air Technical Information Section Liaison Office No. F-TS-9295/V and American Meteorological Society Translation No. T-R-174, 35 pp.) (239, 484)
- Monin, A. S., and A. M. Yaglom, 1965, 1967. *Statisticheskaya Gidromekhanika; Mekhanika Turbulentnosti*. Nauka, Moscow, 1 (1965), 639 pp., 2 (1967), 708 pp. [Statistical Fluid Mechanics: Mechanics of Turbulence, J. L. Lumley, ed., MIT Press, Cambridge, Massachusetts, (1971), 769 pp., 2 (1975), 874 pp.] (485)
- Montgomery, R. B., 1938a. Circulation in upper layers of southern North Atlantic deduced with use of isentropic analysis. *Papers in Physical Oceanography and Meteorology* 6:2, 55 pp. (43, 44, 82)
- Montgomery, R. B., 1938b. Fluctuations in monthly sea level on eastern U.S. coast as related to dynamics of western North Atlantic Ocean. *Journal of Marine Research* 1:165–185. (114, 116, 351)
- Montgomery, R. B., 1941. Sea level difference between Key West and Miami, Florida. *Journal of Marine Research* 4:32–37. (116)
- Montgomery, R. B., 1950. The Taylor diagram (temperature against vapor pressure) for air mixtures. *Archiv für Meteorologie, Geophysik und Bioklimatologie* 2:163–183. (497)
- Montgomery, R. B., 1958. Water characteristics of Atlantic Ocean and of world ocean. *Deep-Sea Research* 5:134–148. (42, 44, 46, 47, 49, 50, 51, 57, 93)
- Montgomery, R. B., 1962. Equatorial Undercurrent observations in review. *Journal of the Oceanographical Society of Japan, 20th Anniversary Volume*: 487–498. (185)
- Montgomery, R. B., 1969. Comments on oceanic leveling. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement):147–152. (227)
- Montgomery, R. B., and E. Palmén, 1940. Contribution to the question of the equatorial counter current. *Journal of Marine Research* 3:112–133. (188)
- Montgomery, R. B., and M. J. Pollak, 1942. Sigma-T Surfaces in the Atlantic Ocean. *Journal of Marine Research* 5:20–27. (86)

- Montgomery, R. B., and E. D. Stroup, 1962. Equatorial Waters and Currents at 150°W in July–August 1952. *The Johns Hopkins Oceanographic Studies*, No. 1, 68 pp. (185)
- Mooers, C. N. K., J. Fernandez-Partagas, and J. F. Price, 1976. Meteorological Forcing Fields of the New York Bight (First Year's Progress Report). *Technical Report, Rosenstiel School of Marine and Atmospheric Science, University of Miami, TR76-8*, Miami, Florida, 151 pp. (214, 215, 233)
- Moore, D. W., 1963. Rossby waves in ocean circulation. *Deep-Sea Research* 10:735–747. (154, 155)
- Moore, D. W., 1968. Planetary-gravity waves in equatorial ocean. Ph.D. Thesis, Harvard University, Cambridge, Massachusetts, 207 pp. (191, 307)
- Moore, D., 1970. The mass transport velocity induced by free oscillations at a single frequency. *Geophysical Fluid Dynamics* 1:237–247. (345, 472)
- Moore, D. W., P. Hisard, J. P. McCreary, J. Merle, J. J. O'Brien, J. Picaut, J. Verstraete, and C. Wunsch, 1978. Equatorial adjustment in the eastern Atlantic. *Geophysical Research Letters* 5:637–640. (193)
- Moore, D. W., and P. P. Niiler, 1975. A two-layer model for the separation of inertial boundary currents. *Journal of Marine Research* 32:457–485. (343)
- Moore, D. W., and S. G. H. Philander, 1977. Modeling of the tropical oceanic circulation. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 6: *Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 319–361. (184, 191, 192, 304, 307, 513)
- Moore, W. S., 1969. Oceanic concentration of $^{228}\text{Radium}$. *Earth and Planetary Science Letters* 6:437–446. (445)
- Morey, R., 1973. Evaluation of long term deep sea effects on mooring line components. *Charles Stark Draper Laboratory Technical Report E-2748*, Cambridge, Massachusetts, 85 pp. (410)
- Morgan, G. W., 1956. On the wind-driven ocean circulation. *Tellus* 8:301–320. (125, 154, 342, 506)
- Moriyasu, S., 1972. Deep waters in the western North Pacific. In *Kuroshio: Its Physical Aspects*, H. Stommel and K. Yoshida, eds., University of Tokyo Press, pp. 387–408. (36)
- Morse, P. M., and H. Feshbach, 1953. *Methods of Theoretical Physics*. McGraw-Hill, New York, 2 vols., 1978 pp. (298)
- Mosby, H., 1934. The waters of the Atlantic Antarctic Ocean. In *Scientific Results of the Norwegian Antarctic Expedition 1927–1928 et seq.* 1:11, 131 pp. (11, 72)
- Mowbray, D. E., and B. S. H. Rarity, 1967. A theoretical and experimental investigation of the phase configuration of internal waves of small amplitude in a density stratified fluid. *Journal of Fluid Mechanics* 28:1–16. (270)
- Müller, P., 1976. Determination of the rate of change of G and the tidal acceleration of earth and moon from ancient and modern astronomical data. *Technical report, JPL-SP43-36*, The Jet Propulsion Laboratory, Pasadena, California, 24 pp. (322, 323)
- Müller, P., D. J. Olbers, and J. Willebrand, 1978. The IWEX spectrum. *Journal of Geophysical Research* 83:479–500. (285)
- Munk, W. H., 1947. A critical wind speed for air-sea boundary processes. *Journal of Marine Research* 6:203–218. (488)
- Munk, W. H., 1950. On the wind-driven ocean circulation. *Journal of Meteorology* 7:79–93. (79, 81, 125, 140, 152, 340, 341, 342, 345, 468, 471, 473)
- Munk, W. H., 1966. Abyssal recipes. *Deep-Sea Research* 13:707–730. (160, 245, 261, 281, 337, 339, 449)
- Munk, W., 1968. Once again—tidal friction. *Quarterly Journal of the Royal Astronomical Society* 9:352–375. (322)
- Munk, W. H., and E. R. Anderson, 1948. Notes on a theory of the thermocline. *Journal of Marine Research* 7:276–295. (240)
- Munk, W. H., and G. F. Carrier, 1950. The wind-driven circulation in ocean basins of various shapes. *Tellus* 2:158–167. (xix)
- Munk, W. H., and D. E. Cartwright, 1966. Tidal spectroscopy and prediction. *Philosophical Transactions of the Royal Society of London A* 259:533–581. (294, 320, 351)
- Munk, W. H., G. W. Groves, and G. F. Carrier, 1950. Note on the dynamics of the Gulf Stream. *Journal of Marine Research* 9:218–238. (125, 141, 153)
- Munk, W. H., and G. MacDonald, 1960. *The Rotation of the Earth: A Geophysical Discussion*. Cambridge, University Press, London, 323 pp. (296)
- Munk, W. and D. Moore, 1968. Is the Cromwell current driven by equatorial Rossby waves? *Journal of Fluid Mechanics* 33:241–259. (345)
- Munk, W., and N. Phillips, 1968. Coherence and band structure of inertial motion in the sea. *Reviews of Geophysics* 6:447–472. (272, 297, 307, 332)
- Munk, W., F. Snodgrass, and F. Gilbert, 1964. Long waves on the continental shelf: an experiment to separate trapped and leaky modes. *Journal of Fluid Mechanics* 20:529–554. (310, 312)
- Munk, W., F. Snodgrass, and M. Wimbush, 1970. Tides offshore: transition from California coastal to deep-sea waters. *Geophysical Fluid Dynamics* 1:161–235. (310, 326, 327, 333, 358, 400, 425)
- Munk, W. H., and C. Wunsch, 1979. Ocean acoustic tomography: a scheme for large scale monitoring. *Deep-Sea Research* 26:123–161. (265, 374, 428)
- Muromtsev, A. M., 1958. *Osnovnye Cherty Gidrologii Tikhogo Okeana*. Gidrometeoizdat, Leningrad, 631 pp., plus Appendix II (bound separately), 124 pp. (*The Principal Hydrological Features of the Pacific Ocean*, A. Birron and Z. S. Cole, translators, 1963, Israel Program for Scientific Translations, Jerusalem, 417 pp. Available from Office of Technical Services, U.S. Department of Commerce, Washington, D. C.) (85)
- Murphy, D. W., and P. A. Christian, 1979. Solid state electrodes for high energy batteries. *Science* 205:651–656. (401)
- Murphy, S. R., and G. E. Lord, 1965. Thermal and sound velocity microstructure data taken with an unmanned research vehicle. In *Second United States Navy Symposium on Military Oceanography, The Proceedings of the Symposium*, U.S. Naval Ordnance Laboratory White Oak, Silver Springs, Maryland, 1:343–360. (265)
- Mysak, L. A., 1980. Recent advances in shelf wave dynamics. *Reviews of Geophysics and Space Physics* 18:211–241. (222, 358)

- Namias, J., 1969. Seasonal interactions between the North Pacific Ocean and the atmosphere during the 1960's. *Monthly Weather Review* 97:173–192. (496)
- Namias, J., 1972. Large-scale and long-term fluctuations in some atmospheric and oceanic variables. In *Nobel Symposium 20: The Changing Chemistry of the Oceans*, D. Dryssen and D. Jagner, eds., Almqvist & Wiksell, Stockholm, and Wiley, Interscience, New York, pp. 27–48. (351)
- Nan'niti, T., and H. Akamatsu, 1966. Deep current observations in the Pacific Ocean near the Japan Trench. *Journal of the Oceanographical Society of Japan* 22: 154–160. (36)
- Nansen, F., 1902. The Oceanography of the North Pole Basin. In *Scientific Results of the Norwegian North Polar Expedition, 1893–1896*, 3:9, 427 pp. and 33 plates. (72, 264, 331, 415)
- Nansen, F., 1906. Northern waters: Captain Roald Amundsen's observations in the Arctic Seas in 1901. With a discussion of the origin of the bottom-waters of the Northern Seas. *Videnskabs-Selskabets Skrifter. I. Mathematisk-Naturvitenskapelig Klasse*, 1906:3, 145 pp. (72)
- Nansen, F., 1912. Das Bodenwasser und die Abuühlung des Meeres. *Internationale Revue der Gesamten Hydrobiologie und Hydrographie* 5:1, 42 pp. (22, 40, 41, 72)
- Nansen, F., 1913. The waters of the north-eastern North Atlantic. Investigations made during the cruise of the "Frithjof", of the Norwegian Royal Navy, in July 1910. *Internationale Revue der Gesamten Hydrobiologie und Hydrographie* 4: Hydrographisches Supplement, 139 pp. (72)
- Nath, J. H., 1977. Laboratory validation of numerical model drifting buoy-tethering-droge system. *Final Report to NOAA Data Buoy Office, NSTL Station, Mississippi, Contract No. 03-6-038-128*. (426)
- NATO Science Committee, 1978. *Instruments and Methods in Air-Sea Interaction*. Preprint volume for NATO School, Ustaoset, Norway, April 1978, pp. various. (402, 426)
- Needler, G., 1967. A model for the thermohaline circulation in an ocean of finite depth. *Journal of Marine Research* 25:329–342. (159, 160, 161)
- Needler, G., 1972. Thermocline models with arbitrary barotropic flow. *Deep-Sea Research* 18:895–903. (159, 161)
- Needler, G., and P. H. LeBlond, 1973. On the influence of the horizontal component of the earth's rotation on long-period waves. *Geophysical Fluid Dynamics* 5:23–45. (143)
- Neshyba, S., V. T. Neal, and W. Denner, 1971. Temperature and conductivity measurements under Ice Island T-3. *Journal of Geophysical Research* 76:8107–8120. (252)
- Neumann, G., W. H. Beatty III, and E. C. Escowitz, 1975. Seasonal changes of oceanographic and marine-climatological conditions in the equatorial Atlantic. City College of the City University of New York, CUNY Institute of Marine and Atmospheric Science, 211 pp. (186)
- Newman, F. C., 1976. Temperature steps in Lake Kivu: A bottom heated saline lake. *Journal of Physical Oceanography* 6:157–163. (252, 253, 256)
- Newton, C. W., 1961. Estimates of the vertical motions and meridional heat exchange in Gulf Stream eddies and a comparison with atmospheric disturbances. *Journal of Geophysical Research* 66:853–870. (137)
- Newton, I., 1687. *Philosophiae Naturalis Principia Mathematica*. See Newton's *Principia*, Cajori's 1946 revision of Motte's 1729 translation, University of California Press, Berkeley, 680 pp. (293, 504)
- Nicholls, J. M., 1973. The airflow over mountains. *World Meteorological Organization Technical Note No. 127*, WMO No. 355, Geneva, 74 pp. (522)
- Nielsen, J. N., 1904. Hydrography of the waters by the Faroe Islands and Iceland during the cruises of the Danish Research Steamer "Thor" in the summer of 1903. *Meddelelsar fra Kommissionen for Havundersøgelser. Serie: Hydrografi* 1:4, 29 pp. (22)
- Nielsen, J. N., 1925. Golfstrømmen. *Geografisk Tidsskrift* 28:49–59. (113)
- Nihoul, J. C. J., ed., 1975. *Modelling of Marine Systems*. Elsevier, Amsterdam, 272 pp. (236)
- Nihoul, J. C. J., ed., 1977. *Bottom Turbulence*. Elsevier, Amsterdam, 306 pp. (258)
- Niiler, P. P., 1966. On the theory of the wind-driven ocean circulation. *Deep-Sea Research* 13:597–606. (141, 154, 155)
- Niiler, P. P., 1969. On the Ekman divergence in an oceanic jet. *Journal of Geophysical Research* 74:7048–7052. (149)
- Niiler, P. P., 1975. Deepening of the wind-mixed layer. *Journal of Marine Research* 33:405–422. (243)
- Niiler, P. P., 1977. One-dimensional models of the seasonal thermocline. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 6: Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 97–115. (240, 245)
- Niiler, P. P., and E. B. Kraus, 1977. One-dimensional models of the upper ocean. In *Modelling and Prediction of the Upper Layers of the Ocean*, E. B. Kraus, ed., Pergamon Press, Oxford, pp. 143–172. (240, 243, 244, 503)
- Niiler, P. P., and L. A. Mysak, 1971. Barotropic waves along an eastern continental shelf. *Geophysical Fluid Dynamics* 2:273–288. (120)
- Niiler, P. P., and W. S. Richardson, 1973. Seasonal variability of the Florida Current. *Journal of Marine Research* 31:144–167. (117, 357, 421)
- Niiler, P. P., and A. R. Robinson, 1967. The theory of free inertial jets. II. A numerical experiment for the path of the Gulf Stream. *Tellus* 19:601–619. (126)
- Ninomiya, K., 1974. Bulk properties of cumulus convections in the small area over Kuroshio Region in February 1968. *Journal of the Meteorological Society of Japan, Series 2* 52:188–203. (503)
- Noble, M., and B. Butman, 1979. Low-frequency wind-induced sea level oscillations along the east coast of North America. *Journal of Geophysical Research* 84:3227–3236. (215, 216, 218, 222, 223)
- NORPAC Committee, 1960. *Oceanic Observations of the Pacific: 1955, the NORPAC Atlas*. University of California Press and University of Tokyo Press, Berkeley and Tokyo, 123 plates. (82)
- Nowlin, W. D., T. Whitworth, and R. D. Pillsbury, 1977. Structure and transport of the Antarctic Circumpolar Current at Drake Passage from short-term measurements. *Journal of Physical Oceanography* 7:787–802. (355)

- Nowroozi, A. A., G. H. Sutton, and B. Ault, 1966. Oceanic tides recorded on the sea floor. *Annales de Geophysique* 22:512–517. (424)
- Nozaki, Y., D. M. Rye, K. K. Turekian and R. E. Dodge, 1978. A 200-year record of carbon-13 and carbon-14 variations in a Bermuda coral. *Geophysical Research Letters* 5:825–828. (439)
- Nydal, R., K. Lövseth, and S. Gulliksen, 1979. A survey of radiocarbon variation in nature since the Test Ban Treaty. In *Radiocarbon Dating*, R. Berger and H. Suess, eds., University of California Press, Berkeley, pp. 313–323. (440)
- O'Brien, J. J., D. Adamec, and D. W. Moore, 1978. A simple model of upwelling in the Gulf of Guinea. *Geophysical Research Letters* 5:641–644. (193)
- O'Brien, J. J., R. M. Clancy, A. J. Clarke, M. Crepon, R. Elsberry, T. Gammelsrød, M. MacVean, L. P. Røed, J. D. Thompson, 1977. Upwelling in the ocean: Two- and three-dimensional models of upper ocean dynamics and variability. In *Modelling and Prediction of the Upper Layers of the Ocean*, E. B. Kraus, ed., Pergamon Press, Oxford, pp. 178–228. (358)
- O'Brien, J. J., and H. Hurlburt, 1974. Equatorial jet in the Indian Ocean: Theory. *Science* 184:1075–1077. (192)
- Obukhov, A. M., 1946. Turbulentnost v temperaturno-neodnorodnoi atmosfere (Turbulence in a thermally inhomogeneous atmosphere). *Trudy Instituta Teoreticheskoi Geofiziki Akademii Nauk SSSR* 1:95–115. (484)
- Obukhov, A., 1949. K voprosu o geostroficheskem vetro (On the matter of the geostrophic wind). *Izvestiya Akademii Nauk SSSR, Seriya Geograficheskaya i Geofizicheskaya* 13:281–306. (508)
- Oeschger, H., A. Gugelmann, H. Loosli, U. Schotterer, U. Siegenthaler, and W. Wiest, 1974. ^{39}Ar dating of groundwater. In *Isotope Techniques in Groundwater Hydrology*, International Atomic Energy Agency, Vienna, 2, pp. 179–190. (447)
- Oeschger, H., U. Siegenthaler, U. Schotterer, and A. Gugelmann, 1975. A box diffusion model to study the carbon dioxide exchange in nature. *Tellus* 27:168–192. (449)
- Ogura, Y., and J. G. Charney, 1962. A numerical model of thermal convection in the atmosphere. In *Proceedings of the International Symposium on Numerical Weather Prediction in Tokyo, November 7–13, 1960*, S. Syono, chief ed., The Meteorological Society of Japan, Tokyo, pp. 431–461. (548)
- Ogura, Y., and N. A. Phillips, 1962. Scale analysis of deep and shallow convection in the atmosphere. *Journal of the Atmospheric Sciences* 19:173–179. (548)
- Okubo, A., 1964. Equations describing the diffusion of an introduced pollutant in a one-dimensional estuary. In *Studies on Oceanography*, K. Yoshida, ed., University of Tokyo Press, Tokyo, pp. 216–226. (205)
- Okubo, A., 1967. The effect of shear in an oscillatory current on horizontal diffusion from an instantaneous source. *International Journal of Oceanography and Limnology* 1:194–204. (206)
- Okubo, A., 1969. Some remarks on the importance of the “shear effect” on horizontal diffusion. *Journal of the Oceanographical Society of Japan* 24:60–69. (206)
- Okubo, A., 1971. Oceanic diffusion diagrams. *Deep-Sea Research* 18:789–802. (377)
- Okubo, A., 1973. Effect of shoreline irregularities on streamwise dispersion in estuaries and other embayments. *Netherlands Journal of Sea Research* 6:213–224. (206)
- Omori, M., 1978. Zooplankton fisheries of the world: A review. *Marine Biology* 48:199–205. (380)
- Onsager, L., 1949. Statistical hydrodynamics. *Nuovo Cimento* 6 (Supplement): 179–187. (543)
- Oort, A. H., and J. P. Peixoto, 1974. The annual cycle of the energetics of the atmosphere on a planetary scale. *Journal of Geophysical Research* 79:2705–2719. (507)
- Oort, A. H., and T. H. Vonder Haar, 1976. On the observed annual cycle in the ocean-atmosphere heat balance over the Northern Hemisphere. *Journal of Physical Oceanography* 6:781–800. (490)
- Orlanski, I., 1968. Instability of frontal waves. *Journal of the Atmospheric Sciences* 25:178–200. (529)
- Orlanski, I., 1969. The influence of bottom topography on the stability of jets in a baroclinic fluid. *Journal of the Atmospheric Sciences* 26:1216–1232. (119, 120, 529)
- Orlanski, I., 1972. On the breaking of standing internal waves. *Journal of Fluid Mechanics* 54:577–598. (248)
- Orlanski, I., 1975. A rational subdivision of scales for atmospheric processes. *Bulletin of the American Meteorological Society* 56:527–530. (214)
- Orlanski, I., and K. Bryan, 1969. Formation of the thermocline step structure by large-amplitude internal gravity waves. *Journal of Geophysical Research* 74:6975–6993. (278)
- Orlanski, I., and M. D. Cox, 1973. Baroclinic instability in ocean currents. *Geophysical Fluid Dynamics* 4:297–332. (120, 174, 529)
- Ortega, G. F., 1972. Isanosteric analysis of the eastern Caribbean waters during winter. *Boletín del Instituto Oceanográfico de la Universidad de Oriente* 11:19–34. (84)
- Osborn, T. R., 1974. Vertical profiling of velocity microstructure. *Journal of Physical Oceanography* 4:109–115. (267, 282)
- Osborn, T. R., 1978. Measurements of energy dissipation adjacent to an island. *Journal of Geophysical Research* 83:2939–2957. (257)
- Osborn, T. R., 1980. Estimates of the local rate of vertical diffusion from dissipation measurements. *Journal of Physical Oceanography* 10:83–89. (267, 290)
- Osborn, T. R., and C. S. Cox, 1972. Oceanic fine structure. *Geophysical Fluid Dynamics* 3:321–345. (250, 267, 281, 419)
- Osborn, T. R., and W. R. Crawford, 1978. Turbulent velocity measurements with an airfoil probe. In *Instruments and Methods in Air-Sea Interaction*, preprint volume for NATO School, Ustaoset, Norway, April 1978, NATO Science Committee, 18 pp. (423)
- Otto, J. F. W., 1800. *System einer Allgemeinen Hydrographie des Erdbodens*. G. C. Nauck, Berlin, 662 pp. (40)
- Ou, H.-W., 1979. On the propagation of free topographic Rossby waves near continental margins. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, 133 pp. (217, 218, 225, 258, 313, 315, 316)
- Ou, H.-W., 1980. On the propagation of free topographic Rossby waves near continental margins. Part 1: Analytical model for a wedge. *Journal of Physical Oceanography*. (313)

- Ou, H.-W., and R. C. Beardsley, 1980. On the propagation of free topographic Rossby waves near continental margins. Part 2: Numerical model. *Journal of Physical Oceanography*. 1(313)
- Overland, J. E., and W. G. Gemmill, 1977. Prediction of marine winds in the New York Bight. *Monthly Weather Review* 105:1003–1008. (215, 233)
- Owen, P. R., and W. R. Thompson, 1963. Heat transfer across rough surfaces. *Journal of Fluid Mechanics* 15:321–334. (487)
- Owens, W. B., and F. P. Bretherton, 1978. A numerical study of mid-ocean mesoscale eddies. *Deep-Sea Research* 25:1–14. (133)
- Ozmidov, R. V., 1965. O turbulentnom obmene v ustochivo stratifitsirovannom okeane. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 1:853–860. (On the turbulent exchange in a stably stratified ocean. *Izvestiya, Academy of Sciences, USSR, Atmospheric and Oceanic Physics* 1:493–497.) (239)
- Palmén, E., 1930. Ein Beitrag zur Berechnung der Strömungen in einem begrenzten und geschichteten Meere. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 64:47–58. (201)
- Palmén, E., and H. Riehl, 1957. Budget of angular momentum and energy in tropical cyclones. *Journal of Meteorology* 14:150–159. (490)
- Pannetier, R., 1968. Distribution, atmospheric transfer, and assessment of krypton-85. *Commissariat d'Energie Atomique, Publication CEA-R-3591, Centre d'Etudes Nucléaires, Fontenay-Aux-Roses, France*, 177 pp. (446)
- Parke, M., 1978. Global numerical model of the open ocean tides M₂, S₂, K₁ on an elastic earth. Ph.D. Thesis, University of California at San Diego. (329)
- Parke, M. E., 1979. Open-ocean tide modelling. In *Proceedings of the Ninth GEOP Conference, Department of Geodetic Sciences Report No. 280*, Ohio State University, Columbus, Ohio, pp. 289–297. (329)
- Parke, M. E., 1980. Detection of tides on the Patagonian Shelf by the SEASAT satellite radar altimeter: an initial comparison. *Deep-Sea Research* 27:297–300. (324)
- Parke, M. E., and M. C. Hendershott, 1980. M₂, S₂, K₁ models of the global ocean tide on an elastic earth. *Marine Geodesy* 3:379–408. (322, 323, 327, 329)
- Parker, C. E., 1971. Gulf Stream rings in the Sargasso Sea. *Deep-Sea Research* 18:981–993. (125)
- Paros, J. M., 1976. Digital pressure transducers. *Measurements and Data* 10:2, 74–79. (426)
- Parr, A. E., 1938. On the validity of the dynamic topographic method for the determination of ocean current trajectories. *Journal of Marine Research* 1:119–132. (74, 82)
- Parsons, A. T., 1969. A two-layer model of Gulf Stream separation. *Journal of Fluid Mechanics* 39:511–528. (141, 158, 473)
- Patullo, J. G., W. Munk, R. Revelle, and E. Strong, 1955. The seasonal oscillation in sea level. *Journal of Marine Research* 14:88–156. (355)
- Patzert, W., T. Barnett, M. Sessions, and B. Kilonsky, 1978. AXBT observations of the tropical Pacific Ocean thermal structure during the NORPAX Hawaii/Tahiti Shuttle Experiment, Nov. 1977–Feb. 1978. *S.I.O. Reference Series* 78–24, Scripps Institution of Oceanography, University of California at San Diego, 61 pp. (184)
- Paulson, C. A., E. Leavitt, and R. G. Fleagle, 1972. Air-sea transfer of momentum, heat and water determined from profile measurements during BOMEX. *Journal of Physical Oceanography* 2:487–497. (489)
- Pedlosky, J., 1964a. The stability of currents in the atmosphere and the ocean: Part I. *Journal of the Atmospheric Sciences* 21:201–219. (142, 146, 169, 172, 529)
- Pedlosky, J., 1964b. The stability of currents in the atmosphere and the ocean: Part II. *Journal of the Atmospheric Sciences* 21:342–353. (529)
- Pedlosky, J., 1965a. A necessary condition for the existence of an inertial boundary layer in a baroclinic ocean. *Journal of Marine Research* 23:69–72. (139, 531)
- Pedlosky, J., 1965b. A note on the western intensification of oceanic circulation. *Journal of Marine Research* 23:207–209. (165, 341, 533)
- Pedlosky, J., 1965c. A study of the time dependent ocean circulation. *Journal of the Atmospheric Sciences* 22:267–272. (345)
- Pedlosky, J., 1967. Fluctuating winds and the ocean circulation. *Tellus* 19:250–257. (544)
- Pedlosky, J., 1970. Finite amplitude baroclinic waves. *Journal of the Atmospheric Sciences* 27:15–30. (345, 532)
- Pedlosky, J., 1971. Finite amplitude baroclinic waves with small dissipation. *Journal of the Atmospheric Sciences* 28:587–597. (532)
- Pedlosky, J., 1972. Limit cycles and unstable baroclinic waves. *Journal of the Atmospheric Sciences* 29:53–63. (532)
- Pedlosky, J., 1975. On secondary baroclinic stability and the meridional scale of motion in the ocean. *Journal of Physical Oceanography* 5:603–607. (174)
- Pedlosky, J., 1976. On the dynamics of finite amplitude baroclinic waves as a function of supercriticality. *Journal of Fluid Mechanics* 78:621–637. (532)
- Pedlosky, J., 1977. On the radiation of meso-scale energy in the mid-ocean. *Deep-Sea Research* 24:591–600. (119, 373, 524)
- Pedlosky, J., 1979a. *Geophysical Fluid Dynamics*. Springer-Verlag, New York, 624 pp. (505, 520)
- Pedlosky, J., 1979b. Finite-amplitude baroclinic waves in a continuous model of the atmosphere. *Journal of the Atmospheric Sciences* 36:1908–1924. (532, 538)
- Pedlosky, J., and H. P. Greenspan, 1967. A simple laboratory model for the ocean circulation. *Journal of Fluid Mechanics* 27:291–304. (152, 469, 470, 472)
- Pekeris, C., and Y. Accad, 1969. Solution of Laplace's equations for the M₂ tide in the world ocean. *Philosophical Transactions of the Royal Society of London A* 265:413–436. (322)
- Peng, T.-H., W. S. Broecker, G. G. Mathieu, Y.-H. Li, and A. E. Bainbridge, 1979. Radon evasion rates in the Atlantic and Pacific Oceans as determined during the GEOSECS program. *Journal of Geophysical Research* 84:2471–2486. (447)
- Perkin, R. G., and E. L. Lewis, 1978. Mixing in an Arctic fjord. *Journal of Physical Oceanography* 8:873–880. (261)

- Peterson, W. H., and C. G. H. Rooth, 1976. Formation and exchange of deep water in the Greenland and Norwegian Seas. *Deep-Sea Research* 23:273–283. (24)
- Pettersson, H., 1931. Eddy-viscosity in stratified water. *Göteborgs Kungliga Vetenskaps-och Vitterhets-Samhälles Handlingar, Flera Förläden, Serien B* 2:1, 21 pp. (140)
- Pettersson, H., 1955. Manganese nodules and oceanic radium. *Papers in Marine Biology and Oceanography, Deep-Sea Research* 3 (Supplement): 335–345. (444)
- Philander, S. G. H., 1973. Equatorial Undercurrent: Measurements and theories. *Reviews of Geophysics and Space Physics* 11:513–570. (184, 185, 191, 527)
- Philander, S. G. H., 1976. Instabilities of zonal equatorial currents. *Journal of Geophysical Research* 81:3725–3735. (193)
- Philander, S. G. H., 1978. Forced oceanic waves. *Reviews of Geophysics and Space Physics* 16:15–46. (304, 347)
- Philander, S. G. H., 1979. Equatorial waves in the presence of the Equatorial Undercurrent. *Journal of Physical Oceanography* 9:254–262. (193)
- Philander, S. G. H., 1980. The equatorial undercurrent revisited. *Annual Review of Earth and Planetary Sciences* 8. (527)
- Philander, S. G. H., and R. C. Pacanowski, 1980a. The generation of equatorial currents. *Journal of Geophysical Research* 85:1123–1136. (194, 527)
- Philander, S. G. H., and R. C. Pacanowski, 1980b. The response of equatorial currents to a relaxation of the winds. *Journal of Geophysical Research*. (194)
- Phillips, N. A., 1951. A simple three-dimensional model for the study of large-scale extratropical flow patterns. *Journal of Meteorology* 8:381–394. (141, 169, 172)
- Phillips, N. A., 1954. Energy transformations and meridional circulations associated with simple baroclinic waves in a two-level, quasi-geostrophic model. *Tellus* 6:273–286. (169, 173, 174)
- Phillips, N. A., 1963. Geostrophic motion. *Reviews of Geophysics* 1:123–176. (144, 161, 183, 372, 505, 520)
- Phillips, N. A., 1966a. The equations of motion for a shallow rotating atmosphere and the “traditional approximation.” *Journal of the Atmospheric Sciences* 23:626–628. (143, 165)
- Phillips, N., 1966b. Large-scale eddy motion in the western Atlantic. *Journal of Geophysical Research* 71:3883–3891. (295, 341, 359, 533)
- Phillips, N. A., 1968. Reply [to Veronis (1968)]. *Journal of the Atmospheric Sciences* 25:1155–1157. (295)
- Phillips, N. A., 1973. Principles of large scale numerical weather prediction. In *Dynamic Meteorology*, P. Morel, ed., D. Reidel, Dordrecht, pp. 128–141. (518)
- Phillips, O. M., 1957. On the generation of waves by turbulent wind. *Journal of Fluid Mechanics* 2:417–445. (494)
- Phillips, O. M., 1958. The equilibrium range in the spectrum of wind-generated waves. *Journal of Fluid Mechanics* 4:426–434. (265)
- Phillips, O. M., 1963. On the attenuation of long gravity waves by short breaking waves. *Journal of Fluid Mechanics* 16:321–332. (494)
- Phillips, O. M., 1966a. On turbulent convection currents and the circulation of the Red Sea. *Deep-Sea Research* 13:1149–1160. (24)
- Phillips, O. M., 1966b. *The Dynamics of the Upper Ocean*, 1st ed. Cambridge University Press, London, 261 pp. (265, 275, 348)
- Phillips, O. M., 1970. On flows induced by diffusion in a stably stratified fluid. *Deep-Sea Research* 17:435–443. (260)
- Phillips, O. M., 1972. Turbulence in a stratified fluid—is it unstable? *Deep-Sea Research* 19:79–81. (247)
- Phillips, O. M., 1977a. *The Dynamics of the Upper Ocean*, 2nd ed. Cambridge University Press, London, 336 pp. (248, 250, 265, 268, 273, 274, 346, 491, 492, 493)
- Phillips, O. M., 1977b. Entrainment. In *Modelling and Prediction of the Upper Layers of the Ocean*, E. B. Kraus, ed., Pergamon Press, Oxford, pp. 92–101. (244)
- Phillips, O. M., 1977c. The sea surface. In *Modelling and Prediction of the Upper Layers of the Ocean*, E. B. Kraus, ed., Pergamon Press, Oxford, pp. 229–237. (242).
- Pickard, G. L., and K. Rodgers, 1959. Current measurements in Knight Inlet, British Columbia. *Journal of the Fisheries Research Board of Canada* 16:635–678. (206)
- Pierson, W. J., ed., 1960. The directional spectrum of a wind generated sea as determined from data obtained by the Stereo Wave Observation Project. *Meteorological Papers; New York University, College of Engineering* 2:6, 88 pp. (492)
- Pillsbury, J. E., 1891. The Gulf Stream—a description of the methods employed in the investigation, and the results of the research. In *Report of the Superintendent of the U.S. Coast and Geodetic Survey Showing the Progress of the Work during the Fiscal Year Ending with June, 1890*, Washington, Appendix No. 10, pp. 459–620. (344)
- Pillsbury, R. D., J. S. Bottero, and R. E. Still, 1977. A compilation of observations from moored current meters, Volume X. Currents, temperature and pressure in the Drake Passage during F DRAKE 75, February 1975–February 1976. *School of Oceanography, Oregon State University, Data Report 67, Reference 77-8*, Corvallis, Oregon, 117 pp. (403)
- Pingree, R. D., 1972. Mixing in the deep stratified ocean. *Deep-Sea Research* 19:549–561. (84)
- Pingree, R. D., 1973. A component of Labrador Sea water in the Bay of Biscay. *Limnology and Oceanography* 18:711–718. (84)
- Pingree, R. D., 1978. Mixing and stabilization of phytoplankton distributions on the northwest European continental shelf. In *Spatial Pattern in Plankton Communities*, J. H. Steele, ed., Plenum Press, New York, pp. 181–220. (378, 379)
- Pingree, R. D., P. M. Holligan, and R. N. Head, 1977. Survival of dinoflagellate blooms in the western English Channel. *Nature* 265:266–269. (380, 381)
- Pingree, R. D., and G. K. Morrison, 1973. The relationship between stability and source waters for a section in the northeast Atlantic. *Journal of Physical Oceanography* 3:280–285. (84)
- Pinkel, R., 1975. Upper ocean internal wave observations from FLIP. *Journal of Geophysical Research* 80:3892–3910. (265, 285)

- Pinkel, R., 1979. Observations of strongly non-linear internal motion in the open sea using a range-gated Doppler sonar. *Journal of Physical Oceanography* 9:675–686. (428)
- Plate, E. J., 1971. Aerodynamic characteristics of atmospheric boundary layers. U.S. Atomic Energy Commission, Technical Information Division, TID 25465, 190 pp. Available from National Technical Information Service, U.S. Dept. of Commerce, Springfield, Virginia. (485)
- Platt, T., 1972. Local phytoplankton abundance and turbulence. *Deep-Sea Research* 19:183–188. (376)
- Platt, T., and K. L. Denman, 1975. Spectral analysis in ecology. *Annual Review of Ecology and Systematics* 6:189–210. (380)
- Platzman, G. W., 1975. Normal modes of the Atlantic and Indian Oceans. *Journal of Physical Oceanography* 5:201–221. (317, 320, 322, 328)
- Platzman, G. W., 1978. Normal modes of the world ocean. Part I. Design of a finite-element barotropic model. *Journal of Physical Oceanography* 8:323–343. (317)
- Platzman, G. W., 1979. A Kelvin wave in the eastern North Pacific Ocean. *Journal of Geophysical Research* 84:2525–2528. (326).
- Plumb, R. A., and A. D. McEwan, 1978. The instability of a forced standing wave in a viscous stratified fluid: A laboratory analogue of the quasi-biennial oscillation. *Journal of the Atmospheric Sciences* 35:1827–1839. (532)
- Pochapsky, T. E., 1976. Vertical structure of currents and deep temperatures in the western Sargasso Sea. *Journal of Physical Oceanography* 6:45–56. (421)
- Pochapsky, T. E., and F. D. Malone, 1972. A vertical profile of deep horizontal current near Cape Lookout, North Carolina. *Journal of Marine Research* 30:163–167. (421)
- Poincaré, H., 1910. *Leçons de Mécanique Céleste*, 3, Théorie des Marées. Gauthier-Villars, Paris, 469 pp. (344).
- Pollak, M. J., 1958. Frequency distribution of potential temperatures and salinities in the Indian Ocean. *Deep-Sea Research* 5:128–133. (42, 44, 46, 47, 49, 57)
- Pollard, R. T., 1977. Observations and theories of Langmuir circulations and their role in near surface mixing. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, pp. 235–251. (242, 495)
- Pollard, R. T., P. B. Rhines, and R. O. R. Y. Thompson, 1973. The deepening of the wind-mixed layer. *Geophysical Fluid Dynamics* 3:381–404. (241, 244, 385)
- Pomphrey, N., J. D. Meiss, and K. M. Watson, 1980. Description of nonlinear internal wave interactions using Langevin methods. *Journal of Geophysical Research* 85:1085–1094. (285)
- Pond, S., G. T. Phelps, J. E. Paquin, G. McBean, and R. W. Stewart, 1971. Measurement of the turbulent fluxes of momentum, moisture and sensible heat over the ocean. *Journal of the Atmospheric Sciences* 28:901–917. (489)
- Posmentier, E. S., 1977. The generation of salinity finestructure by vertical diffusion. *Journal of Physical Oceanography* 7:298–300. (247)
- Prestwich, J., 1875. Tables of temperatures of the sea at different depths beneath the surface, reduced and collated from the various observations made between the years 1749 and 1868, discussed. *Philosophical Transactions of the Royal Society of London* 165:587–674. (8, 9, 10, 71, 110, 111)
- Price, J. F., 1979. On the scaling of stress-driven entrainment experiments. *Journal of Fluid Mechanics* 90:509–529. (241)
- Price, J. F., C. N. K. Mooers, and J. C. van Leer, 1978. Observation and simulation of storm-induced mixed-layer deepening. *Journal of Physical Oceanography* 8:582–599. (244)
- Priestley, C. H. B., 1951. A survey of the stress between the ocean and atmosphere. *Australian Journal of Scientific Research A* 4:315–328. (488)
- Priestley, C. H. B., 1967. Handover in scale of the fluxes of momentum, heat, etc. in the atmospheric boundary layer. In *Boundary Layers and Turbulence, The Physics of Fluids* 10 [Supplement]: S38–S46. (498)
- Pritchard, D. W., 1952a. Estuarine hydrography. *Advances in Geophysics* 1:243–280. (202)
- Pritchard, D. W., 1952b. Salinity distribution and circulation in the Chesapeake Bay estuarine system. *Journal of Marine Research* 11:106–123. (203, 204)
- Pritchard, D. W., 1953. Distribution of oyster larvae in relation to hydrographic conditions. In *Proceedings of the Gulf and Caribbean Fisheries Institute, 5th Annual Session*, University of Miami Marine Laboratory, pp. 123–132. (206)
- Pritchard, D. W., 1954a. A study of flushing in the Delaware Model. *Chesapeake Bay Institute of the Johns Hopkins University Technical Report* 7, Reference 54-4, Baltimore, Maryland, 143 pp. (203)
- Pritchard, D. W., 1954b. A study of the salt balance in a coastal plain estuary. *Journal of Marine Research* 13:133–144. (203, 204)
- Pritchard, D. W., 1955. Estuarine circulation patterns. *Proceedings of the American Society of Civil Engineers* 81: Separate No. 717, 11 pp. (202, 204)
- Pritchard, D. W., 1956. The dynamic structure of a coastal plane estuary. *Journal of Marine Research* 15:33–42. (203, 204)
- Pritchard, D. W., 1958. The equations of mass continuity and salt continuity in estuaries. *Journal of Marine Research* 17:412–423. (204)
- Pritchard, D. W., 1967a. What is an estuary: Physical viewpoint. In *Estuaries*, G. H. Lauff, ed., American Association for the Advancement of Science, Publication No. 83, Washington, D.C., pp. 3–5. (199, 202)
- Pritchard, D. W., 1967b. Observations of circulation in coastal plain estuaries. In *Estuaries*, G. H. Lauff, ed., American Association for the Advancement of Science, Publication No. 83, Washington, D.C., pp. 37–44. (202, 204)
- Pritchard, D. W., and W. V. Burt, 1951. An inexpensive and rapid technique for obtaining current profiles in estuarine waters. *Journal of Marine Research* 10:180–189. (203)
- Pritchard, D. W., and J. H. Carpenter, 1960. Measurements of turbulent diffusion in estuarine and inshore waters. *Bulletin of the International Association of Scientific Hydrology* 20:37–50 (206).
- Privett, D. W., 1960. The exchange of energy between the atmosphere and the oceans of the southern hemisphere. *Geophysical Memoirs* 13:104, 61 pp. (490)

- Proudman, J., 1944. The tides of the Atlantic Ocean. (George Darwin Lecture, 1944 October 13.) *Monthly Notices of the Royal Astronomical Society* 104:244–256. (324)
- Proudman, J., 1948. The applicability of Laplace's differential equations of the tides. *International Hydrographic Review* 25:112–118. (295)
- Proudman, J., 1953. *Dynamical Oceanography* Methuen, London, and John Wiley & Sons, New York, 409 pp. (236)
- Pruitt, W. O., D. L. Morgan, and F. J. Laurence, 1973. Momentum and mass transfers in the surface boundary layer. *Quarterly Journal of the Royal Meteorological Society* 99:370–386. (485)
- Prytherch, H. F., 1929. Investigation of the physical conditions controlling spawning of oysters and the occurrence, distribution, and setting of oyster larvae in Milford Harbor, Connecticut. *Bulletin of the United States Bureau of Fisheries* 44:429–503. (201)
- Purdy, G. M., P. D. Rabinowitz, and J. J. A. Velterop, 1979. The Kane Fracture Zone in the central Atlantic Ocean. *Earth and Planetary Science Letters* 45:429–434. (29)
- Quay, P. D., W. S. Broecker, R. H. Hesslein, and D. W. Schindler, 1980. Vertical diffusion rates determined by tritium tracer experiments in the thermocline and hypolimnion of two lakes. *Limnology and Oceanography* 25:201–218. (459, 460)
- Rao, D., 1966. Free gravitational oscillations in rotating rectangular basins. *Journal of Fluid Mechanics* 25:523–555. (298)
- Ratcliffe, R. A. S., and R. Murray, 1970. New lag associations between North Atlantic sea temperature and European pressure applied to long-range weather forecasting. *Quarterly Journal of the Royal Meteorological Society* 96:226–246. (496)
- Rattray, M., Jr., 1960. On the coastal generation of internal tides. *Tellus* 12:54–62. (331)
- Rattray, M., Jr., 1964. Time-dependent motion in an ocean; A unified two-layer, beta-plane approximation. In *Studies on Oceanography*, K. Yoshida, ed., University of Tokyo Press, Tokyo, pp. 19–29. (344)
- Rattray, M., Jr., 1977. Fjord and salt-wedge circulation. In *Estuaries, Geophysics, and the Environment*, C. B. Officer, panel chairman, National Academy of Sciences, Washington, D.C., pp. 36–45. (205, 206)
- Rattray, M., Jr., and R. C. Charnell, 1966. Quasigeostrophic free oscillations in enclosed basins. *Journal of Marine Research* 24:82–102. (344)
- Rattray, M., Jr., J. G. Dworski, and P. E. Kovala, 1969. Generation of long internal waves at the continental slope. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement): 179–195. (334, 335)
- Rattray, M., Jr., and D. V. Hansen, 1962. A similarity solution for circulation in an estuary. *Journal of Marine Research* 20:121–133. (203)
- Rattray, M., Jr., and P. Welander, 1975. A quasi-linear model of the combined wind-driven and thermohaline circulations in a rectangular β -plane ocean. *Journal of Physical Oceanography* 5:585–602. (39)
- Rauschelbach, H., 1932. Zur Geschichte des Hochseepegels. *Annalen der Hydrographie und Maritimen Meteorologie* 60:73–76. (399, 424)
- Rayleigh, Lord, 1880. On the stability, or instability, of certain fluid motions. *Proceedings of the London Mathematical Society* 11:57–70; reprinted in *Scientific Papers*, 1, Cambridge University Press, London, pp. 474–487. (530)
- Rayleigh, Lord, 1883. Investigation of the character of the equilibrium of an incompressible heavy fluid of variable density. *Proceedings of the London Mathematical Society* 14:170–178. (264, 299)
- Rayleigh, Lord, 1903. Note on the theory of the fortnightly tide. *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, Sixth Series* 5:136–141. (344)
- Redekopp, L. G., 1977. On the theory of solitary Rossby waves. *Journal of Fluid Mechanics* 82:725–804. (345)
- Redfield, A. C., 1958. The influence of the continental shelf on the tides of the Atlantic coast of the United States. *Journal of Marine Research* 17:432–448. (327, 328)
- Redfield, A. C., and L. A. Walford, 1951. A study of the disposal of chemical waste at sea. Report of the Committee for Investigation of Waste Disposal. *National Research Council Publication* 201, 29 pp. (212)
- Reed, R. K., 1969. Deep water properties and flow in the central North Pacific. *Journal of Marine Research* 27:24–31. (36)
- Reed, R. K., 1970a. On the anomalous deep water south of the Aleutian Islands. *Journal of Marine Research* 28:371–372. (36)
- Reed, R. K., 1970b. Geopotential topography of deep levels in the Pacific Ocean. *Journal of the Oceanographical Society of Japan* 26:331–339. (85)
- Regal, R., and C. Wunsch, 1973. M_2 tidal currents in the western North Atlantic. *Deep-Sea Research* 20:493–502. (334, 336)
- Reid, J. L., Jr., 1961a. On the geostrophic flow at the surface of the Pacific Ocean with respect to the 1000-decibar surface. *Tellus* 13:489–502. (83, 91)
- Reid, J. L., Jr., 1961b. On the temperature, salinity, and density differences between the Atlantic and Pacific oceans in the upper kilometre. *Deep-Sea Research* 7:265–275. (108)
- Reid, J. L., 1962. Observations of internal tides in October 1950. *Transactions of the American Geophysical Union* 37:278–289. (332)
- Reid, J. L., Jun., 1964a. Evidence of a South Equatorial Counter-current in the Atlantic Ocean in July 1963. *Nature* 203:182. (83)
- Reid, J. L., 1964b. A transequatorial Atlantic oceanographic section in July 1963 compared with other Atlantic and Pacific sections. *Journal of Geophysical Research* 69:5205–5215. (185)
- Reid, J. L., Jr., 1965. Intermediate Waters of the Pacific Ocean. *The Johns Hopkins Oceanographic Studies* 2:85 pp. (43, 44, 82, 83, 85, 161, 162)
- Reid, J. L., 1973a. Transpacific hydrographic sections at Lats. 43°S and 28°S: the SCORPIO Expedition-III. Upper water and a note on southward flow at mid-depth. *Deep-Sea Research* 20:39–49. (34, 110)
- Reid, J. L., 1973b. Northwest Pacific Ocean Water in Winter. *The Johns Hopkins Oceanographic Studies* 5:96 pp. (59)

- Reid, J. L., 1978. On the middepth circulation and salinity field in the North Atlantic Ocean. *Journal of Geophysical Research* 83:5063–5067. (85, 89, 91, 107, 111, 343, 373)
- Reid, J. L., 1979. On the contribution of the Mediterranean Sea outflow to the Norwegian-Greenland Sea. *Deep-Sea Research* 26:1199–1223. (111)
- Reid, J. L., and R. S. Arthur, 1975. Interpretation of maps of geopotential anomaly for the deep Pacific Ocean. *Journal of Marine Research* 33 (Supplement): 37–52. (85)
- Reid, J. L., and P. F. Lonsdale, 1974. On the flow of water through the Samoan Passage. *Journal of Physical Oceanography* 4:58–73. (35, 108)
- Reid, J. L., and R. J. Lynn, 1971. On the influence of the Norwegian-Greenland and Weddell seas upon the bottom waters of the Indian and Pacific oceans. *Deep-Sea Research* 18:1063–1088. (25, 82, 83, 84, 93, 106, 111)
- Reid, J. L. and A. W. Mantyla, 1978. On the mid-depth circulation of the North Pacific Ocean. *Journal of Physical Oceanography* 8:946–951. (89, 91)
- Reid, J. L., W. D. Nowlin, and W. C. Patzert, 1977. On the characteristics and circulation of the southwestern Atlantic Ocean. *Journal of Physical Oceanography* 7:62–91. (7, 17, 28, 31, 84, 85, 90, 91, 108)
- Reid, R. O., 1948. The equatorial currents of the eastern Pacific as maintained by the stress of the wind. *Journal of Marine Research* 7:74–99. (79, 188)
- Reid, R. O., 1958. Effect of Coriolis force on edge waves (I) Investigation of the normal modes. *Journal of Marine Research* 16:109–144. (309)
- Rennell, J., 1832. *Investigation of the Currents of the Atlantic Ocean, and of Those Which Prevail between the Indian Ocean and the Atlantic*. J. G. & F. Rivington, London, 359 pp. (343, 507)
- Rhines, P. B., 1969a. Slow oscillations in an ocean of varying depth. Part 1. Abrupt topography. *Journal of Fluid Mechanics* 37:161–189. (120, 358)
- Rhines, P. B., 1969b. Slow oscillations in an ocean of varying depth. Part 2. Islands and seamounts. *Journal of Fluid Mechanics* 37:191–205. (310)
- Rhines, P., 1970. Edge-, bottom-, and Rossby waves in a rotating stratified fluid. *Geophysical Fluid Dynamics* 1:273–302. (141, 165, 311, 313, 315, 358, 520, 521)
- Rhines, P. B., 1971a. A note on long-period motions at Site D. *Deep-Sea Research* 18:21–26. (169)
- Rhines, P. B., 1971b. A comment on the Aries observations. *Philosophical Transactions of the Royal Society of London A* 270:461–463. (359)
- Rhines, P. B., 1975. Waves and turbulence on a beta-plane. *Journal of Fluid Mechanics* 69:417–443. (175, 310, 508, 543, 544)
- Rhines, P. B., 1977. The dynamics of unsteady currents. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 6: Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 189–318. (7, 127, 130, 141, 142, 165, 166, 168, 174, 177, 182, 183, 304, 310, 313, 314, 315, 346, 371, 376, 474, 507, 533, 544)
- Rhines, P. B., 1979. Geostrophic turbulence. *Annual Reviews of Fluid Mechanics* 11:401–441. (344, 346)
- Rhines, P. B., and F. P. Bretherton, 1974. Topographic Rossby waves in a rough-bottom ocean. *Journal of Fluid Mechanics* 61:583–607. (177, 370)
- Rhines, P. B., and W. R. Holland, 1979. A theoretical discussion of eddy-driven mean flows. *Dynamics of Atmospheres and Oceans* 3:289–325. (182)
- Richards, J. M., 1970. The effect of windshear on a puff. *Quarterly Journal of the Royal Meteorological Society* 96:702–714. (498)
- Richardson, L. F., 1920. The supply of energy from and to atmospheric eddies. *Proceedings of the Royal Society of London A* 97:354–373. (484, 485)
- Richardson, L. F., 1926. Atmospheric diffusion shown on a distance-neighbour graph. *Proceedings of the Royal Society of London A* 110:709–737. (239)
- Richardson, L. F., and H. Stommel, 1948. Note on eddy diffusion in the sea. *Journal of Meteorology* 5:238–240. (xxv, 239)
- Richardson, P. L., 1977. On the crossover between the Gulf Stream and the Western Boundary Undercurrent. *Deep-Sea Research* 24:139–159. (27, 79, 108, 121)
- Richardson, P. L., R. E. Cheney, and L. A. Mantini, 1977. Tracking a Gulf Stream ring with a free drifting surface buoy. *Journal of Physical Oceanography* 7:581–590. (534)
- Richardson, P. L., R. E. Cheney, and L. V. Worthington, 1978. A census of Gulf Stream rings, spring 1975. *Journal of Geophysical Research* 83:6136–6144. (373)
- Richardson, P. L., and J. A. Knauss, 1971. Gulf Stream and Western Boundary Undercurrent observations at Cape Hatteras. *Deep-Sea Research* 18:1089–1109. (27, 121, 123)
- Richardson, P. L., A. E. Strong, and J. A. Knauss, 1973. Gulf Stream eddies: recent observations in the western Sargasso Sea. *Journal of Physical Oceanography* 3:297–301. (121)
- Richardson, W. S., and W. J. Schmitz, Jr., 1965. A technique for the direct measurement of transport with applications to the Straits of Florida. *Journal of Marine Research* 23:172–185. (421)
- Richardson, W. S., W. J. Schmitz, Jr., and P. P. Niiler, 1969. The velocity structure of the Florida Current from the Straits of Florida to Cape Fear. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement): 225–231. (118, 121)
- Richardson, W. S., P. B. Stimson, and C. H. Wilkins, 1963. Current measurement from moored buoys. *Deep-Sea Research* 10:369–388. (403, 404, 407)
- Richardson, W. S., H. J. White, Jr., and L. Nemeth, 1972. A technique for the direct measurement of ocean currents from aircraft. *Journal of Marine Research* 30:259–268. (421)
- Richman, J. G., 1976. Kinematics and energetics of the mesoscale mid-ocean circulation: MODE. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, 205 pp. (431, 521)
- Richman, J. G., C. Wunsch, and N. G. Hogg, 1977. Space and time scales and mesoscale motion in the sea. *Reviews of Geophysics and Space Physics* 15:385–420. (359, 363, 370, 371, 372, 407)

- Riehl, H., 1954. *Tropical Meteorology*. McGraw-Hill, New York, 392 pp. (186)
- Riehl, H., and J. Malkus, 1961. Some aspects of Hurricane Daisy, 1958. *Tellus* 13:181–213. (490)
- Riehl, H., T. C. Yeh, J. S. Malkus, and N. E. La Seur, 1951. The north-east trade of the Pacific Ocean. *Quarterly Journal of the Royal Meteorological Society* 77:598–626. (500)
- Riley, G. A., 1951. Oxygen, phosphate and nitrate in the Atlantic Ocean. *Bulletin of the Bingham Oceanographic Collection* 13:1, 126 pp. (81, 83, 434)
- Riley, G. A., H. Stommel, D. F. Bumpus, 1949. Quantitative ecology of the plankton of the western North Atlantic. *Bulletin of the Bingham Oceanographic Collection* 12:3, 169 pp. (211)
- Riser, S. C., H. Freeland, and H. T. Rossby, 1978. Mesoscale motions near the deep western boundary of the North Atlantic. *Deep-Sea Research* 25:1179–1191. (27, 108, 121)
- Rivas, E. K. de, 1973. Numerical models of the circulation of the atmosphere of Venus. *Journal of the Atmospheric Sciences* 30:763–779. (506)
- Rivas, E. K. de, 1975. Further numerical calculations of the circulation of the atmosphere of Venus. *Journal of the Atmospheric Sciences* 32:1017–1024. (506)
- Robinson, A. R., ed., 1963. *Wind-Driven Ocean Circulation*. Blaisdell, New York, 161 pp. (79)
- Robinson, A. R., 1964. Continental shelf waves and the response of sea level to weather systems. *Journal of Geophysical Research* 69:367–368. (120, 358)
- Robinson, A. R., 1971. The Gulf Stream. *Philosophical Transactions of the Royal Society of London A* 270:351–370. (126)
- Robinson, A. R., D. E. Harrison, and D. B. Haidvogel, 1979. Mesoscale eddies and general ocean circulation models. *Dynamics of Atmospheres and Oceans* 3:143–180. (346)
- Robinson, A. R., D. E. Harrison, Y. Mintz, and A. J. Semtner, 1977. Eddies and the general circulation of an idealized oceanic gyre: A wind and thermally driven primitive equation numerical experiment. *Journal of Physical Oceanography* 7:182–207. (89, 90, 133, 178, 346)
- Robinson, A. R., J. R. Luyten, and G. Flierl, 1975. On the theory of thin rotating jets: A quasi-geostrophic time dependent model. *Geophysical Fluid Dynamics* 6:211–244. (126)
- Robinson, A. R., J. R. Luyten, and F. C. Fuglister, 1974. Transient Gulf Stream meandering. Part I: An observational experiment. *Journal of Physical Oceanography* 4:237–255. (126, 127, 534)
- Robinson, A. R., and J. C. McWilliams, 1974. The baroclinic instability of the open ocean. *Journal of Physical Oceanography* 4:281–294. (347, 529)
- Robinson, A. R., and P. P. Niiler, 1967. The theory of free inertial currents. I. Path and structure. *Tellus* 19:269–291. (508)
- Robinson, A. R., and H. Stommel, 1959. The oceanic thermocline and the associated thermohaline circulation. *Tellus*, 3:295–308. (xxi, 141, 159, 160, 161, 449, 509)
- Robinson, A. R., and P. Welander, 1963. Thermal circulation on a rotating sphere; with application to the oceanic thermocline. *Journal of Marine Research* 21:25–38. (161, 506)
- Robinson, G. D., 1966. Another look at some problems of the air-sea interface. *Quarterly Journal of the Royal Meteorological Society* 92:451–465. (488)
- Rochford, D. J., 1964. Salinity maxima in the upper 1000 metres of the North Indian Ocean. *Australian Journal of Marine and Freshwater Research* 15:1–24. (26)
- Rodewald, M., 1972. Long-term variations of the sea temperature in the areas of the nine North Atlantic weather stations during the period 1951–1968. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 162:139–153. (355)
- Roll, H. U., 1965. *Physics of the Marine Atmosphere*. Academic Press, New York, 426 pp. (503)
- Rooth, C., 1972. A linearized bottom friction law for large-scale oceanic motions. *Journal of Physical Oceanography* 2:509–510. (152)
- Rosenbluth, M. N., and A. Simon, 1964. Necessary and sufficient conditions for stability of plane parallel and inviscid flows. *The Physics of Fluids* 7:557–558. (531)
- Rosenthal, S. L., 1965. Some preliminary theoretical considerations of troposphere wave motions in equatorial latitudes. *Monthly Weather Review* 93:605–612. (527)
- Rossby, C.-G., 1936. Dynamics of steady ocean currents in the light of experimental fluid mechanics. *Papers in Physical Oceanography and Meteorology* 5:1, 43 pp. (xxiv)
- Rossby, C.-G., 1938. On the mutual adjustment of pressure and velocity distributions in certain simple current systems, II. *Journal of Marine Research* 1:239–263. (183, 509, 510, 519)
- Rossby, C.-G., 1951. A comparison of current patterns in the atmosphere and in ocean basins. In *Scientific Proceedings of the Association of Meteorology, Ninth Assembly of the I.U.G.G.*, Brussels, pp. 9–31. (504)
- Rossby, C.-G., and Collaborators, 1939. Relation between variations in the intensity of the zonal circulation of the atmosphere and the displacements of the semi-permanent centers of action. *Journal of Marine Research* 2:38–55. (xv, 300, 302, 340, 344, 506, 508, 512)
- Rossby, H. T., 1965. On thermal convection driven by non-uniform heating from below: an experimental study. *Deep-Sea Research* 12:9–16. (40, 505)
- Rossby, H. T., 1969. A vertical profile of currents near Plantagenet Bank. *Deep-Sea Research* 16:377–385. (420)
- Rossby, H. T., 1974. Studies of the vertical structure of horizontal currents near Bermuda. *Journal of Geophysical Research* 79:1781–1791. (421)
- Rossby, H. T., 1979. Oceanography. In *Impact of Technology on Geophysics*, H. E. Newell, panel chairman, National Academy of Sciences, Washington, D.C. (403, 412, 413)
- Rossby, H. T., and T. B. Sanford, 1976. A study of velocity profiles through the main thermocline. *Journal of Physical Oceanography* 6:766–774. (423)
- Rossby, H. T., and D. Webb, 1971. The four month drift of a Swallow float. *Deep-Sea Research* 18:1035–1039. (412)
- Rossiter, J. R., 1958. On the application of relaxation methods to oceanic tides. *Proceedings of the Royal Society of London A* 248:482–498. (328)
- Rotschi, H., 1970. Variation of equatorial currents. In *Scientific Exploration of the South Pacific*, W. S. Wooster, ed.,

- National Academy of Sciences, Washington, D.C., pp. 75–83. (184)
- Rowntree, P. R., 1972. The influence of tropical east Pacific temperatures on the atmosphere. *Quarterly Journal of the Royal Meteorological Society* 98:290–321. (355)
- Ruddick, B. R., and J. S. Turner, 1979. The vertical length scale of double-diffusive intrusions. *Deep-Sea Research* 26:903–913. (254, 255)
- Ruggles, K. W., 1970. The vertical mean wind profile over the ocean for light to moderate winds. *Journal of Applied Meteorology* 9:389–395. (489)
- Rumford, B., Count of, 1800. Essay VII, The Propagation of Heat in Fluids. In *Essays, Political, Economical, and Philosophical, A New Edition*, 2, T. Cadell, Jr., and W. Davies, London, pp. 197–386. Also in *Collected Works of Count Rumford*, S. C. Brown, ed., 1: *The Nature of Heat*, 1968, Harvard University Press, Cambridge, pp. 117–285. (8)
- Ryther, J. H., 1969. Relationship of photosynthesis to fish production in the sea. *Science* 166:72–76. (380)
- Sager, G., 1955. *Gezeitenvoraussagen und Gezeitenrechenmaschinen*. Seehydrographischer Dienst der Deutschen Demokratischen Republik, Warnemünde, 126 pp. (318)
- Salmon, R., 1978. Two-layer quasigeostrophic turbulence in a simple special case. *Geophysical and Astrophysical Fluid Dynamics* 10:25–52. (346, 371, 543)
- Salmon, R., G. Holloway, and M. C. Hendershott, 1976. The equilibrium statistical mechanics of simple geostrophic models. *Journal of Fluid Mechanics* 75:691–703. (178, 346, 543)
- Saltzman, B., 1962. Finite amplitude convection as an initial value problem. *Journal of the Atmospheric Sciences* 19:329–341. (387)
- Sambuco, E., and J. A. Whitehead, 1976. Hydraulic control by a wide weir in a rotating fluid. *Journal of Fluid Mechanics* 73:521–528. (473)
- Sandstrom, H., 1969. Effect of topography on propagation of waves in stratified fluids. *Deep-Sea Research* 16:405–410. (332)
- Sandström, J. W., 1903. Ueber die Anwendungen von Pegelbeobachtungen zur Berechnung der Geschwindigkeit der Meereströme. *Svenska Hydrografisk-Biologiska Kommissionens Skrifter* 1: 3 pp. (114, 351)
- Sandström, J. W., 1919. The hydrodynamics of Canadian Atlantic waters. In *Canadian Fisheries Expedition, 1914–15*, Department of Naval Service, Ottawa, pp. 221–343, 59 figs., 15 plates. (233)
- Sandström, J. W., and B. Helland-Hansen, 1903. Ueber die Berechnung von Meereströmungen. *Report on Norwegian Fishery- and Marine-Investigations* 2 (1902): 4, 43 pp. (72, 233)
- Sanford, T. B., 1975. Observations of the vertical structure of internal waves. *Journal of Geophysical Research* 80:3861–3871. (265, 267)
- Sanford, T. B., R. G. Drever, and J. H. Dunlap, 1978. A velocity profiler based on the principles of geomagnetic induction. *Deep-Sea Research* 25:183–210. (265, 267, 422)
- Sanford, T. B., and W. J. Schmitz, Jr., 1971. A comparison of direct measurements and GEK observations in the Florida Current off Miami. *Journal of Marine Research* 29:347–359. (116)
- Sarkisyan, A. S., 1977. The diagnostic calculations of a large-scale oceanic circulation. In *The Sea: Ideas and Observations on Progress in the Study of the Seas, 6: Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 363–459. (142)
- Sarkisyan, A. S., and V. P. Keonjiyan, 1975. Review of numerical ocean circulation models using the observed density field. In *Numerical Models of Ocean Circulation*, National Academy of Sciences, Washington, D.C., pp. 76–93. (90)
- Sarmiento, J. L., 1978. A study of mixing in the deep sea based on STD, radon-222, and radium-228 measurements. Ph.D. Thesis, Columbia University. (459)
- Sarmiento, J. L., and K. Bryan, in preparation. 3-dimensional model of bomb tritium distribution in the Atlantic Ocean. (449)
- Sarmiento, J. L., H. W. Feely, W. S. Moore, A. E. Bainbridge, and W. S. Broecker, 1976. The relationship between vertical eddy diffusion and buoyancy gradient in the deep sea. *Earth and Planetary Science Letters* 32:357–370. (459, 460)
- Sarmiento, J. L., and C. G. H. Rooth, 1980. A comparison of vertical and isopycnal mixing models in the deep sea based on radon 222 measurements. *Journal of Geophysical Research* 85:1515–1518. (459)
- Saunders, K. D., and R. C. Beardsley, 1975. An experimental study of the spin-up of a thermally stratified rotating fluid. *Geophysical Fluid Dynamics* 7:1–28. (476)
- Saunders, P. M., 1971. Anticyclonic eddies formed from shoreward meanders of the Gulf Stream. *Deep-Sea Research* 18:1207–1219. (125)
- Saunders, P. M., 1973. The instability of a baroclinic vortex. *Journal of Physical Oceanography* 3:61–65. (253, 476)
- Saunders, P. M., 1976. Near-surface current measurements *Deep-Sea Research* 23:249–258. (405)
- Saunders, P. M., 1977. Wind stress on the ocean over the eastern continental shelf of North America. *Journal of Physical Oceanography* 7:555–566. (217, 226, 227, 229, 490)
- Savonius, S. J., 1931. The S-rotor and its applications. *Mechanical Engineering* 53:333–338. (403)
- Scarlet, R. I., and C. N. Flagg, 1979. Interaction of a warm core eddy with the New England continental shelf (Abstract only.) *EOS, Transactions of the American Geophysical Union* 60:279. (218)
- Schiemer, E. W., and D. W. Pritchard, 1957. The Chesapeake Bay Institute Conductivity-Temperature-Indicator (CTI). *Chesapeake Bay Institute of the Johns Hopkins University Technical Report* 12, Reference 57-1, Baltimore, Maryland, 15 pp. (203)
- Schink, D. R., 1962. The measurement of dissolved Si³² in seawater. Ph.D. Thesis. University of California at San Diego, 189 pp. (447)
- Schink, D. R., 1967. Budget for dissolved silica in the Mediterranean Sea. *Geochimica et Cosmochimica Acta* 31:987–999. (25)
- Schlee, S., 1973. *The Edge of an Unfamiliar World: A History of Oceanography*. E. P. Dutton, New York, 398 pp. (209, 233)

- Schlee, S., 1978. *On Almost Any Wind*. Cornell University Press, Ithaca, 301 pp. (211, 233)
- Schleicher, K. E., and A. L. Bradshaw, 1956. A conductivity bridge for measurement of the salinity of sea water. *Journal du Conseil* 22:9–20. (42, 44)
- Schmitt, R. W., 1979. Flux measurements on salt fingers at an interface. *Journal of Marine Research* 37:419–436. (255)
- Schmitt, R. W., and D. L. Evans, 1978. An estimate of the vertical mixing due to salt fingers based on observations in the North Atlantic central water. *Journal of Geophysical Research* 83:2913–2919. (258)
- Schmitz, W. J., Jr., 1969. On the dynamics of the Florida Current. *Journal of Marine Research* 27:121–150. (116)
- Schmitz, W. J., Jr., 1976. Eddy kinetic energy in the deep western North Atlantic. *Journal of Geophysical Research* 81:4981–4982. (139, 359, 363, 370, 508)
- Schmitz, W. J., Jr., 1977. On the deep general circulation in the Western North Atlantic. *Journal of Marine Research* 35:21–28. (7, 127, 133, 134, 139, 397, 534)
- Schmitz, W. J., Jr., 1978. Observations of the vertical distribution of low frequency kinetic energy in the Western North Atlantic. *Journal of Marine Research* 36:295–310. (123, 127, 131, 139, 359, 363, 370, 373, 374, 546)
- Schmitz, W. J., Jr., 1980. Weakly depth-dependent segments of the North Atlantic circulation. *Journal of Marine Research* 38:111–135. (397)
- Schmitz, W. J., Jr., and P. P. Niiler, 1969. A note on the kinetic energy exchange between fluctuations and mean flow in the surface layer of the Florida Current. *Tellus* 21:814–819. (118, 507)
- Schmitz, W. J., Jr., and W. B. Owens, 1979. Observed and numerically simulated kinetic energies for some MODE eddies. *Journal of Physical Oceanography* 9:1294–1297. (346)
- Schmitz, W. J., Jr., and W. S. Richardson, 1968. On the transport of the Florida Current. *Deep-Sea Research* 15:679–693. (116)
- Schmitz, W. J., Jr., A. R. Robinson, and F. C. Fuglister, 1970. Bottom velocity observations directly under the Gulf Stream. *Science* 170:1192–1194. (127)
- Schneider, E. K., 1977. Axially symmetric steady-state models of the basic state for instability and climate studies. Part II. Nonlinear calculations. *Journal of the Atmospheric Sciences* 34:280–296. (506)
- Schott, F., and W. Düing, 1976. Continental shelf waves in the Florida Straits. *Journal of Physical Oceanography* 6:451–460. (117, 120, 121)
- Schott, F., and H. Stommel, 1978. Beta spirals and absolute velocities in different oceans. *Deep-Sea Research* 25:961–1010. (xxiii, 91, 343)
- Schott, G., 1897. Die Gewässer der Bank von Neufundland und ihrer weiten Umgebung. *Petermanns Mitteilungen* 43:201–212. (208)
- Schott, G., 1902. Oceanographie und maritime Meteorologie. In *Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer "Valdivia" 1898–1899*, 1, 403 pp. (8, 10, 32, 40)
- Schott, G., 1926. Die Tiefwasserbewegungen des Indischen Ozeans. Zugleich zur Besprechung von E. von Drygalski "Ozean und Antarktis". *Annalen der Hydrographie und Maritimen Meteorologie* 54:417–431. (10)
- Schroeder, E., and H. Stommel, 1969. How representative is the series of *Panulirus* stations of monthly mean conditions off Bermuda? *Progress in Oceanography* 5:31–40. (351)
- Schroeder, J., 1975. Krypton-85 in the ocean. *Zeitschrift für Naturforschung A* 30:962–967. (446)
- Schroeder, K. J. P., and W. Roether, 1975. The release of krypton-85 and tritium to the environment and krypton-85 to tritium ratios as source indicator. In *Isotope Ratios as Pollutant Source and Behavior Indicators*, Publication IAEA-SM-191/30, International Atomic Energy Agency, Vienna, pp. 231–253. (446, 447)
- Slater, J. G., and R. L. Fisher, 1974. Evolution of the east central Indian Ocean, with emphasis on the tectonic setting of the Ninetyeast Ridge. *Geological Society of America Bulletin* 85:683–702. (33)
- SCOR, 1977. Report of the Panel on Monitoring Ocean Climate Fluctuations. World Meteorological Organization, Geneva, 96 pp. (428)
- Scott, J. T., and G. T. Csanady, 1976. Nearshore currents off Long Island. *Journal of Geophysical Research* 81:5401–5409. (219, 228)
- Scotti, R. S., and G. M. Corcos, 1972. An experiment on the stability of small disturbances in a stratified shear layer. *Journal of Fluid Mechanics* 52:499–528. (248)
- Sea Data Corporation, 1978. Advertising brochure. Newton, Massachusetts. (401)
- Seabrooke, J. D., G. L. Hufford, and R. B. Elder, 1971. Formation of antarctic bottom water in the Weddell Sea. *Journal of Geophysical Research* 76:2164–2178. (17)
- Seitz, R. C., 1973. Observations of intermediate and small scale turbulent water motion in a stratified estuary (Parts I and II). *Chesapeake Bay Institute of the Johns Hopkins University Technical Report* 79, Reference 73-2, Baltimore, Maryland, 89 and 158 pp. (205)
- Semtner, A. J., and W. R. Holland, 1978. Intercomparison of quasi-geostrophic simulations of the western North Atlantic circulation with primitive equation results. *Journal of Physical Oceanography* 8:735–754. (133, 182)
- Semtner, A. J., and W. R. Holland, 1980. Numerical simulation of equatorial ocean circulation. Part I: A basic case in turbulent equilibrium. *Journal of Physical Oceanography*. (194)
- Semtner, A. J., and Y. Mintz, 1977. Numerical simulation of the Gulf Stream and mid-ocean eddies. *Journal of Physical Oceanography* 7:208–230. (89, 133, 228, 229)
- Sharma, G. S., 1972. Water characteristics at 200 cl/t in the intertropical Indian Ocean during the southwest monsoon. *Journal of Marine Research* 30:102–111. (83)
- Shaw, D. M., and W. L. Donn, 1964. Sea level variations at Iceland and Bermuda. *Journal of Marine Research* 22:111–122. (351)
- Shaw, N., 1930. *Manual of Meteorology, 3: The Physical Processes of Weather*. Cambridge University Press, London, 445 pp. (44)

- Sheldon, R. W., A. Prakash, and W. H. Sutcliffe, Jr., 1972. The size distribution of particles in the ocean. *Limnology and Oceanography* 17:327–340. (380)
- Sheppard, P. A., 1947. The aerodynamic drag of the earth's surface and the value of von Karman's constant in the lower atmosphere. *Proceedings of the Royal Society of London A* 188:208–222. (485)
- Sheppard, P. A., 1970. The atmospheric boundary layer in relation to large-scale dynamics. In *The Global Circulation of the Atmosphere*, G. A. Corby, ed., Royal Meteorological Society, London, pp. 91–112. (503)
- Sheppard, P. A., H. Charnock, and J. R. D. Francis, 1952. Observations of the westerlies over the sea. *Quarterly Journal of the Royal Meteorological Society* 78:563–582. (503)
- Sheppard, P. A., D. T. Tribble, and J. R. Garratt, 1972. Studies of turbulence in the surface layer over water [Lough Neagh]. Part I. Instrumentation, programme, profiles. *Quarterly Journal of the Royal Meteorological Society* 98:627–641. (489)
- Sherman, F. S., J. Imberger, and G. M. Corcos, 1978. Turbulence and mixing in stably stratified waters. *Annual Review of Fluid Mechanics* 10:267–288. (238, 244, 248, 249, 251, 252)
- Shirtcliffe, T. G. L., and J. S. Turner, 1970. Observations of the cell structure of salt fingers. *Journal of Fluid Mechanics* 41:707–719. (256)
- Siedler, G., 1968. Schichtungs-und Bewegungsverhältnisse am Südausgang des Roten Meeres. "Meteor" Forschungsergebnisse, Reihe A, No. 4, 1–76. (25)
- Silker, W. B., 1972a. Beryllium-7 and fission products in the GEOSCS II water column and applications of their oceanic distributions. *Earth and Planetary Science Letters* 16:131–137. (447, 448)
- Silker, W. B., 1972b. Horizontal and vertical distributions of radionuclides in the North Pacific Ocean. *Journal of Geophysical Research* 77:1061–1070. (447)
- Silker, W. B., D. E. Robertson, H. G. Rieck, Jr., R. W. Perkins, and J. M. Prospero, 1968. Beryllium-7 in ocean water. *Science* 161:879–880. (447)
- Silvert, W., and T. Platt, 1978. Energy flux in the pelagic ecosystem: a time-dependent equation. *Limnology and Oceanography* 23:813–816. (379)
- Simmons, A. J., 1974. The meridional scale of baroclinic waves. *Journal of the Atmospheric Sciences* 31:1515–1525. (529)
- Simmons, H. B., 1950. Applicability of hydraulic model studies to tidal problems. In *Evaluation of Present State of Knowledge of Factors Affecting Tidal Hydraulics and Related Phenomena*, U.S. Army Corps of Engineers, Committee on Tidal Hydraulics Report No. 1, pp. 127–146. (203)
- Simpson, J. H., 1972. A free fall probe for the measurement of velocity microstructure. *Deep-Sea Research* 19:331–336. (423)
- Simpson, J. H., 1975. Observations of small scale vertical shear in the ocean. *Deep-Sea Research* 22:619–627. (257)
- Simpson, J. H., and J. R. Hunter, 1974. Fronts in the Irish Sea. *Nature* 250:404–406. (259, 380)
- Sippican Corporation, 1973, 1978. Sippican Oceanographic Division—various advertising brochures, Marion, Massachusetts. (414)
- Smith, E. H., 1926. A practical method for determining ocean currents. *United States Coast Guard Bulletin* No. 14, U.S. Government Printing Office, Washington, D.C., 50 pp. (233)
- Smith, E. H., F. M. Soule, and O. Mosby, 1937. The Marion and General Greene expeditions to Davis Strait and Labrador Sea under direction of the United States Coast Guard 1928–1931–1933–1934–1935. Scientific results, part 2, physical oceanography. *United States Coast Guard Bulletin* No. 19, U.S. Government Printing Office, Washington, D.C., 259 pp. (74, 75)
- Smith, J. D., 1974. Turbulent structure of the surface boundary layer in an ice-covered ocean. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 167:53–65. (405)
- Smith, J. D., 1978. Measurement of turbulence in ocean boundary layers. In *Proceedings of Working Conference on Current Measurement, January 11–13, 1978*, University of Delaware, Newark, pp. 95–128. (205, 405)
- Smith, P. C., 1973. The dynamics of bottom boundary currents in the ocean. Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, WHOI Ref. No. 73-4, 214 pp. (473)
- Smith, P. C., 1975. A streamtube model for bottom boundary currents in the ocean. *Deep-Sea Research* 22:853–873. (24, 25, 260)
- Smith, P. C., 1977. Experiments with viscous source flows in rotating systems. *Dynamics of Atmospheres and Oceans* 1:241–272. (473)
- Smith, P. C., 1978. Low-frequency fluxes of momentum, heat, salt, and nutrients at the edge of the Scotian Shelf. *Journal of Geophysical Research* 83:4079–4096. (218)
- Smith, R. L., 1978. Poleward propagating perturbations in currents and sea levels along the Peru coast. *Journal of Geophysical Research* 83:6083–6092. (310, 313)
- Smith, S. D., 1973. Thrust anemometer measurements over the sea re-examined. *Report Series BI-R-73-1*, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, 23 pp. (489)
- Smith, S. D., and E. G. Banke, 1975. Variation of the sea surface drag coefficient with wind speed. *Quarterly Journal of the Royal Meteorological Society* 101:665–673. (489)
- Snodgrass, F. E., 1968. Deep sea instrument capsule. *Science* 162:78–87. (323, 408, 425)
- Snodgrass, F. E., G. W. Groves, K. Hasselmann, G. R. Miller, W. H. Munk, and W. H. Powers, 1966. Propagation of ocean swell across the Pacific. *Philosophical Transactions of the Royal Society of London A* 259:431–497. (491)
- Snodgrass, J. M., 1968. Instrumentation and communications. In *Ocean Engineering: Goals, Environment, Technology*, J. F. Brahtz, ed., John Wiley and Sons, New York, pp. 393–477. (400, 403, 414)
- Snyder, R. L., 1974. A field study of wave-induced pressure fluctuations above surface gravity waves. *Journal of Marine Research* 32:497–531. (494)
- Snyder, R. L., and C. S. Cox, 1966. A field study of the wind generation of ocean waves. *Journal of Marine Research* 24:141–178. (491)
- Snyder, R. L., F. W. Dobson, J. A. Elliott and R. B. Long, 1980. Array measurements of atmospheric pressure fluctuations

- above surface gravity waves. *Journal of Fluid Mechanics.* 9(495)
- Solberg, H., 1928. Integrationen der atmosphärischen Störungsgleichungen. Erster Teil: Wellenbewegungen in rotierenden, inkompressiblen Flüssigkeitsschichten. *Geofysiske Publikasjoner* 5:9, 120 pp. (529)
- Solberg, T. A., 1950. Preface to Proceedings of the Colloquium on the Flushing of Estuaries, September 7–8, 1950, Cambridge, Massachusetts, H. Stommel, ed., *W.H.O.I. Reference No. 50-37*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 206 pp. (202)
- Soley, J. C., 1911. The circulation in the North Atlantic in the month of August. *Supplement Pilot Chart North Atlantic Ocean for 1911*. Hydrographic office, U.S. Navy Dept., Washington, D.C. (208)
- Solomon, H., 1974. Comments on the antarctic bottom water problem and high-latitude thermohaline sinking. *Journal of Geophysical Research* 79:881–884. (40)
- Solomon, H., 1978. Comments on a theory of the Kuroshio meander. *Deep-Sea Research* 25:957–958. (540)
- Somayajulu, B. L. K., D. Lal, and H. Craig, 1973. Silicon-32 profiles in the South Pacific. *Earth and Planetary Science Letters* 18:181–188. (447)
- Spiegel, E. A., and G. Veronis, 1960. On the Boussinesq approximation for a compressible fluid. *Astrophysical Journal* 131:442–447. (142, 385)
- Spilhaus, A. F., 1937. Note on the flow of streams in a rotating system. *Journal of Marine Research* 1:29–33. (464)
- Spilhaus, A. F., A. Erlich, and A. R. Miller, 1950. Hydrostatic instability in the ocean. *Transactions of the American Geophysical Union* 31:213–215. (212)
- Spilhaus, A. F., and A. R. Miller, 1948. The sea sampler. *Journal of Marine Research* 7:370–385. (212)
- Starr, V. P., 1954. Studies of the atmospheric general circulation, part I. *Final Report General Circulation Project, AF 19(122)-153*, Massachusetts Institute of Technology, Dept. of Meteorology, 535 pp. (507)
- Starr, V. P., 1957. Studies of the atmospheric general circulation, part II. *Final Report General Circulation Project, AF 19(604)-1000*, Massachusetts Institute of Technology, Dept. of Meteorology, 672 pp. (507)
- Starr, V. P., 1968. *Physics of Negative Viscosity Phenomena*. McGraw-Hill, New York, 256 pp. (343)
- Steele, J. H., 1961. The environment of a herring fishery. *Marine Research, Department of Agriculture and Fisheries for Scotland* 1961: 6, 19 pp. (380)
- Steele, J. H., 1975. Biological modelling II. In *Modelling of Marine Systems*, J. C. J. Nihoul, ed., Elsevier, Amsterdam, pp. 207–216. (378)
- Steele, J. H., ed., 1978a. *Spatial Pattern in Plankton Communities*. Plenum Press, New York, 470 pp. (376)
- Steele, J. H., 1978b. Some comments on plankton patches. In *Spatial Pattern in Plankton Communities*, J. H. Steele, ed., Plenum Press, New York, pp. 1–20. (377, 378)
- Steele, J. H., 1979. Some problems in the management of marine resources. *Applied Biology* 4: 103–140. (379, 381, 382)
- Steele, J. H., J. R. Barrett, and L. V. Worthington, 1962. Deep currents south of Iceland. *Deep-Sea Research* 9:465–474. (23, 29, 43)
- Steele, J. H., and B. W. Frost, 1977. The structure of plankton communities. *Philosophical Transactions of the Royal Society of London B* 280:485–534. (379, 382)
- Steele, J. H., and E. W. Henderson, 1977. Plankton patches in the northern North Sea. In *Fisheries Mathematics*, J. H. Steele, ed., Academic Press, London, pp. 1–19. (382)
- Steele, J. H., and E. W. Henderson, 1979. Spatial patterns in North Sea plankton. *Deep-Sea Research* 26:955–963. (380)
- Stefánsson, U., 1968. Dissolved nutrients, oxygen and water masses in the Northern Irminger Sea. *Deep-Sea Research* 15:541–575. (24, 25)
- Stern, M. E., 1959. The decay and instability of Ekman flows. (Unpublished manuscript, 26 pp.) (476)
- Stern, M. E., 1960a. The “salt-fountain” and thermohaline convection. *Tellus* 12:172–175. (xx, 252, 419)
- Stern, M. E., 1960b. Instability of Ekman flow at large Taylor number. *Tellus* 12:399–417. (466, 476)
- Stern, M. E., 1963. Trapping of low frequency oscillations in an equatorial “boundary layer”. *Tellus* 15:246–250. (295)
- Stern, M. E., 1966. Interaction of a uniform wind stress with hydrostatic eddies. *Deep-Sea Research* 13:193–203. (149)
- Stern, M. E., 1969. Collective instability of salt fingers. *Journal of Fluid Mechanics* 35:209–218. (252, 253)
- Stern, M. E., 1970. Optical measurement of salt fingers. *Tellus* 22:76–81. (419)
- Stern, M. E., 1975a. *Ocean Circulation Physics*. Academic Press, New York, 246 pp. (132, 140, 143, 148, 149, 183, 250, 252, 255)
- Stern, M. E., 1975b. Minimal properties of planetary eddies. *Journal of Marine Research* 33:1–13. (511)
- Stern, M. E., 1976. Maximum buoyancy flux across a salt finger interface. *Journal of Marine Research* 34:95–110. (255)
- Stern, M. E., and J. S. Turner, 1969. Salt fingers and convecting layers. *Deep-Sea Research* 16:497–511. (252)
- Stewart, R. W., 1957. A note on the dynamic balance in estuarine circulation. *Journal of Marine Research* 16:34–39. (206)
- Stewart, R. W., 1969. Turbulence and waves in a stratified atmosphere. *Radio Science* 4:1269–1278. (246)
- Stewartson, K., and J. A. Rickard, 1969. Pathological oscillations of a rotating fluid. *Journal of Fluid Mechanics* 35:759–773. (295)
- Stidd, C. K., 1974. Ship drift components: Means and standard deviations. *S.I.O. Reference Series 74-33*, Scripps Institution of Oceanography, University of California at San Diego, 57 pp. (71)
- Stigebrandt, A., 1976. Vertical diffusion driven by internal waves in a sill fjord. *Journal of Physical Oceanography* 6:486–495. (261)
- Stimson, P. B., 1965. Synthetic-fiber deep-sea mooring cables: Their life expectancy and susceptibility to biological attack. *Deep-Sea Research* 12:1–8. (407)

- Stock, G., 1976. Modelling of tides and tidal dissipation in the Gulf of California. Ph.D. Thesis, University of California at San Diego. (325)
- Stokes, G. G., 1846. Report on recent researches in hydrodynamics. In *Report of the 16th Meeting of the British Association for the Advancement of Science*, Southampton, pp. 1–20. (307)
- Stokes, G. G., 1847. On the theory of oscillating waves. *Transactions of the Cambridge Philosophical Society* 8:441–455. (264, 299)
- Stommel, H., 1948. The westward intensification of wind-driven ocean currents. *Transactions of the American Geophysical Union* 29:202–206. (xiv, xv, xix, xxiv, 79, 125, 140, 150, 340, 341, 342, 344, 345, 468, 470)
- Stommel, H., 1949. Horizontal diffusion due to oceanic turbulence. *Journal of Marine Research* 8:199–225. (203, 239, 384)
- Stommel, H., 1950a. Note on the deep circulation of the Atlantic Ocean. *Journal of Meteorology* 7:245–246. (13)
- Stommel, H., ed., 1950b. Proceedings of the Colloquium on the Flushing of Estuaries, September 7–8, 1950, Cambridge, Massachusetts. W.H.O.I. Reference No. 50-37, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 206 pp. (202)
- Stommel, H., 1951. Recent developments in the study of tidal estuaries. W.H.O.I. Technical Report 51-33, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 18 pp. (202)
- Stommel, H., 1952. Streaks of natural water surfaces. In *International Symposium on Atmospheric Turbulence in the Boundary Layer*, E. W. Hewson, ed., *Geophysical Research Papers* No. 19, Air Force Cambridge Research Center, Cambridge, Massachusetts, pp. 145–154. (477)
- Stommel, H., 1953a. Examples of the possible role of inertia and stratification in the dynamics of the Gulf Stream system. *Journal of Marine Research* 12:184–195. (116)
- Stommel, H., 1953b. Computation of pollution in a vertically mixed estuary. *Sewage and Industrial Wastes* 25:1065–1071. (202, 212)
- Stommel, H., 1954. Why do our ideas about the ocean circulation have such a peculiarly dream-like quality? (Unpublished manuscript, privately printed, 34 pp.) (xiii, xvi, 153, 154)
- Stommel, H., 1955. Discussion at the Woods Hole Convocation, June 1954. *Journal of Marine Research* 14:504–510. (411)
- Stommel, H., 1957a. The abyssal circulation of the ocean. *Nature* 180:733–734. (xxi)
- Stommel, H., 1957b. A survey of ocean current theory. *Deep-Sea Research* 4:149–184. (xv, xxi, 79, 121, 152, 162, 339, 340, 466)
- Stommel, H., 1958. The abyssal circulation. *Deep-Sea Research* 5:80–82. (xxi, 12, 58, 59, 163, 449)
- Stommel, H., 1960. Wind-drift near the equator. *Deep-Sea Research* 6:298–302. (189, 190)
- Stommel, H., 1962a. Primery peremeshivaniya i samovozbuzhdayushcheisya konvektsii na S,T-diagramme. *Okeanologiya* 2:205–209. (Examples of mixing and spontaneous convection of the S,T diagram. Translation No. 63-15151, Office of Technical Services, U.S. Department of Commerce, Washington, D.C.) (251)
- Stommel, H., 1962b. On the smallness of sinking regions in the ocean. *Proceedings of the National Academy of Sciences of the U.S.A.* 48:766–772. (505)
- Stommel, H., 1963. Varieties of oceanographic experience. *Science* 139:572–576. (376, 429, 430, 431)
- Stommel, H., 1965. *The Gulf Stream: A Physical and Dynamical Description*, 2nd ed. University of California Press, Berkeley, 248 pp. (First ed. 1958, 202 pp.) (xiii, xv, xxv, 12, 79, 112, 137, 141, 153, 155, 173, 342, 344, 429)
- Stommel, H. M., 1966. The large-scale oceanic circulation. In *Advances in Earth Science*, P. Hurley, ed., MIT Press, Cambridge, Massachusetts, pp. 175–184. (398)
- Stommel, H., and A. B. Arons, 1960a. On the abyssal circulation of the world ocean—I. Stationary planetary flow patterns on a sphere. *Deep-Sea Research* 6:140–154. (xxi, 12, 26, 340)
- Stommel, H., and A. B. Arons, 1960b. On the abyssal circulation of the world ocean—II. An idealized model of the circulation pattern and amplitude in oceanic basins. *Deep-Sea Research* 6:217–233. (xxi, 12, 14, 15, 26, 27, 29, 37, 58, 59, 106, 340, 449)
- Stommel, H., and A. B. Arons, 1972. On the abyssal circulation of the world ocean—V. The influence of bottom slope on the broadening of inertial boundary currents. *Deep-Sea Research* 19:707–718. (xxiii, 37)
- Stommel, H., A. B. Arons, and D. Blanchard, 1956. An oceanographical curiosity: The perpetual salt fountain. *Deep-Sea Research* 3:152–153. (xvii, 250, 419)
- Stommel, H., A. B. Arons, and A. J. Faller, 1958. Some examples of stationary planetary flow patterns in bounded basins. *Tellus* 10:179–187. (xxi, 12, 152, 466, 467, 475)
- Stommel, H., and H. G. Farmer, 1952. Abrupt change in width in two-layer open channel flow. *Journal of Marine Research* 11:205–214. (203)
- Stommel, H., and H. G. Farmer, 1953. Control of salinity in an estuary by a transition. *Journal of Marine Research* 12:13–20. (203)
- Stommel, H., and K. N. Fedorov, 1967. Small scale structure in temperature and salinity near Timor and Mindinao. *Tellus* 19:306–325 (279, 290)
- Stommel, H., and M. Fieux, 1978. *Oceanographic Atlases: A Guide to their Geographic Coverage and Contents*. Woods Hole Press, Woods Hole, Massachusetts 97 pp. (xxiii, 44)
- Stommel, H., and A. Leetmaa, 1972. Circulation on the continental shelf. *Proceedings of the National Academy of Sciences of the U.S.A.* 69:3380–3384. (227, 228)
- Stommel, H., P. Niiler, and D. Anati, 1978. Dynamic topography and recirculation of the North Atlantic. *Journal of Marine Research* 36:449–468. (85, 90, 91, 125, 373)
- Stommel, H., and F. Schott, 1977. The beta spiral and the determination of the absolute velocity field from hydrographic station data. *Deep-Sea Research* 24:325–329. (xxi, xxiii, 91, 397)
- Stommel, H., E. D. Stroup, J. L. Reid, and B. A. Warren, 1973. Transpacific hydrographic sections at Lats. 43°S and 28°S: the

- SCORPIO Expedition—I. Preface. *Deep-Sea Research* 20:1–7. (34, 35, 43, 46, 52, 55)
- Stommel, H., and G. Veronis, 1957. Steady convective motions in a horizontal layer of fluid heated uniformly above and non-uniformly from below. *Tellus* 8:401–407. (159)
- Stommel, H., A. Voorhis, and D. Webb, 1971. Submarine clouds in the deep ocean. *American Scientist* 59:716–722. (413)
- Stommel, H., and J. Webster, 1962. Some properties of the thermocline equations in a subtropical gyre. *Journal of Marine Research* 20:42–56. (159)
- Stone, P. H., 1966. On non-geostrophic baroclinic stability. *Journal of the Atmospheric Sciences* 23:390–400. (529)
- Stone, P. H., 1968. Some properties of Hadley regimes on rotating and non-rotating planets. *Journal of the Atmospheric Sciences* 25:644–657. (505)
- Stone, P. H., 1969. The meridional structure of baroclinic waves. *Journal of the Atmospheric Sciences* 26:376–389. (529)
- Stone, P. H., 1970. On non-geostrophic baroclinic stability: Part II. *Journal of the Atmospheric Sciences* 27:721–726. (529)
- Stone, P. H., 1978. Baroclinic adjustment. *Journal of the Atmospheric Sciences* 35:561–571. (507)
- Stuart, J. T., 1960. On the non-linear mechanics of wave disturbances in stable and unstable parallel flows. Part I. The basic behaviour in plane Poiseuille flow. *Journal of Fluid Mechanics* 9:353–370. (174)
- Stuiver, M., 1976. The ^{14}C distribution in West Atlantic abyssal waters. *Earth and Planetary Science Letters* 32:322–330. (439, 450)
- Stumpf, H. G., and P. K. Rao, 1975. Evolution of Gulf Stream eddies as seen in satellite infra-red imagery. *Journal of Physical Oceanography* 5:388–393. (121)
- Sturges, W., III, 1968. Sea-surface topography near the Gulf Stream. *Deep-Sea Research* 15:149–156. (116, 212, 227)
- Sturges, W., 1974. Sea level slope along continental boundaries. *Journal of Geophysical Research* 79:825–830. (116)
- Sugimoto, T., 1975. Effect of boundary geometries on tidal currents and tidal mixing. *Journal of the Oceanographical Society of Japan* 31:1–14. (206)
- Suomi, V., 1976. As quoted by K. J. Hansen, ed., in Geophysical Monitoring for Climate Change, No. 5 Summary Report 1976, NOAA/ERL, Boulder, Colorado, November, 1977. (429)
- Sumner, F. B., R. P. Osburn, and L. J. Cole, 1913. A biological survey of the waters of Woods hole and vicinity. Part I, Section I—Physical and zoological. *Bulletin of the Bureau of Fisheries* 31 (1911): 1–442. (208)
- Sverdrup, H. U., 1926. Dynamic of tides on the North Siberian shelf. Results from the Maud Expedition. *Geofysiske Publikasjoner* 4:5, 75 pp. (298)
- Sverdrup, H. U., 1931. The origin of the deep-water of the Pacific Ocean as indicated by the oceanographic work of the "Carnegie". *Geologische Beiträge zur Geophysik* 29:95–105. (10)
- Sverdrup, H. U., 1947. Wind-driven currents in a baroclinic ocean; with application to the equatorial currents of the eastern Pacific. *Proceedings of the National Academy of Sciences of the U.S.A.* 33:318–326. (xxiv, 79, 140, 149, 188, 340, 342, 509, 517)
- Sverdrup, H. U., M. W. Johnson, and R. H. Fleming, 1942. *The Oceans: Their Physics, Chemistry, and General Biology*. Prentice-Hall, Englewood Cliffs, New Jersey, 1087 pp. (xii, xxv, 7, 11, 22, 36, 42, 58, 71, 72, 75, 78, 79, 81, 83, 140, 211, 212, 227, 236, 342, 343, 348, 384, 398, 414, 415, 434, 488)
- Swallow, J. C., 1955. A neutral-buoyancy float for measuring deep currents. *Deep-Sea Research* 3:74–81. (58, 121, 359, 403, 412)
- Swallow, J. C., 1957. Some further deep current measurements using neutrally buoyant floats. *Deep-Sea Research* 4:93–104. (403)
- Swallow, J. C., 1971. The Aries current measurements in the western North Atlantic. *Philosophical Transactions of the Royal Society of London A* 270:451–460. (358, 430, 507)
- Swallow, J. C., 1976. Variable currents in mid-ocean. *Oceanus* 19:3, 18–25. (343, 430)
- Swallow, J. C., 1977. An attempt to test the geostrophic balance using Minimode current measurements. In *A Voyage of Discovery: George Deacon 70th Anniversary Volume*, M. Angel, ed., Supplement to *Deep-Sea Research*, Pergamon Press, Oxford, 165–176. (397, 412)
- Swallow, J. C., and L. V. Worthington, 1957. Measurements of deep currents in the western North Atlantic. *Nature* 179:1183–1184. (xxi, 13, 121)
- Swallow, J. C., and L. V. Worthington, 1961. An observation of a deep countercurrent in the western North Atlantic. *Deep-Sea Research* 8:1–19. (27, 79, 108, 121, 421)
- Swallow, J. C., and L. V. Worthington, 1969. Deep currents in the Labrador Sea. *Deep-Sea Research* 16:77–84. (23, 26, 43, 108)
- Swallow, M., 1961. Deep currents in the open ocean. *Oceanus* 7:3, 2–8. (507)
- Swanson, R. L., and C. S. Sindermann, eds., 1980. *Oxygen Depletion and Associated Benthic Mortalities in New York Bight, 1976*. NOAA Professional Paper, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Rockville, Maryland. (225)
- Swanson, R. L., H. M. Stanford, J. S. O'Connor, S. Chanesman, C. A. Parker, P. A. Eisen, and G. F. Mayer, 1978. June 1976 pollution of Long Island ocean beaches. *Journal of the Environmental Engineering Division, Proceedings of the American Society of Civil Engineers* 104:1067–1085. (225)
- Swift, D. J. P., D. B. Duane, and T. F. McKinney, 1973. Ridge and swale topography of the Middle Atlantic Bight, North America: secular response to the Holocene hydraulic regime. *Marine Geology* 15:227–247. (208)
- Swift, D. J. P., G. L. Freeland, P. E. Gadd, G. Han, J. W. Lavelle, and W. L. Stubblefield, 1976. Morphologic evolution and coastal sand transport, New York-New Jersey shelf. In *Middle Atlantic Continental Shelf and the New York Bight*, M. G. Gross, ed., American Society of Limnology and Oceanography, Special Symposia, 2, pp. 69–89. (208)
- Taft, B. A., 1963. Distribution of salinity and dissolved oxygen on surfaces of uniform potential specific volume in the South Atlantic, South Pacific, and Indian oceans. *Journal of Marine Research* 21:129–146. (44, 82, 85)

- Taft, B. A., 1972. Characteristics of the flow of the Kuroshio south of Japan. In *Kuroshio: Its Physical Aspects*, H. Stommel and K. Yoshida, eds., University of Tokyo Press, pp. 165–216. (541)
- Taft, B. A., 1978. Structure of the Kuroshio south of Japan. *Journal of Marine Research* 36:77–117. (36)
- Taft, B. A., and P. Kovala, 1979. Temperature, salinity, thermosteric anomaly and zonal geostrophic velocity sections along 150°W from NORPAX Shuttle Experiment (1977–78). *Department of Oceanography, University of Washington, Special Report No. 87, Reference M79-17*, Seattle, Washington. (185)
- Tait, J. B., 1957. Hydrography of the Faroe-Shetland Channel, 1927–1952. *Marine Research, Scottish Home Department* 1957: 2, 309 pp. (43)
- Tait, J. B., 1967. Horizontal temperature and salinity distributions. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 157:38–63. (24)
- Tait, R. I., and M. R. Howe, 1968. Some observations of thermohaline stratification in the deep ocean. *Deep-Sea Research* 15:275–280. (252)
- Tait, R. I., and M. R. Howe, 1971. Thermohaline staircase. *Nature* 231:178–179. (252)
- Tapley, B. D., G. H. Born, H. H. Hagar, J. Lorell, M. E. Parke, J. M. Diamante, B. C. Douglas, C. C. Goad, R. Kolenkiewicz, J. G. Marsh, C. F. Martin, S. L. Smith III, W. F. Townsend, J. A. Whitehead, H. M. Byrne, L. S. Fedor, D. C. Hammond, and N. M. Mognard, 1979. Seasat altimeter calibration: initial results. *Science* 204:1410–1412. (428)
- Tarbell, S., A. Spencer, and R. E. Payne, 1978. A compilation of moored current meter data and associated oceanographic observations, Volume XVII (POLYMODE Array II data). *W.H.O.I. Technical Report 78-49*, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 88 pp. (403)
- Tatross, P. R., and E. L. Mollo-Christensen, 1967. Experiments on Ekman layer instability. *Journal of Fluid Mechanics* 28:531–543. (464, 526)
- Taub, H., and D. L. Schilling, 1977. *Digital Integrated Electronics*. McGraw-Hill, New York, 650 pp. (400)
- Taylor, G. I., 1914. Report by Mr. G. I. Taylor. In *Report on the Work Carried out by the S.S. "Scotia"*, 1913, H.M. Stationery Office, London, pp. 48–68. (500, 501)
- Taylor, G. I., 1915. Eddy-motion in the atmosphere. *Philosophical Transactions of the Royal Society of London A* 215:1–26. (182)
- Taylor, G. I., 1917. The formation of fog and mist. *Quarterly Journal of the Royal Meteorological Society* 43:241–268. (497)
- Taylor, G. I., 1920. Tidal friction in the Irish Sea. *Philosophical Transactions of the Royal Society of London A* 220:1–33. (323)
- Taylor, G. I., 1921. Tidal oscillations in gulfs and rectangular basins. *Proceedings of the London Mathematical Society* 20:148–181. (299)
- Taylor, G. I., 1931. Internal waves and turbulence in a fluid of variable density. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 76:35–42. (236)
- Taylor, G. I., 1954. The dispersion of matter in turbulent flow through a pipe. *Proceedings of the Royal Society of London A* 223:446–468. (239, 378)
- Taylor, P. K., 1979. Observations of the atmospheric boundary layer over the ocean, JASIN 1972. (Unpublished manuscript.) (503)
- Telegadas, K., and G. J. Ferber, 1975. Atmospheric concentrations and inventory of krypton-85 in 1973. *Science* 190:882–883. (446)
- Thompson, P. D., 1956. A theory of large-scale disturbances in non-geostrophic flow. *Journal of Meteorology* 13:251–261. (508)
- Thompson, R. E., 1975. Propagation of planetary waves over random bottom topography. *Journal of Fluid Mechanics* 70:267–286. (177)
- Thompson, R., 1971. Topographic Rossby waves at a site north of the Gulf Stream. *Deep-Sea Research* 18:1–9. (119)
- Thompson, R. O. R. Y., 1976. Climatological numerical models of the surface mixed layer of the ocean. *Journal of Physical Oceanography* 6:496–503. (245)
- Thompson, R. O. R. Y., 1977. Observations of Rossby waves near site D. *Progress in Oceanography* 7:135–162. (230, 372, 545)
- Thompson, R. O. R. Y., 1978. Reynolds stresses and deep counter-currents near the Gulf Stream. *Journal of Marine Research* 36:611–615. (119)
- Thompson, R. O. R. Y., 1980. Efficiency of conversion of kinetic energy to potential energy by a breaking internal gravity wave. *Journal of Geophysical Research*. (279)
- Thompson, R. O. R. Y., and J. R. Luyten, 1976. Evidence for bottom-trapped topographic Rossby waves from single moorings. *Deep-Sea Research* 23:629–635. (169)
- Thompson, S. M., and J. S. Turner, 1975. Mixing across an interface due to turbulence generated by an oscillating grid. *Journal of Fluid Mechanics* 67:349–368. (242)
- Thomsen, H., 1933. The circulation in the depths of the Indian Ocean. *Journal du Conseil* 8:73–79. (10)
- Thomson, C. W., 1877. *The Voyage of the Challenger. The Atlantic*, 2. MacMillan, London, 396 pp. (40, 43)
- Thompson, W., 1863. On the rigidity of the earth. *Philosophical Transactions of the Royal Society of London* 153:573–582. (296)
- Thomson, W. (Lord Kelvin), 1879. On gravitational oscillations of rotating water. *Proceedings of the Royal Society of Edinburgh* 10:92–100. Reprinted in *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, Fifth Series* 10 (1880): 109–116; and in his *Mathematical and Physical Papers*, J. Larmor, ed., Cambridge University Press, London, 4 (1910), pp. 141–148. (297, 298)
- Thorpe, S. A., 1971. Experiments on the instability of stratified shear flows: miscible fluids. *Journal of Fluid Mechanics* 46:299–319. (248, 249)
- Thorpe, S. A., 1973a. Turbulence in stably stratified fluids. A review of laboratory experiments. *Boundary-Layer Meteorology* 5:95–119. (249)
- Thorpe, S. A., 1973b. Experiments on instability and turbulence in a stratified shear flow. *Journal of Fluid Mechanics* 61:731–751. (279, 290)

- Thorpe, S. A., 1977. Turbulence and mixing in a Scottish loch. *Philosophical Transactions of the Royal Society of London A* 286:125–181. ⟨244, 291⟩
- Thorpe, S. A., 1978a. The near-surface ocean mixing layer in stable heating conditions. *Journal of Geophysical Research* 83: 2875–2885. ⟨242, 249, 278⟩
- Thorpe, S. A., 1978b. On the shape and breaking of finite amplitude internal gravity waves in a shear flow. *Journal of Fluid Mechanics* 85:7–31. ⟨243, 249, 276, 278⟩
- Thorpe, S. A., 1978c. On internal gravity waves in an accelerating shear flow. *Journal of Fluid Mechanics* 88:623–629. ⟨273, 276⟩
- Thorpe, S. A., 1979. Breaking internal waves in shear flows. In *Twelfth Symposium Naval Hydrodynamics*, National Academy of Science, Washington, D.C. pp. 623–628. ⟨278⟩
- Thorpe, S. A., P. K. Hutt, and R. Soulsby, 1969. The effect of horizontal gradients on thermohaline convection. *Journal of Fluid Mechanics* 38:375–400. ⟨252⟩
- Tizard, T. H., 1883. Remarks on the soundings and temperatures obtained in the Faroe Channel during the summer of 1882. *Proceedings of the Royal Society of London* 35:202–226. ⟨22, 41⟩
- Tizard, T. H., H. N. Moseley, J. Y. Buchanan, and J. Murray, 1885a. *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1873–76, Narrative of the Cruise of H.M.S. Challenger with a General Account of the Scientific Results of the Expedition*, 1, Second Part, pp. 511–1110. ⟨11⟩
- Tizard, T. H., H. N. Moseley, J. Y. Buchanan, and J. Murray, 1885b. *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1873–76, Narrative of the Cruise of H.M.S. Challenger with a General Account of the Scientific Results of the Expedition*, 1, First Part, pp. 1–510. ⟨349⟩
- Toba, Y., M. Tokuda, K. Okuda, and S. Kawai, 1975. Forced convection accompanying wind waves. *Journal of the Oceanographical Society of Japan* 31:192–198. ⟨242⟩
- Tomasko, M. G., L. R. Doose, and P. H. Smith, 1979. Absorption of sunlight in the atmosphere of Venus. *Science* 205:80–82. ⟨506⟩
- Townsend, A. A., 1959. Temperature fluctuations over a heated horizontal surface. *Journal of Fluid Mechanics* 5:209–221. ⟨392⟩
- Townsend, A. A., 1965. Excitation of internal waves by a turbulent boundary layer. *Journal of Fluid Mechanics* 22:241–252. ⟨509⟩
- Trier, R. M., W. S. Broecker, and H. W. Feely, 1972. Radium-228 profile at the Second GEOSECS Intercalibration Station, 1970, in the North Atlantic. *Earth and Planetary Science Letters* 16:141–145. ⟨446⟩
- Tsuchiya, M., 1968. Upper Waters of the Intertropical Pacific Ocean. *The Johns Hopkins Oceanographic Studies* 4: 50 pp. ⟨44, 82, 83, 188⟩
- Tsuchiya, M., 1970. Equatorial circulation of the South Pacific. In *Scientific Exploration of the South Pacific*, W. S. Wooster, ed., National Academy of Sciences, Washington, D.C., pp. 69–74. ⟨184, 185⟩
- Tsuchiya, M., 1974. Variation of the surface geostrophic flow in the eastern intertropical Pacific Ocean. *Fishery Bulletin* 72:1075–1086. ⟨185⟩
- Tsuchiya, M., 1975. Subsurface countercurrents in the eastern equatorial Pacific Ocean. *Journal of Marine Research* 33 [Supplement]: 145–175. ⟨83, 185, 186⟩
- Tucholke, B. E., W. R. Wright, and C. D. Hollister, 1973. Abyssal circulation over the Greater Antilles Outer Ridge. *Deep-Sea Research* 20:973–995. ⟨27, 28⟩
- Tulley, J. P., 1949. Oceanography and prediction of pulp mill pollution in Alberni Inlet. *Bulletin of the Fisheries Research Board of Canada* 83: 169 pp. ⟨202⟩
- Turner, J. S., 1965. The coupled transports of salt and heat across a sharp density interface. *International Journal of Heat and Mass Transfer* 8:759–767. ⟨254⟩
- Turner, J. S., 1967. Salt fingers across a density interface. *Deep-Sea Research* 14:599–611. ⟨255⟩
- Turner, J. S., 1968. The behaviour of a stable salinity gradient heated from below. *Journal of Fluid Mechanics* 33:183–200. ⟨251⟩
- Turner, J. S., 1969. Buoyant plumes and thermals. *Annual Review of Fluid Mechanics* 1:29–44. ⟨498⟩
- Turner, J. S., 1973a. *Buoyancy Effects in Fluids*. Cambridge University Press, London, 367 pp. ⟨183, 238, 243, 246, 248, 251, 254, 260, 265⟩
- Turner, J. S., 1973b. Geophysical examples of layering and microstructure: interpretation and relation to laboratory experiments. *Mémoires de la Société Royale des Sciences de Liège, Sixième Série* 4:11–30. ⟨238, 244⟩
- Turner, J. S., 1974. Double-diffusive phenomena. *Annual Review of Fluid Mechanics* 6:37–56. ⟨261⟩
- Turner, J. S., 1978. Double-diffusive intrusions into a density gradient. *Journal of Geophysical Research* 83:2887–2901. ⟨253, 254, 257⟩
- Turner, J. S., and C. F. Chen, 1974. Two-dimensional effects in double-diffusive convection. *Journal of Fluid Mechanics* 63:577–592. ⟨252, 253⟩
- Turner, J. S., T. G. L. Shirtcliffe, and P. G. Brewer, 1970. Elemental variations of transport coefficients across density interfaces in multiple-diffusive systems. *Nature* 228:1083–1084. ⟨256⟩
- Turner, J. S., and H. Stommel, 1964. A new case of convection in the presence of combined vertical salinity and temperature gradients. *Proceedings of the National Academy of Sciences of the U.S.A.* 52:49–53. ⟨xx, 251⟩
- Twitchell, P. F., 1979. Meeting on Physical Oceanography and Satellites. *Bulletin of the American Meteorological Society* 60:225–231. ⟨426⟩
- Uchupi, E., 1965. Map showing relation of land and submarine topography, Nova Scotia to Florida. *U.S. Geological Survey, Miscellaneous Geological Investigations, Map Series*, I-451. ⟨198, 208⟩
- Ufford, C. W., 1947. Internal waves measured at three stations. *Transactions of the American Geophysical Union* 28:87–95. ⟨264⟩
- Ulltang, O., in press. Factors of pelagic fish stocks which affect their reaction to exploitation and require a new approach to their assessment and managements. In *ICES Sym-*

- posium on the Biological Basis of Pelagic Fish Stock Management, A. Saville, ed., *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 177. (377)
- UNESCO, 1975. An intercomparison of open sea tidal pressure sensors. Report of SCOR Working Group 27: "Tides of the Open Sea." *UNESCO Technical Papers in Marine Science* 21, UNESCO, Paris, 67 pp. (425)
- United States Navy Hydrographic Office, 1944. *Current Charts: Northwestern Pacific Ocean*. Hydrographic Office Miscellaneous No. 10,058-A, Washington, 12 charts. Reissued in 1950 as Hydrographic Office Publication No. 569. (71)
- United States Navy Hydrographic Office, 1946. *Current Charts: North Atlantic Ocean*. Hydrographic Office Miscellaneous No. 10,688, Washington, 12 charts. Reissued as Hydrographic Office Publication No. 571. (116)
- Ursell, F., 1952. Edge waves on a sloping beach. *Proceedings of the Royal Society of London A* 214:79–97. (307, 309, 310, 315)
- US POLYMODE Organizing Committee, 1976 U.S. POLYMODE program and plan. Massachusetts Institute of Technology, Cambridge, Massachusetts, 87 pp. (Unpublished document.) (429)
- Vachon, W. A., 1978. Present status and future directions of drifting buoy developments: A summary of presentations made at a Drifting Buoy Workshop Held at the Woods Hole Oceanographic Institution on June 11 and 12, 1978. Technical report, A. D. Little, Inc., Acorn Park, Cambridge, Massachusetts, 32 pp. Available from National Technical Information Service, Springfield, Virginia. (426)
- van Leer, J. C., W. Düing, R. Erath, E. Kennelly, and A. Speidel, 1974. The Cyclesonde: an unattended vertical profiler for scalar and vector quantities in the upper ocean. *Deep-Sea Research* 21:385–400. (424)
- Vastano, A. C., and B. A. Warren, 1976. Perturbations to the Gulf Stream by Atlantis II Seamount. *Deep-Sea Research* 23:681–694. (522)
- Veronis, G., 1963. On inertially controlled flow patterns in a β -plane ocean. *Tellus* 15:59–66. (154)
- Veronis, G., 1966a. Wind-driven ocean circulation—Part 1. Linear theory and perturbation analysis. *Deep-Sea Research* 13:17–29. (150, 153)
- Veronis, G., 1966b. Wind-driven ocean circulation—Part 2. Numerical solutions of the non-linear problem. *Deep-Sea Research* 13:30–35. (89, 141, 153, 154, 155, 156)
- Veronis, G., 1966c. Generation of mean ocean circulation by fluctuating winds. *Tellus* 18:67–76. (345)
- Veronis, G., 1968a. Effect of a stabilizing gradient of solute on thermal convection. *Journal of Fluid Mechanics* 34:315–336. (255)
- Veronis, G., 1968b. Comments on Phillips (1966). *Journal of the Atmospheric Sciences* 25:1154–1155. (295)
- Veronis, G., 1969. On theoretical models of the thermocline circulation. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement):301–323. (159, 509)
- Veronis, G., 1970. Effects of fluctuating winds on ocean circulation. *Deep-Sea Research* 17:421–434. (142)
- Veronis, G., 1972. On properties of seawater defined by temperature, salinity, and pressure. *Journal of Marine Research* 30:227–255. (82, 183, 282)
- Veronis, G., 1973a. Model of world ocean circulation: I. Wind-driven, two layer. *Journal of Marine Research* 31:228–288. (125, 139, 141, 158)
- Veronis, G., 1973b. Large scale ocean circulation. In *Advances in Applied Mechanics* 13:1–92. (143, 342, 509, 518)
- Veronis, G., 1977. Use of tracers in circulation studies. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 6: *Marine Modeling*, E. D. Goldberg, I. N. McCave, J. J. O'Brien, and J. H. Steele, eds., Wiley, Interscience, New York, pp. 169–188. (449)
- Veronis, G., 1978. Model of world ocean circulation: III. Thermally and wind driven. *Journal of Marine Research* 36:1–44. (141, 158, 162)
- Veronis, G., and H. Stommel, 1956. The action of variable wind stresses on a stratified ocean. *Journal of Marine Research* 15:43–75. (141, 164, 165, 340, 344, 509)
- Veronis, G., and C. C. Yang, 1972. Nonlinear source-sink flow in a rotating pie-shaped basin. *Journal of Fluid Mechanics* 51:513–527. (152)
- Verrill, A. E., 1873. Results of recent dredging expeditions on the coast of New England. *American Journal of Scientific Arts, Third Series* 5:98–106. (208)
- Villain, C., 1952. Cartes des lignes cotidiales dans les océans (1). *Annales Hydrographiques, 4^e Serie* 3:269–388. (318, 320)
- Vinogradova, P. S., A. G. Kislyakov, V. M. Litvin, and L. S. Ponomarenko, 1959. Resultati okeanograficheskikh issledovanii v raione Farero-Islandskogo poroga v 1955–1956 gg. (Results of oceanographic investigations in the region of the Faroe-Iceland Ridge in the years 1955–1956.) *Trudy PINRO* 11:106–134. (22)
- Virk, P., 1975. Drag reduction fundamentals. *American Institute of Chemical Engineering Journal* 21:4–44. (391)
- Volkmann, G., 1962. Deep current observations in the Western North Atlantic. *Deep-Sea Research* 9:493–500. (27, 121)
- von Arx, W. S., 1950. An electromagnetic method for measuring the velocities of ocean currents from a ship underway. *Papers in Physical Oceanography and Meteorology* 11:3, 62 pp. (117)
- von Arx, W. S., 1952. A laboratory study of the wind-driven ocean circulation. *Tellus* 4:311–319. (465)
- von Arx, W. S., 1957. An experimental approach to problems in physical oceanography. *Progress in Physics and Chemistry of the Earth* 2:1–29. (466)
- von Arx, W. S., 1962. *An Introduction to Physical Oceanography*. Addison-Wesley, Reading, Massachusetts, 442 pp. (209, 466)
- von Arx, W. S., D. F. Bumpus, and W. S. Richardson, 1955. On the fine structure of the Gulf Stream front. *Deep-Sea Research* 3:46–65. (117)
- Vonbun, F. O., J. G. Marsh, and F. J. Lerch, 1978. Computed and observed ocean topography: A comparison. *Boundary-Layer Meteorology* 13:253–262. (118)
- von Buttlar, H., and W. F. Libby, 1955. Natural distribution of cosmic-ray produced tritium. *Journal of Inorganic and Nuclear Chemistry* 6:75–91. (440)

- Vonder Haar, T. H., and A. H. Oort, 1973. New estimate of annual poleward energy transport by northern hemisphere oceans. *Journal of Physical Oceanography* 3:169–172. (137)
- Voorhis, A. D., D. C. Webb, and R. C. Millard, 1976. Current structure and mixing in the shelf/slope water front south of New England. *Journal of Geophysical Research* 81:3695–3708. (257, 258)
- Wagner, A. J., 1977. Weather and circulation of January 1977, the coldest month on record in the Ohio Valley. *Monthly Weather Review* 105:553–560. (225)
- Walden, H., 1963. Comparison of one-dimensional wave spectra recorded in the German Bight with various “theoretical” spectra. *Ocean Wave Spectra: Proceedings of a Conference*, Prentice-Hall, Englewood Cliffs, New Jersey, pp. 67–94. (492)
- Walden, R. G., O. H. DeBok, J. B. Gregory, D. Meggitt, and W. A. Vachon, 1977. The mooring dynamics experiment—a major study of the dynamics of buoys in the deep ocean. In *Ninth Annual Offshore Technology Conference, 1977, Proceedings*, Offshore Technology Conference, Dallas, pp. 51–60. (410)
- Walin, G., 1969. Some aspects of time-dependent motion of a stratified rotating fluid. *Journal of Fluid Mechanics* 36:289–307. (527)
- Walsh, J. J., T. G. Falkowski, and T. S. Hopkins, 1980. Oxygen depletion within the New York Bight as a function of climatology and phytoplankton species succession. *Journal of Marine Research*. (225)
- Walsh, J. J., T. E. Whitledge, F. W. Barvenik, C. D. Wirick, S. O. Howe, W. E. Esaias, and J. T. Scott, 1978. Wind events and food chain dynamics within the New York Bight. *Limnology and Oceanography* 23:659–683. (379)
- Walther, E., 1966. Streaking. In *Langmuir Circulations and Internal Waves in Lake George*, *Lake George Studies Report No. 1, Atmospheric Sciences Research Center Publication No. 42*, State University of New York, Albany, pp. 7–16. (477)
- Wang, D.-P., 1979a. Subtidal sea level variations in the Chesapeake Bay and relations to atmospheric forcing. *Journal of Physical Oceanography* 9:413–421. (206)
- Wang, D.-P., 1979b. Wind-driven circulation in the Chesapeake Bay, winter 1975. *Journal of Physical Oceanography* 9:564–572. (206)
- Wang, D.-P., 1979c. Low frequency sea level variability on the Middle Atlantic Bight. *Journal of Marine Research* 37:683–697. (215, 222, 223, 228)
- Wang, D.-P., 1980. Diffraction of continental shelf waves by the irregular alongshore geometry. *Journal of Physical Oceanography*. (223)
- Wang, D.-P., and A. J. Elliott, 1978. Non-tidal variability in the Chesapeake Bay and Potomac River; evidence for non-local forcing. *Journal of Physical Oceanography* 8:225–232. (206)
- Wang, D.-P., and C. N. K. Mooers, 1976. Coastal trapped waves in a continuously stratified ocean. *Journal of Physical Oceanography* 6:853–863. (316, 358)
- Wang, D.-P., and C. N. K. Mooers, 1977. Long coastal trapped waves off the west coast of the United States, summer 1973. *Journal of Physical Oceanography* 7:856–864. (222)
- Warren, B. A., 1963. Topographic influences on the path of the Gulf Stream. *Tellus* 15:167–183. (123, 126)
- Warren, B. A., 1972. Insensitivity of subtropical mode water characteristics to meteorological fluctuations. *Deep-Sea Research* 19:1–20. (355)
- Warren, B. A., 1973. Transpacific hydrographic sections at Lats. 43°S and 28°S: the SCORPIO Expedition—II. Deep water. *Deep-Sea Research* 20:9–38. (25, 34, 35)
- Warren, B. A., 1974. Deep flow in the Madagascar and Mascarene basins. *Deep-Sea Research* 21:1–21. (29, 32, 108)
- Warren, B. A., 1976. Structure of deep western boundary currents. *Deep-Sea Research* 23:129–142. (35, 37, 38)
- Warren, B. A., 1977. Deep western boundary current in the eastern Indian Ocean. *Science* 196:53–54. (32, 33, 109)
- Warren, B. A., 1978. Bottom water transport through the Southwest Indian Ridge. *Deep-Sea Research* 25:315–321. (29, 109)
- Warren, B. A., H. Stommel, and J. C. Swallow, 1966. Water masses and patterns of flow in the Somali Basin during the southwest monsoon of 1964. *Deep-Sea Research* 13:825–860. (32)
- Warren, B. A., and G. H. Volkmann, 1968. Measurement of volume transport of the Gulf Stream south of New England. *Journal of Marine Research* 26:110–126. (131)
- Warren, B. A., and A. D. Voorhis, 1970. Velocity measurements in the deep western boundary current of the South Pacific. *Nature* 228:849–850. (35, 108)
- Watson, E. E., 1936. Mixing and residual currents in tidal waters as illustrated in the Bay of Fundy. *Journal of the Biological Board of Canada* 2:141–208. (201)
- Watson, E. R., 1904. Movements of the waters of Loch Ness, as indicated by temperature observations. *The Geographical Journal* 24:430–437. (290)
- Watson, J. G., W. L. Siegmann, and M. J. Jacobson, 1977. Acoustically relevant statistics for stochastic internal-wave models. *Journal of the Acoustical Society of America* 61:716–726. (291)
- Watson, K. M., B. J. West, and B. I. Cohen, 1976. Coupling of surface and internal gravity waves: a mode coupling model. *Journal of Fluid Mechanics* 77:185–208. (286)
- Watson, W. H., 1963. *Understanding Physics Today*. Cambridge University Press, London, p. 16 (396)
- Wattenberg, H., 1929. Durchlüftung des Atlantischen Ozeans. (Vorläufige Mitteilung aus den Ergebnissen der Deutschen Atlantischen Expedition). *Journal du Conseil* 4:68–79. (11)
- Wattenberg, H., 1939. Atlas zu: Die Verteilung des Sauerstoffs im Atlantischen Ozean. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff “Meteor” 1925–1927*, 9: Atlas, 72 plates. (43, 75)
- Wattenberg, H., 1957. Die Verteilung des Phosphats im Atlantischen Ozean. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff “Meteor” 1925–1927*, 9: 2nd Part, 2, 133–180. (75)
- Watts, D. R., and H. T. Rossby, 1977. Measuring dynamic heights with inverted echo sounders: Results from MODE. *Journal of Physical Oceanography* 7:345–358. (428)

- Wearn, R. B., Jr., and D. J. Baker, Jr., 1980. Bottom pressure measurements across the Antarctic Circumpolar Current and their relation to the wind. *Deep-Sea Research*. 26:425.
- Weatherly, G. L., and J. van Leer, 1977. On the importance of stable stratification to the structure of the bottom boundary layer on the western Florida Shelf. In *Bottom Turbulence*, J. C. J. Nihoul, ed., Elsevier, Amsterdam, pp. 108–122. (259)
- Webb, D. C., 1977. SOFAR floats for POLYMODE. In *Oceans '77 Conference Record*, IEEE Publication 77CH1272-4 OEC, Institute of Electrical and Electronics Engineers, New York, and Marine Technology Society, Washington, D.C., 2, pp. 44B1–44B5. (413)
- Webb, D. C., and L. V. Worthington, 1968. Measurement of vertical water movement in the Cayman Basin. *Deep-Sea Research* 15:609–612. (413)
- Webb, D., 1974. Green's function and tidal prediction. *Reviews of Geophysics and Space Physics* 12:103–116. (320, 321, 323)
- Webb, D. J., 1978. The wave-wave interaction machine. In *Turbulent Fluxes through the Sea Surface, Wave Dynamics, and Prediction*, A. Favre and K. Hasselmann, eds., Plenum Press, New York, pp. 335–345. (494)
- Webster, F., 1961a. The effect of meanders on the kinetic energy balance of the Gulf Stream. *Tellus* 13:392–401. (117, 118, 119, 345, 507, 529)
- Webster, F., 1961b. A description of Gulf Stream meanders off Onslow Bay. *Deep-Sea Research* 8:130–143. (117, 119)
- Webster, F., 1965. Measurements of eddy fluxes of momentum in the surface layer of the Gulf Stream. *Tellus* 17:239–245. (117, 345)
- Webster, F., 1968. Observations of inertial-period motions in the deep sea. *Reviews of Geophysics* 6:473–490. (265)
- Webster, F., 1969. Vertical profiles of horizontal ocean currents. *Deep-Sea Research* 16:85–98. (27, 121, 123)
- Wedderburn, E. M., 1907. The temperature of the fresh water lochs of Scotland, with special references to Loch Ness. *Transactions of the Royal Society of Edinburgh* 45:407–489. (290)
- Weiler, H. S., and R. W. Burling, 1967. Direct measurements of stress and spectra of turbulence in the boundary layer over the sea. *Journal of the Atmospheric Sciences* 24:653–664. (489)
- Weisberg, R. H., 1976a. A note on estuarine mean flow estimation. *Journal of Marine Research* 34:387–396. (206)
- Weisberg, R. H., 1976b. The nontidal flow in the Providence River of Narragansett Bay: a stochastic approach to estuarine circulation. *Journal of Physical Oceanography* 6:721–734. (206)
- Weisberg, R. H., A. Horigan, and C. Colin, 1979. Equatorially trapped Rossby-gravity wave propagation in the Gulf of Guinea. *Journal of Marine Research* 37:67–86. (186, 192)
- Weisberg, R. H., L. Miller, A. Horigan, and J. Knauss, 1980. Velocity observations in the equatorial thermocline during GATE. *Deep-Sea Research* 26(suppl. ©1979) (186, 192)
- Weisberg, R. H., and W. Sturges, 1976. Velocity observations in the West Passage of Narragansett Bay: A partially mixed estuary. *Journal of Physical Oceanography* 6:345–354. (206)
- Weiss, R. F., H. G. Östlund, and H. Craig, 1979. Geochemical studies of the Weddell Sea. *Deep-Sea Research* 26:1093–1120. (450, 456)
- Welander, P., 1959. An advective model of the ocean thermocline. *Tellus* 11:309–318. (xxi, 141, 159, 160, 161, 506, 509)
- Welander, P., 1968. Wind-driven circulation in one- and two-layer oceans of variable depth. *Tellus* 20:1–15. (151)
- Welander, P., 1971a. Some exact solutions to the equations describing an ideal fluid thermocline. *Journal of Marine Research* 29:60–68. (141, 159, 161, 162)
- Welander, P., 1971b. The thermocline problem. *Philosophical Transactions of the Royal Society of London A* 270:69–73. (159, 161)
- Welander, P., 1973. Lateral friction in the oceans as an effect of potential vorticity mixing. *Geophysical Fluid Dynamics* 5:173–189. (507)
- Welander, P., 1976. A zonally uniform regime in the ocean circulation. *Journal of Physical Oceanography* 6:121–124. (150)
- Weller, R. A., 1978. Observations of horizontal velocity in the upper ocean made with a new vector measuring current meter. Ph.D. Thesis, University of California at San Diego, 169 pp. (404, 406)
- Weller, R. A., and R. E. Davis, 1980. A vector measuring current meter. *Deep-Sea Research*. (404, 406)
- Wells, R. C., R. K. Bailey, and E. P. Henderson, 1929. Salinity of the water of Chesapeake Bay. In *Shorter Contributions to General Geology, 1928; U.S. Geological Survey Professional Paper* 154, pp. 105–152. (200)
- Wenner, F., E. H. Smith, and F. M. Soule, 1930. Apparatus for the determination aboard ship of the salinity of sea water by the electrical conductivity method. *Bureau of Standards Journal of Research* 5:711–732. (44)
- Wertheim, G. K., 1954. Studies of the electrical potential between Key West, Florida, and Havana, Cuba. *Transactions of the American Geophysical Union* 35:872–882. (116)
- White, W. B., 1977. Annual forcing of baroclinic long waves in the tropical North Pacific Ocean. *Journal of Physical Oceanography* 7:50–61. (357)
- White, W. B., and J. P. McCreary, 1976. On the formation of the Kuroshio meander and its relationship to the large-scale ocean circulation. *Deep-Sea Research* 23:33–47. (540, 541)
- White, W. B., and A. E. Walker, 1974. Time and depth scales of anomalous sub-surface temperature at ocean weather stations P, N, and V in the North Pacific. *Journal of Geophysical Research* 79:4517–4522. (355, 356)
- Whitehead, J. A., Jr., 1975. Mean flow generated by circulation on a β -plane: An analogy with the moving flame experiment. *Tellus* 27:358–364. (474, 533)
- Whitehead, J. A., A. Leetmaa, and R. A. Knox, 1974. Rotating hydraulics of strait and sill flow. *Geophysical Fluid Dynamics* 6:101–125. (473)
- Whitham, G. B., 1974. *Linear and Nonlinear Waves*. Wiley, Interscience, New York, 636 pp. (345, 514)
- Wiebe, P. H., E. M. Hulbert, E. J. Carpenter, A. E. Jahn, G. P. Knapp, III, S. H. Boyd, P. B. Ortner, and J. L. Cox, 1976. Gulf Stream cold core rings: Large-scale interaction sites for open

- ocean plankton communities. *Deep-Sea Research* 23:695–710. (379)
- Wieringa, J., 1974. Comparison of three methods for determining strong wind stress over Lake Flevo. *Boundary-Layer Meteorology* 7:3–19. (489)
- Willebrand, J., 1978. Temporal and spatial scales of the wind field over the North Pacific and North Atlantic. *Journal of Physical Oceanography* 8:1080–1094. (216, 218, 229, 348)
- Willebrand, J., S. G. H. Philander, and R. C. Pacanowski, 1980. The oceanic response to large-scale atmospheric disturbances. *Journal of Physical Oceanography*. (230)
- Williams, A. J., 3rd, 1974a. Salt fingers observed in the Mediterranean outflow. *Science* 185:941–943. (252)
- Williams, A. J., 3rd, 1974b. Salt fingers in the ocean: A short history. *Naval Research Reviews* 27:10, 27–33. (419, 420)
- Williams, A. J., 3rd, 1975. Images of ocean microstructure. *Deep-Sea Research* 22:811–829. (252, 419, 420)
- Williams, G. O., 1976. Repeated profiling of microstructure lenses with a midwater float. *Journal of Physical Oceanography* 6:281–292. (258, 419)
- Williams, G. P., 1978. Planetary circulations: 1. Barotropic representation of Jovian and terrestrial turbulence. *Journal of the Atmospheric Sciences* 35:1399–1426. (183)
- Williams, G. P., 1979. Planetary circulations: 2. The Jovian quasi-geostrophic regime. *Journal of the Atmospheric Sciences* 36:932–968. (183)
- Williams, L. P., 1965. *Michael Faraday*. Basic Books, New York, 540 pp. (396)
- Williams, R. G., and F. A. Godshall, 1977. Summarization and interpretation of historical physical oceanographic and meteorological information for the Mid-Atlantic Region. Final report to the Bureau of Land Management, U.S. Department of Interior NOAA/EDS, Washington, D.C., 296 pp. (215)
- Wilson, B. W., 1960. Note on surface wind stress over water at low and high wind speeds. *Journal of Geophysical Research* 65:3377–3382. (488)
- Wilson, K. G., 1979. Problems in physics with many scales of length. *Scientific American* 241:158–179. (509)
- Wilson, R. E., and A. Okubo, 1978. Longitudinal dispersion in a partially stratified estuary. *Journal of Marine Research* 36:427–447. (206)
- Wimbush, M., 1972. Tidal movements of the deep sea. *Underwater Journal and Information Bulletin* 4:239–248. (425)
- Wimbush, M., 1977. An inexpensive sea-floor precision pressure recorder. *Deep-Sea Research* 24:493–497. (425)
- Wimbush, M., and W. Munk, 1970. The benthic boundary layer. In *The Sea: Ideas and Observations on Progress in the Study of the Seas*, 4: *New Concepts of Sea Floor Evolution*, A. E. Maxwell ed., Part I. General Observations, Wiley, Interscience, New York, pp. 731–758. (258)
- Winant, C., 1979. Coastal current observations. *Reviews of Geophysics and Space Physics* 7:89–98. (332)
- Wiseman, W. J., R. M. Crosby, and D. W. Pritchard, 1972. A three-dimensional current meter for estuarine applications. *Journal of Marine Research* 30:153–158. (205)
- Witting, T., 1930. Determinations of current, direct and indirect. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 64:8–18. (201, 203)
- Wolgemuth, K., and W. S. Broecker, 1970. Barium in seawater. *Earth and Planetary Science Letters* 8:372–378. (444)
- Woods, J. D., 1968a. Wave-induced shear instability in the summer thermocline. *Journal of Fluid Mechanics* 32:791–800. (249)
- Woods, J. D., 1968b. An investigation of some physical processes associated with the vertical flow of heat through the upper ocean. *Meteorological Magazine* 97:65–72. (267)
- Woods, J. D., 1969. On Richardson's number as a criterion for laminar-turbulent-laminar transition in the ocean and atmosphere. *Radio Science* 4:1289–1298. (423)
- Woods, J. D., and R. L. Wiley, 1972. Billow turbulence and ocean microstructure. *Deep-Sea Research* 19:87–121. (249)
- Woodward, W., C. N. K. Mooers, and K. Jensen, eds., 1978. Proceedings of a Working Conference on Current Measurements. *College of Marine Studies, University of Delaware, Technical Report DEL-SG-3-78*, Newark, Delaware, 372 pp. (403)
- Wooster, W. S., and O. Guillen, 1974. Characteristics of El Niño in 1972. *Journal of Marine Research* 32:387–404. (379)
- Wooster, W. S., and G. H. Volkmann, 1960. Indications of deep Pacific circulation from the distribution of properties at five kilometers. *Journal of Geophysical Research* 65:1239–1249. (36)
- Worthington, L. V., 1959. The 18° water in the Sargasso Sea. *Deep-Sea Research* 5:297–305. (55, 59, 83, 355)
- Worthington, L. V., 1962. Evidence for a two gyre circulation system in the North Atlantic. *Deep-Sea Research* 9:51–67. (125, 133)
- Worthington, L. V., 1969. An attempt to measure the volume transport of Norwegian Sea overflow water through the Denmark Strait. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement): 421–432. (24)
- Worthington, L. V., 1970. The Norwegian Sea as a mediterranean basin. *Deep-Sea Research* 17:77–84. (23, 24, 58, 108)
- Worthington, L. V., 1976. On the North Atlantic Circulation. *The Johns Hopkins Oceanographic Studies* 6: 110 pp. (24, 43, 58, 79, 85, 108, 122, 123, 133, 137, 229, 355, 373, 397, 532, 533, 534)
- Worthington, L. V., 1977a. The case for near-zero production of Antarctic Bottom Water. *Geochimica et Cosmochimica Acta* 41:1001–1006. (59)
- Worthington, L. V., 1977b. Intensification of the Gulf Stream after the winter of 1976–77. *Nature* 270:415–417. (355)
- Worthington, L. V., and H. Kawai, 1972. Comparison between deep sections across the Kuroshio and the Florida Current and Gulf Stream. In *Kuroshio: Its Physical Aspects*, H. Stommel and K. Yoshida, eds., University of Tokyo Press, pp. 371–385. (36, 121)
- Worthington, L. V., and W. G. Metcalf, 1961. The relationship between potential temperature and salinity in deep Atlantic water. *Rapports et Procès-Verbaux des Réunions, Conseil Permanent International pour l'Exploration de la Mer* 149:122–128. (25)

- Worthington, L. V., and G. H. Volkmann, 1965. The volume transport of the Norwegian Sea overflow water in the North Atlantic. *Deep-Sea Research* 12:667–676. ⟨23, 43⟩
- Worthington, L. V., and W. R. Wright, 1970. North Atlantic Ocean Atlas of Potential Temperature and Salinity in the Deep Water Including Temperature, Salinity, and Oxygen Profiles from the Erika Dan Cruise of 1962. Woods Hole Oceanographic Institution Atlas Series 2: 24 pp. and 58 plates. ⟨25, 27, 28, 43, 54, 93⟩
- Wright, W. R., 1970. Northward transport of Antarctic Bottom Water in the western Atlantic Ocean. *Deep-Sea Research* 17:367–371. ⟨28⟩
- Wright, W. R., 1972. Northern sources of energy for the deep Atlantic. *Deep-Sea Research* 19:865–877. ⟨25⟩
- Wright, W. R., and C. E. Parker, 1976. A volumetric temperature/salinity census for the Middle Atlantic Bight. *Limnology and Oceanography* 21:563–571. ⟨233⟩
- Wright, W. R., and L. V. Worthington, 1970. The Water Masses of the North Atlantic Ocean; a Volumetric Census of Temperature and Salinity. *Serial Atlas of the Marine Environment*, Folio 19, American Geographical Society, New York, 8 pp. and 7 plates. ⟨42, 43, 44, 46, 47, 53, 54, 55, 58⟩
- Wu, J., 1969a. Mixed region collapse with internal wave generation in a density-stratified medium. *Journal of Fluid Mechanics* 35:531–544. ⟨253⟩
- Wu, J., 1969b. Wind stress and surface roughness at air-sea interface. *Journal of Geophysical Research* 74:444–455. ⟨488⟩
- Wunsch, C., 1967. The long-period tides. *Reviews of Geophysics* 5:447–476. ⟨339⟩
- Wunsch, C., 1969. Progressive internal waves on slopes. *Journal of Fluid Mechanics* 35:131–144. ⟨261, 270, 316, 332⟩
- Wunsch, C., 1970. On oceanic boundary mixing. *Deep-Sea Research* 17:293–301. ⟨260, 261, 334⟩
- Wunsch, C., 1972a. Temperature microstructure on the Bermuda slope with application to the mean flow. *Tellus* 24:350–367. ⟨261⟩
- Wunsch, C., 1972b. The spectrum from two years to two minutes of temperature in the main thermocline at Bermuda. *Deep-Sea Research* 19:577–593. ⟨270, 358, 363, 364⟩
- Wunsch, C., 1972c. Bermuda sea level in relation to tides, weather, and baroclinic fluctuations. *Reviews of Geophysics and Space Physics* 10:1–49. ⟨320, 321, 323, 351, 353, 357⟩
- Wunsch, C., 1975. Internal tides in the ocean. *Reviews of Geophysics and Space Physics* 13:167–182. ⟨293, 331, 337⟩
- Wunsch, C., 1976. Geographical variability of the internal wave field; a search for sources and sinks. *Journal of Physical Oceanography* 6:471–485. ⟨286, 339, 340⟩
- Wunsch, C., 1977. Response of an equatorial ocean to a periodic monsoon. *Journal of Physical Oceanography* 7:497–511. ⟨194, 524⟩
- Wunsch, C., 1978a. The general circulation of the North Atlantic west of 50°W determined from inverse methods. *Reviews of Geophysics and Space Physics* 16:583–620. ⟨91, 92, 343, 373, 397, 534⟩
- Wunsch, C., 1978b. Observations of equatorially trapped waves in the ocean: A review prepared for equatorial workshop, July, 1977. In *Review Papers of Equatorial Oceanography—FINE Workshop Proceedings*, Nova/N.Y.I.T. University Press, Fort Lauderdale, 37 pp. ⟨186⟩
- Wunsch, C., and J. Dahlen, 1970. Preliminary results of internal wave measurements in the main thermocline at Bermuda. *Journal of Geophysical Research* 75:5899–5908. ⟨364⟩
- Wunsch, C., and J. Dahlen, 1974. A moored temperature and pressure recorder. *Deep-Sea Research* 21:145–154. ⟨406⟩
- Wunsch, C., and E. M. Gaposchkin, 1980. On using satellite altimetry to determine the general circulation of the oceans with application to geoid improvement. *Reviews of Geophysics and Space Physics*. ⟨374, 428⟩
- Wunsch, C., and A. E. Gill, 1976. Observations of equatorially trapped waves in Pacific sea level variations. *Deep-Sea Research* 23:371–390. ⟨186, 191, 307, 308, 347, 352⟩
- Wunsch, C., D. V. Hansen, and B. D. Zetler, 1969. Fluctuations of the Florida Current inferred from sea level records. *Frederick C. Fuglister Sixtieth Anniversary Volume, Deep-Sea Research* 16 (Supplement): 447–470. ⟨117⟩
- Wunsch, C., and R. Hendry, 1972. Array measurements of the bottom boundary layer and the internal wave field on the continental slope. *Geophysical Fluid Dynamics* 4:101–145. ⟨332, 334, 337⟩
- Wunsch, C., and S. Webb, 1979. The climatology of deep ocean internal waves. *Journal of Physical Oceanography* 9:235–243. ⟨286, 291⟩
- Wunsch, C., and M. Wimbush, 1977. Simultaneous pressure, velocity and temperature measurements in the Florida Straits. *Journal of Marine Research* 35:75–104. ⟨117, 121, 347, 358, 372⟩
- Wüst, G., 1924. Florida—und Antillenstrom: eine hydrodynamische Untersuchung. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge*. A. Geographisch-naturwissenschaftliche Reihe, 12, 48 pp. ⟨113⟩
- Wüst, G., 1928. Der Ursprung der atlantischen Tiefenwasser. *Zeitschrift der Gesellschaft für Erdkunde zu Berlin. Sonderband zur Hundertjahrfeier der Gesellschaft*: 506–534. ⟨11⟩
- Wüst, G., 1929. Schichtung und Tiefenzirkulation des Pazifischen Ozeans. *Veröffentlichungen des Instituts für Meereskunde an der Universität Berlin, Neue Folge*. A. Geographisch-naturwissenschaftliche Reihe, 20, 63 pp. ⟨10⟩
- Wüst, G., 1933. Schichtung und Zirkulation des Atlantischen Ozeans. Das Bodenwasser und die Gliederung der Atlantischen Tiefsee. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff "Meteor" 1925–1927*, 6: 1st Part, 1, 106 pp. (*Bottom Water and the Distribution of the Deep Water of the Atlantic*, M. Slessers, translator, B. E. Olson, ed., 1967, U.S. Naval Oceanographic Office, Washington, D.C., 145 pp.; ⟨11, 29, 72, 82⟩)
- Wüst, G., 1934. Anzeichen von Beziehungen zwischen Bodenstrom und Relief in der Teifsee des Indischen Ozeans. *Die Naturwissenschaften* 22:241–244. ⟨10, 32⟩
- Wüst, G., 1935. Schichtung und Zirkulation des Atlantischen Ozeans. Die Stratosphäre. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff "Meteor" 1925–1927*, 6: 1st Part, 2, 180 pp. (*The Stratosphere of the Atlantic Ocean*, W. J. Emery, ed., 1978, Amerind, New Delhi, 112 pp.) ⟨11, 22, 25, 27, 43, 57, 70, 72, 74, 77, 78, 79, 82, 84, 93, 106⟩

- Wüst, G., 1938. Bodentemperatur und Bodenstrom in der atlantischen, indischen und pazifischen Tiefsee. *Gelands Beiträge zur Geophysik* 54:1–8. (10, 11, 28)
- Wüst, G., 1943. Der subarktische Bodenstrom in der westatlantischen Mulde. *Annalen der Hydrographie und Maritimen Meteorologie* 71:249–255. (72)
- Wüst, G., 1951. Über die Fernwirkungen antarktischer und nordatlantischer Wassermassen in den Tiefen des Weltmeeres. *Naturwissenschaftliche Rundschau, Jahrgang* 1951: 3, 97–108. (106)
- Wüst, G., 1955. Stromgeschwindigkeiten im Tiefen—und Bodenwasser des Atlantischen Ozeans auf Grund dynamischer Berechnung der Meteor-Profile der Deutschen Atlantischen Expedition 1925/27. *Papers in Marine Biology and Oceanography, Deep-Sea Research* 3 (Supplement): 373–397. (13)
- Wüst, G., 1964. The major deep-sea expeditions and research vessels 1873–1960—a contribution to the history of oceanography. *Progress in Oceanography* 2:1–52. (398)
- Wüst, G., and A. Defant, 1936. Atlas zur Schichtung und Zirkulation des Atlantischen Ozeans. Schnitte und Karten von Temperatur, Salzgehalt und Dichte. In *Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff "Meteor" 1925–1927*, 6: Atlas, 103 plates. (6, 7, 28, 43, 44, 75, 348)
- Wyrtki, K., 1961a. The flow of water into the deep sea basins of the western South Pacific. *Australian Journal of Marine and Freshwater Research* 12:1–16. (34, 35)
- Wyrtki, K., 1961b. The thermohaline circulation in relation to the general circulation in the oceans. *Deep-Sea Research* 8:39–64. (81, 449)
- Wyrtki, K., 1962. The oxygen minima in relation to ocean circulation. *Deep-Sea Research* 9:11–23. (434, 449)
- Wyrtki, K., 1971. *Oceanographic Atlas of the International Indian Ocean Expedition*. National Science Foundation, Washington, D.C., 531 pp. (25, 26, 29, 32, 33, 44, 55, 83, 85)
- Wyrtki, K., 1973a. An equatorial jet in the Indian Ocean. *Science* 181:262–264. (186, 192)
- Wyrtki, K., 1973b. Teleconnections in the equatorial Pacific Ocean. *Science* 180:66–68. (398)
- Wyrtki, K., 1974. Equatorial currents in the Pacific 1950 to 1970 and their relation to the trade winds. *Journal of Physical Oceanography* 4:372–380. (351, 357)
- Wyrtki, K., 1975a. Fluctuations of the dynamic topography in the Pacific Ocean. *Journal of Physical Oceanography* 5:450–459. (85, 91, 108, 351, 357)
- Wyrtki, K., 1975b. El Niño—the dynamic response of the Pacific Ocean to atmospheric forcing. *Journal of Physical Oceanography* 5:572–584. (192)
- Wyrtki, K., 1978. Lateral oscillations of the Pacific Equatorial Counter-current. *Journal of Physical Oceanography* 8:530–532. (427)
- Wyrtki, K., 1979. Sea level variations: monitoring the breadth of the Pacific. *EOS, Transactions of the American Geophysical Union* 60:25–27. (351, 398)
- Wyrtki, K., L. Magaard, and J. Hager, 1976. Eddy energy in the oceans. *Journal of Geophysical Research* 81:2641–2646. (71, 360, 361, 430)
- Wyrtki, K., D. McLain, and W. Patzert, 1977. Variability of the thermal structure in the central equatorial Pacific Ocean. *Hawaii Institute of Geophysics Report, HIG-77-1*, University of Hawaii, Honolulu, 75 pp. (184)
- Wyrtki, K., and G. Meyers, 1975. The trade wind field over the Pacific Ocean. Part I, the mean field and the mean annual variation. *Hawaii Institute of Geophysics Report, HIG-75-1*, University of Hawaii, Honolulu, 26 pp. (186, 187, 188)
- Yoshida, K., 1959. A theory of the Cromwell current and of the equatorial upwelling. *Journal of the Oceanographical Society of Japan* 15:154–170. (189, 192)
- Yoshida, K., 1961. Some calculations on the equatorial circulation. *Records of Oceanographic Works in Japan, New Series* 6:1, 101–105. (83)
- Yoshida, K., and T. Kidokoro, 1967. A subtropical counter-current (II)—a prediction of eastward flows at lower subtropical latitudes. *Journal of the Oceanographical Society of Japan* 23:231–246. (85)
- Young, R. E., and J. B. Pollack, 1977. A three-dimensional model of dynamical processes in the Venus atmosphere. *Journal of the Atmospheric Sciences* 34:1315–1351. (506)
- Zahel, W., 1970. Die Reproduktion gezeitenbedingter Bewegungsvorgänge im Weltozean mittels des hydrodynamisch-numerischen Verfahrens. *Mitteilungen des Instituts für Meereskunde der Universität Hamburg*, 17, 51 pp. (329)
- Zeilon, N., 1911. On tidal boundary-waves and related hydrodynamical problems. *Kungliga Svenska Vetenskapsakademiens Handlingar, Ny Föld* 47:4, 46 pp. (331)
- Zeilon, N., 1912. On the seiches of the Gullmar Fjord. With an introduction on the theory of seiches in branched bays. *Svenska Hydrografisk-Biologiska Kommissionens Skrifter* 5: 18 pp. (331)
- Zeilon, N., 1934. Experiments on boundary tides. A preliminary report. *Göteborgs Kungliga Vetenskaps—och Vitterhets-Samhällens Handlingar, Femten Földjen, Serien B* 3:10, 8 pp. (331)
- Zeskind, L. M., 1926. Instructions for tidal current surveys. *U.S. Coast and Geodetic Survey Special Publication No. 124*, 48 pp. (201)
- Zeskind, L. M., and E. A. Le Lacheur, 1926. Tides and currents in Delaware Bay and River. *U.S. Coast and Geodetic Survey Special Publication No. 123*, 122 pp. (200)
- Zetler, B., 1971. Radiational ocean tides along the coasts of the United States. *Journal of Physical Oceanography* 1:34–38. (294)
- Zetler, B., 1978. Tide predictions. In *Geophysical Predictions*, H. E. Landsberg, panel chairman, National Academy of Sciences, Washington, D.C., pp. 166–177. (318)
- Zilitinkevich, S. S., 1969. On the computation of the basic parameters of the interaction between the atmosphere and the ocean. *Tellus* 21:17–24. (502)
- Zilitinkevich, S. S., 1970. *Dinamika Pogranichnogo Sloya Atmosfery* (Dynamics of the Atmospheric Boundary Layer). Gidrometeorologicheskoe Izdatel'stvo, Leningrad, 291 pp. (502)
- Zimmerman, H. B., 1971. Bottom currents on the New England continental rise. *Journal of Geophysical Research* 76:5865–5876. (27, 121)

Zimmerman, J. T. F., 1978. Topographic generation of residual circulation by oscillatory [tidal] currents. *Geophysical and Astrophysical Fluid Dynamics* 11:35–47. (206)

Zimmerman, J. T. F., 1979. On the Euler-Lagrange transformation and the Stokes' drift in the presence of oscillatory and residual currents. *Deep-Sea Research* 26:505–520. (206)

Zubkovskii, S. L., and T. K. Kravchenko, 1967. Pryamye izmereniya nekotorykh kharakteristik atmosfernoi turbulentnosti v privodnom sloe. *Fizika Atmosfery i Okeana, Izvestiya Akademii Nauk SSSR* 3:127–135. (Direct measurements of some characteristics of atmospheric turbulence in the near-water layer. *Izvestiya, Academy of Sciences USSR, Atmospheric and Oceanic Physics* 3:73–77.) (489)