

DEEP TOW BIBLIOGRAPHY

- Spiess, F. N., H. W. Menard, and D. C. Krause. Some sources of sonar bearing errors. *USN J. Underw. Acoust.* 9 (2):259-268. (1959).
- Spiess, F. N. Detection of and by deep submarine Proc. Confer. on Deep Diving Submarines, NRC-CWW Report 0283. 1. (1960).
- Spiess, F. N., Method and apparatus for measuring accelerations in the ocean U. S. Patent 2,986,036, 1960.
- Fisher, F. H. and F. N. Spiess. FLIP - Floating Instrument Platform. *J. Acoust. Soc. Am.* 35 (10):1633-1644. (1963).
- Harrison, J. C. and F. N. Spiess. Tests of the La Coste and Romberg surface-ship gravity meter II. *J. Geophys. Res.* 68 (5):1431-1438. (1963).
- Spiess, F. N. El marco geofisico del golfo de California. *Sobretire del Boletin de la Sociedad Geologica Mexicana Tomo. XXVI (2):67-74.* (1963).
- Loughridge, M. S. Preliminary sea tests of snap-on cable fairings.. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-144. 1964.
- Mudie, J. D. Deep-towed proton magnetometer. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA, MPL TM-160. 1964.
- Spiess, F. N. and A. E. Maxwell. Search for the Thresher. *Science.* 145 (3630):349-355. (1964).
- Loughridge, M. S. Deep-towed echo sounding west of Island Kauai. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-159. 1965.
- Loughridge, M. S. and F. N. Spiess. Deeply-towed echo-sounder reconnaissance of a fleet tactical range site Proc. 2nd USN Symposium on Military Oceanography. 1:209-220. (1965).
- Mudie, J. D. and C. D. Lowenstein. On the optimization of transponder spacing for range-range navigation. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-154.1965
- Anderson, V. C., M. S. Loughridge, and J. D. Mudie. MPL participation in Sealab II. SIO Reference 66-3. (1966).
- Lowenstein, C. D. and M. S. Loughridge. On the optimization of transponder spacing for range-range navigation. Proc. Nat'l Marine Navigation Mtd., 312-317. 1966.
- Loughridge, M. S. and C. D. Lowenstein, Polynomial trend surface analysis, Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL Computer Memorandum 52. 1966.
- Lowenstein, C. D. Computations for transponder navigation. Proceedings of the National Marine Navigation Meeting: 305-311. (1966).

- McGehee, M. W. and D. E. Boegeman. MPL acoustic transponder. Rev. Sci. Instr. 37 (11):1450-1455. (1966).
- Miller, S. P., Program BOATNAV. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL Computer Memo 53, 1966.
- Mundy, C. S. and F. H. Fisher, Terminal end clamp for an armored electrical cable U. S. Patent 3,249,684, 1966.
- Spiess, F. N. The ocean environment. Astronautics and Aeronautics. 4 (4):40-45. (1966).
- Spiess, F. N. Underwater acoustic positioning: Applications. Proceedings of the 1st Marine Geodesy Symposium: 93-101. (1966).
- Spiess, F. N., M. S. Loughridge, M. S. McGehee, and D. E. Boegeman. An acoustic transponder system. J. Instit. Nav. 13 (2):154-161. (1966).
- Loughridge, M. S., Computation of two dimensional magnetic anomalies using program MAG2D. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL Computer Memorandum 59. 1967.
- Loughridge, M. S. and C. D. Lowenstein, SVEL-Program to compute sounding velocities from sound velocimeter data. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL Computer Memorandum 63, 1967.
- Spiess, F. N. Notes on side-looking sonar. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-185. 1967.
- Spiess, F. N. Deep Tow workbook. Technical Report. (1967).
- Spiess, F. N. Book Review: Ocean Acoustics (by Ivan Tolstoy and C. S. Clay McGraw-Hill, N.Y., 1966, 293 pp.). J. Franklin Institute. 283 (4):345-346. (1967).
- Spiess, F. N. Instrumenting the environment - marine physics. Tutorial Lecture Series. 13th Annual Technical Meeting, Washington, D.C., 10-12 April:27-32. (1967).
- Spiess, F. N., J. D. Mudie, and C. D. Lowenstein. Environmental limitations to deep sea search. Proc. 4th USN Symposium on Military Oceanography. 1:69-80. (1967).
- Atwater, T. M. and J. D. Mudie. Block faulting on the Gorda Rise. Science. 159 (3816):729-731. (1968).
- Loughridge, M. S. and F. N. Spiess. **Sound velocity corrections to base-line lengths of acoustic transponder nets.** Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA, 1968. MPL TM-187.
- Loughridge, M. S. and F. N. Spiess. Abyssal hill slope distributions and sonar bearing errors. SIO Reference 68-44. (1968).
- Luyendyk, B. P., J. D. Mudie, and C. G. A. Harrison. Lineations of magnetic anomalies in the Northeast Pacific observed near the ocean floor. J. Geophys. Res. 73 (18):5951-5957. (1968).
- McGehee, M. S., B. P. Luyendyk, and D. E. Boegeman. Location of an ancient roman shipwreck by modern acoustic techniques. 4th Annual MTS Conference:127-139. (1968).

- Spiess, F. N. and W. Whitney. Mt. Prospect, Coherence of signals received at widely-spaced bottom-mounted hydrophones. USN J. Underw. Acoust. 18 (3):403-408. (1968).
- Larson, L. R. and F. N. Spiess. Rebuttal to: "Magnetic observations in studies of sea-floor spreading" comments by William C. Kellogg on "East Pacific Rise Crest: A near-bottom geophysical profile" by R. L. Larson and F. N. Spiess, Science, 163, p. 68-71 3 January 1969). Science. 165 (3893):617-618. (1969).
- Larson, R. L. and F. N. Spiess. East Pacific Rise Crest: A near bottom geophysical profile. Science. 163 (3862):68-71. (1969).
- Lowenstein, C. D. Side-looking sonar navigation. Proc. ION National Marine Navigation Meeting, 2nd Symposim on Manned Deep Submergence Vehicles:173-186. (1969).
- Luyendyk, B. P. Origin of short-wavelength magnetic lineations observed near the ocean bottom. J. Geophys. Res. 47 (20):4869-4881. (1969).
- Mudie, J. D. Applications of seagoing computers. Undersea Technol. (Handbook Directory):A/3-A/7. (1969).
- Spiess, F. N. Quantitative scattering studies for optical sea floor search. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA, 1969. MPL TM-204.
- Spiess, F. N., B. P. Luyendyk, R. L. Larson, W. R. Normark, and J. D. Mudie. Detailed geophysical studies on the Northern Hawaiian arch using a deeply towed instrument package. Mar. Geol. 7:501-527. (1969).
- Spiess, F. N., B. P. Luyendyk, and M. S. Loughridge. Bottom slope distributions and implied acoustic bearing error in abyssal hill regions of the North Pacific. USN J. Underw. Acoust. 19 (2):183-196. (1969).
- Atwater, T. M. Implications of plate tectonics for the Cenozoic tectonic evolution of Western North America. Geol. Soc. Am. Bull. 81:3513-3535. (1970).
- Boegeman, D. E., High speed narrow band signal recognition circuit. U. S. Patent 3,517,214, 1970.
- Grow, J. A. and T. M. Atwater. Mid-tertiary tectonic transition in the Aleutian Arc. Notes and discussions. Geol. Soc. Am. Bull. 81:3715-3722. (1970).
- Larson, P. A., T. W. C. Hilde, R. L. Larson, and J. D. Mudie. Sea-floor spreading in the Gulf of California. EOS, Trans. Am. Geophys. Union. 51 (4):330. (1970).
- Larson, R. L. and F. N. Spiess. Slope distributions of the East Pacific Rise Crest. SIO Reference 70-8. (1970).
- Larson, R. L., F. N. Spiess, and F. N. Spiess. **Slope distributions of the East Pacific Rise Crest Oceanic environment.** (Academic Press Inc., New York, 1970).
- Lonsdale, P. Ocean floor mapping with "Deep Tow". Germany International Trade Fair. (1970).

- Luyendyk, B. P. Origin and history of abyssal hills in the Northeast Pacific Ocean. Geol. Soc. Am. Bull. 31:2237-2260. (1970).
- Mudie, J. D. Taking computers to sea. Mar. Technol. Soc. J. 1. (1970).
- Mudie, J. D., W. R. Normark, and E. J. J. Cray. Direct mapping of the sea floor using side-scanning sonar and transponder navigation. Geol. Soc. Am. Bull. 81:1547-1554. (1970).
- Normark, W. R. Growth patterns of deep-sea fans. Am. Assoc. Pet. Geol. Bull. 54 (11):2170-2195. (1970).
- Normark, W. R. Channel piracy on Monterey deep-sea fan. Deep-Sea Res. 17:837-846. (1970).
- Spiess, F. N., J. A. Grow, B. P. Luyendyk, and J. D. Mudie. SEVEN TOW, Leg 8, Cruise Report. SIO Reference 70-31. (1970).
- Spiess, F. N. and J. D. Mudie. **Small scale topographic and magnetic features.** (Interscience Publ. - Wiley & Sons., New York, 1970).
- Van den Akker, F., C. G. A. Harrison, and J. D. Mudie. Even more on the direct interpretation of magnetic anomalies. Earth Planet. Sci. Lett. 9:405-406. (1970).
- Larson, R. L. Near-bottom studies of the East Pacific Rise Crest. Geol. Soc. Am. Bull. 82:823-841. (1971).
- Mudie, J. D. and F. N. Spiess. Magnetic background near the sea floor. Magnetic Airborne Detector (MAD) Symposium:173-193. (1971).
- Mundy, C. S. and F. N. Spiess, Apparatus for retrieving oceanographic cable from the sea bottom. U. S. Patent 3,608,947, 1971.
- Natland, J. and P. Lonsdale. Volcanic breccias from Horizon Guyot. Riverside-Cordilleran Meeting. (1971).
- Normark, W. R. Mini-topography of the deep-sea fans: Geometric considerations for facies interpretations in turbidities. Soc. Econ., Paleont. and Mineral. Pacific Section, Geologic guidebook:22-36. (1971).
- Olsen, W. L. Use of deep tow to survey a submerged wreckage. SIO Reference 71-14. (1971).
- Spiess, F. N. Acoustic imaging. Proc. Society of Photo-Optical Instrumentation Engineers Underwater Photo-optical Instrumentation Applications. 24:107-115. (1971).
- Spiess, F. N. and C. D. Lowenstein. Seafloor pathfinding. Proc. 8th USN Symposium on Military Oceanography, 18-20 May. 1:89-102. (1971).
- Spiess, F. N. and S. M. Sanders. Survey of chase disposal area NITNATOW. SIO Reference 71-33. 20 pp. (1971).
- Boegeman, D. E., G. J. Miller, and W. R. Normark. Precise positioning for near-bottom equipment using a relay transponder. Mar. Geophys. Res. 1:381-396. (1972).
- Dangeard, L. and P. Lonsdale. Phenomenes d'erosion et courants profonds sur les flancs du "Guyot Horizon" dans le Pacifique Nord. C.R. Acad. Sci.:2752-2754. (1972).

- Johnson, D. A. Ocean floor erosion in the Equatorial Pacific. *Bull. Geol. Soc. Am.* 83:32121-3144. (1972).
- Klitgord, K. D., J. D. Mudie, and W. R. Normark. Magnetic lineations observed near the ocean floor and possible implications on the geomagnetic chronology of the Gilbert Epoch. *Geophys. J. R. Astr. Soc.* 28:35-48. (1972).
- Klitgord, K. D. and R. L. Parker. Magnetic upward continuation from an uneven track. *Geophysics.* 37 (4):662-668. (1972).
- Lonsdale, P., W. Normark, and W. A. Newman. Sedimentation and erosion on Horizon Guyot. *Geol. Soc. Am. Bull.* 83:289-316. (1972).
- Mudie, J. D., J. Grow, K. Klitgord, and P. Larson. Shipboard Report on Leg 2 of expedition SOUTH TOW: Studies in the Southeast Pacific. SIO Reference 72-66. (1972).
- Mudie, J. D., J. A. Grow, and J. S. Bessey. A near-bottom survey of lineated abyssal hills in the equatorial Pacific. *Mar. Geophys. Res.* 1:397-411. (1972).
- Normark, W. R. and D. J. W. Piper. Sediments and growth pattern of Navy deep-sea fan, San Clemente Basin, California Borderland. *J. Geol.* 80:198-223. (1972).
- Atwater, T. M. and J. D. Mudie. Detailed near-bottom geophysical study of the Gorda Rise. *J. Geophys. Res.* 78 (35):8665-8686. (1973).
- Ivers, W. D. and J. D. Mudie. Towing a long cable at slow speeds: A three-dimensional dynamic model. *Mar. Technol. Soc. J.* 7 (3):23-31. (1973).
- Ivers, W. D. and J. D. Mudie. Simulation studies of the response of a deeply towed vehicle. SIO Reference 73-31. (1973).
- Klitgord, K. D., J. D. Mudie, P. A. Larson, and J. A. Grow. Fast sea-floor spreading on the Chile Ridge. *Earth Planet. Sci. Lett.* 20:93-99. (1973).
- Lonsdale, P. Cruise Report, CATO Leg 3. SIO Reference 73-19. 1-29. (1973).
- Lonsdale, P. F. ***Sea-Floor Morphology.*** (CRM Books, 1973).
- Lonsdale, P. F., R. C. Tyce., and F. N. Spiess. ***Near-bottom acoustic observations of abyssal topography and reflectivity.*** (Plenum Publishing, New York, 1973).
- Spiess, F. N. Book review: *Sonographs of the Sea Floor* (by R. H. Belderson, N. H. Kenyon, A. H. Stride, A. R. Stubbs, Elsevier Sci. Publ. Co., Amsterdam, 1972, 200 pp.). *J. Geochem. Exploration.* 2:302-303. (1973).
- Spiess, F. N., P. F. Lonsdale, R. C. Tyce, and J. D. Mudie. Shipboard Report on Leg 10 of expedition SOUTH TOW. SIO Reference 73-10. 17 pp. (1973).
- Spiess, F. N., P. F. Lonsdale, R. C. Tyce., and J. D. Mudie. Cruise Report: SOUTH TOW, Leg 10. SIO Reference 73-10. 1-18. (1973).
- Spiess, F. N., B. Malfait, P. F. Lonsdale, and R. C. Tyce. Shipboard Report on Leg 5 of expedition SOUTH TOW. SIO Reference 73-1. (1973).
- Spiess, F. N. and R. C. Tyce. MPL Deep Tow instrumentation system. SIO Reference 73-4. (1973).

- Detrick, R. S. Fracture Zone A, Mid-Atlantic Ridge 37° N: A near-bottom geophysical study. SIO Reference 74-26. (1974).
- Detrick, R. S., D. L. Williams, J. D. Mudie, and J. G. Sclater. The Galapagos spreading centre: bottom-water temperatures and the significance of geothermal heating. *Geophys. J. R. Astron. Soc.* 38:627-637. (1974).
- Flood, R. D. and C. D. Hollister. Current-controlled topography on the continental margin off the eastern United States. *The Geology of Continental Margins*:197-205. (1974).
- Hollister, C. D., R. D. Flood, D. A. Johnson, P. F. Lonsdale, and J. B. Southard. Abyssal furrows and hyperbolic echo traces on the Bahama Outer Ridge. *Geology*. 2:395-400. (1974).
- Hollister, C. D., D. A. Johnson, and P. F. Lonsdale. Current-controlled abyssal sedimentation: Samoan Passage, Equatorial West Pacific. *J. Geol.* 82 (3):275. (1974).
- Klitgord, K. D. and J. D. Mudie. The Galapagos Spreading Centre: A near-bottom geophysical survey. *Geophys. J. R. Astron. Soc.* 38:563-586. (1974).
- Klitgord, K. D., J. D. Mudie, J. L. Bischoff, and T. L. Henyey. Magnetic anomalies in the Northern and Central Gulf of California. *Geol. Soc. Am. Bull.* 85:815-820. (1974).
- Larson, R. L., P. A. Larson, J. D. Mudie, and F. N. Spiess. Models of near-bottom magnetic anomalies on the East Pacific Rise Crest at 21° N. *J. Geophys. Res.* 79 (17):2686-2689. (1974).
- Lonsdale, P. and B. Malfait. Abyssal dunes of foraminiferal sand on the Carnegie Ridge. *Geol. Soc. Am. Bull.* 85 (11):1697-1712. (1974).
- Lonsdale, P. F. and J. B. Southard. Experimental erosion of North Pacific red clay. *Mar. Geol.* 17:M51-M60. (1974).
- Miller, S. P. Survey of the Blackfin site. SIO Reference 74-35. (1974).
- Miller, S. P., G. J. Miller, and J. D. Mudie. MPL Deep Tow IBM 1800 sea going computer system. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-242. 1974.
- Normark, W. R. Submarine canyons and fan valleys: factors affecting growth patterns of deep-sea fans. ***Modern and ancient Geosynclinal sedimentation***, R. H. Dott. and R. H. Shaver, Ed. (Tulsa, Okla., Soc. of Economic Paleontologists and Mineralogists, 1974), pp. 56-68.
- Parker, R. L. and S. P. Huestis. The inversion of magnetic anomalies in the presence of topography. *Geophys. J. Royal Astron. Soc.* 79:1587-1593. (1974).
- Reid, J. L. and P. F. Lonsdale. On the flow of water through the Samoan Passage. *J. Phys. Oceanogr.* 4 (1):58-73. (1974).
- Silver, E. A. Detailed near-bottom geophysical profile across the continental slope off northern California. *J. Research, US Geological Survey.* 2:563-567. (1974).
- Spiess, F. N. ***Book Review: The Detection of Fish (by D. Cushing)***, vol. 184, (1974).

- Spiess, F. N. Recovery of equipment from the ocean floor. *Ocean Eng.* 2:243-249. (1974).
- Anderson, R. N., D. A. Clague, K. D. Klitgord, M. Marshall, and R. K. Nishimori. Magnetic and petrologic variations along the Galapagos spreading center and their relation to the Galapagos melting anomaly. *Geol. Soc. Am. Bull.* 86:683-694. (1975).
- Blakely, R. J., K. D. Klitgord, and J. D. Mudie. Analysis of marine magnetic data. *Reviews of Geophysics and Space Physics.* 13 (3):182-185. (1975).
- Crane, K. 1975 Calibration of the MPL oscillating quartz crystal temperature sensor. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-267. 1975.
- Crane, K. Report on Leg 1B of expedition COCOTOW observations at the East Pacific Rise-Siqueiros Transform fault intersection. SIO Reference 75-27. (1975).
- Klitgord, K. D., J. D. Mudie, S. P. Huestis, and R. L. Parker. An analysis of near-bottom magnetic anomalies: Sea-floor spreading and the magnetized layer. *Geophys. J. R. Astron. Soc.* 43:387-424. (1975).
- Lonsdale, P. Hydrographic Observations on Expedition COCOTOW. Technical Cruise Report to Ecuadorian Government. (1975).
- Lonsdale, P. Sedimentation and tectonic modification of the Samoan Archipelagic Apron. *Bull. Am. Assoc. Petrol. Geol.* 59 (5):780-798. (1975).
- Lonsdale, P. Detailed abyssal sedimentation studies in the Panama Basin: Cruise report of Expedition COCOTOW, Legs 2b and 3. SIO Reference 75-4. 1-17. (1975).
- Lonsdale, P., F. N. Spiess, and J. D. Mudie. Investigation of the fine scale aspects of the deep sea floor. (1975).
- Macdonald, K., B. P. Luyendyk, J. D. Mudie, and F. N. Spiess. Near-bottom geophysical study of the Mid-Atlantic Ridge Median Valley near lat 37°N: Preliminary observations. *Geology*:211-215. (1975).
- Miller, S. P. Survey of the Blackfin site, Part II. SIO Reference 75-19. (1975).
- Mudie, J. D. and W. D. Ivers. Simulation studies of the response of a deeply towed vehicle to various towing ship maneuvers. *Ocean Eng.* 3:37-46. (1975).
- Pavlicek, F., D. E. Boegeman, and F. N. Spiess. MPL calibration transponder. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-266. 1975.
- Spiess, F. N., C. D. Lowenstein, D. E. Boegeman, and J. D. Mudie. High resolution sonars deep in the ocean. *USN J. Underw. Acoust.* 25 (1):21-35. (1975).
- Crane, K. The intersection of the Siqueiros Transform Fault and the East Pacific Rise. *Marine Geology.* 21:25-46. (1976).
- Hess, G. R. and W. R. Normark. Holocene sedimentation history of the major fan valleys of Monterey fan. *Mar. Geol.* 22:233-250. (1976).

- Hollister, C. D., J. B. Southard, R. D. Flood, and P. F. Lonsdale. *Flow Phenomena in the Benthic Boundary Layer and bed forms beneath deep-current systems*. In: *The Benthic Boundary Area* (Plenum Publishing Co., New York, 1976). Pp. 183,204.
- Johnson, D. A. and P. F. Lonsdale. Erosion and sedimentation around Mytilus Seamount, New England Continental Rise. *Deep-Sea Res.* 23:429-440. (1976).
- Klitgord, K. D. Sea floor spreading: the central anomaly magnetisation high. *Earth and Planet. Sci. Letts.* 29:201-209. (1976).
- Lonsdale, P. Abyssal circulation of the southeastern Pacific and some geological implications. *J. Geophys. Res.* 81 (6):1163-1176. (1976).
- Luyendyk, B. P. and K. C. Macdonald. Spreading center terms and concepts (FAMOUS RIFT). *Geology.* 4:369-370. (1976).
- Macdonald, K. C. Geomagnetic reversals and the deep drill hole at DSDP site 332. *J. Geophys. Res.* 81 (23). (1976).
- Macdonald, K. C. and B. P. Luyendyk. Deep-tow studies of the structure of the Mid-Atlantic Ridge Crest near 37°N (FAMOUS). *Geol. Soc. Am. Bull.* 88:621-636. (1976).
- Macdonald, K. C. and F. N. Spiess. High resolution geophysical studies of the Cocos and Rivera plate boundaries. *CIBCASIO Trans. (Centro de Investigaciones Biologicas and Scripps Institution of Oceanography).* 2:79-117. (1976).
- Mayer, L. Narrative for Station 21, Pleiades Expedition, Leg 04, MN76-01 R/V MELVILLE
Technical Report No. 15. Manganese Nodule Project, Seabed Assessment Program (IDOE/NSF). 24-39. (1976).
- Normark, W. R. Delineation of the main extrusion zone of the East Pacific Rise at lat 21°N. *Geology.* 4:681-685. (1976).
- Normark, W. R. and F. N. Spiess. Erosion on the Line Islands Archipelagic Apron: Effect of small-scale topographic relief. *Bull. Geol. Soc. Am.* 87:286-296. (1976).
- Paluzzi, P. R., W. R. Normark, G. R. Hess, H. D. Hess, and M. J. Cruickshank. Computer image processing in marine resource exploration. . *Proc. Oceans '76 MTS-IEEE:4D-1-4D-10.* (1976).
- Spiess, F. N. ***Unconventional vehicles for ocean research.*** (Office of Naval Research, 1976).
- Spiess, F. N. and Greenslate. Pleiades expedition - Leg 04 MN 76-01 - R/V MELVILLE - Preliminary cruise report - Honolulu 21 August 1976 to San Diego 23 September 1976. IDOE-NSF Technical Report No. 15. (1976).
- Spiess, F. N., C. D. Lowenstein, D. E. Boegeman, and J. D. Mudie. Fine scale mapping near the deep sea floor. 76 CH 1118-90EC. *Oceans '76, 2nd Annual Combined Conf. MTS-IEEE:8A - 8A-9.* (1976).
- Tyce, R. C. Near-bottom observations of 4 kHz acoustic reflectivity and attenuation. *Geophysics.* 41 (4):673-699. (1976).

- Crane, K. and W. R. Normark. Hydrothermal activity and crestal structure of the East Pacific Rise at 21° N. *J. Geophys. Res.* 82 (33):5336-5348. (1977).
- Lonsdale, P. Clustering of filter-feeding macrobenthos near abyssal hydrothermal vents at oceanic spreading centre. *Deep-Sea Res.* 24:857-863. (1977).
- Lonsdale, P. Deep-tow observations at the mounds abyssal hydrothermal field, Galapagos Rift. *Earth Planet. Sci. Lett.* 36:92-110. (1977).
- Lonsdale, P. Structural geomorphology of a fast-spreading rise crest: the East Pacific Rise near 3°25'S. *Mar. Geophys. Res.* 3 (3):251-293. (1977).
- Lonsdale, P. Abyssal pahoehoe with lava coils at the Galapagos Rift. *Geology.* 5:147-152. (1977).
- Lonsdale, P. Inflow of bottom water to the Panama Basin. *Deep-Sea Res.* 24:1065-1101. (1977).
- Lonsdale, P. and F. N. Spiess. Abyssal bedforms explored with a deeply towed instrument package. *Mar. Geol.* 23:57-75. (1977).
- Luyendyk, B. P. and K. C. Macdonald. Physiography and structure of the FAMOUS Rift Valley inner floor observed with a deeply-towed instrument package. *Geol. Soc. Am. Bull.* 88:648-663. (1977).
- Macdonald, K. C. Near-bottom magnetic anomalies, asymmetric spreading, oblique spreading, and tectonics of the Mid-Atlantic Ridge near 37°N. *Geol. Soc. Am. Bull.* 88:541-555. (1977).
- Mayer, L. and R. C. Tyce. A propellor-driven deep-sea *in situ* filtration system. SIO Reference 77-17. (1977).
- Miller, S. P. The validity of geological interpretations of marine magnetic anomalies. *Geophys. J. R. Astr. Soc.* 50:121. (1977).
- Miller, S. P. The size distribution of side-looking sonar targets. SIO Reference 76-23. (1977).
- Tyce, R. C. Toward a quantitative near-bottom seismic profiler. *Ocean Eng.* 4:113-140. (1977).
- Weiss, R. F., P. Lonsdale, J. E. Lupton, A. E. Bainbridge, and H. Craig. Hydrothermal plumes in the Galapagos Rift. *Nature.* 267:600-603. (1977).
- Berger, W. H. and L. A. Mayer. Deep-sea carbonates: Acoustic reflectors and lysocline fluctuations. *Geology.* 6:11-15. (1978).
- Crane, K. Structure and tectonics of the Galapagos Inner Rift, 80°. *J. Geol.* 86:715-730. (1978).
- Lonsdale, P. Ecuadorian subduction system. *Am. Assoc. Petrol. Geol. Bull.* 62 (12):2454-2477. (1978).
- Lonsdale, P. Near-bottom reconnaissance of a fast-slipping transform fault zone at the Pacific-Nazca plate boundary. *J. Geol.* 86 (4):451-472. (1978).
- Lonsdale, P. Bedforms and the benthic boundary layer in the North Atlantic: A Report of INDOMED Leg 11. SIO Reference 78/30. 1-15. (1978).
- Lonsdale, P. and K. D. Klitgord. Structure and tectonic history of the eastern Panama Basin. *Geol. Soc. Am. Bull.* 89:981-999. (1978).
- Macdonald, K. C. and T. M. Atwater. Evolution of rifted ocean ridges. *Earth Planet. Sci. Lett.* 39:319-327. (1978).

- Normark, W. R. Fan-valleys, channels and depositional lobes on modern submarine fans: Characters for recognition of sandy turbidite environments. *Am. Assoc. of Petrol. Geol. Bull.* 62:912-931. (1978).
- Normark, W. R., T. R. Alpha, G. R. Hess, G. S. Lichtman, and C. E. Gutmacher. The crest of the East Pacific Rise near the mouth of the Gulf of California. USGS Open File Report 78-350. (1978).
- Normark, W. R., G. R. Hess, and F. N. Spiess. Mapping of small scale (outcrop-size) sedimentological features on modern submarine fans. *Offshore Technology Conference*:593-598. (1978).
- Shih, J. S. F., T. Atwater, and M. McNutt. A near-bottom geophysical traverse of the Reykjanes Ridge. *Earth and Planet. Sci. Letts.* 39:75-83. (1978).
- Spiess, F. N. Composite aperture side looking sonar. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. MPL TM-303. 1978.
- Spiess, F. N. Book Review: *Fundamentals of Marine Acoustics* (by J. W. Caruthers Published by Elsevier Scientific Publishing Co., Amsterdam, 1977, 154 pp.). *J. Acoust. Soc. Am.* 64 (3):959. (1978).
- Spiess, F. N. Geodetic measurements at sea floor spreading centers. *Proc. 9th Geodesy/Solid Earth and Ocean Physics (GEOP) Research Conference.* OSU-DGS No. 280:131-136. (1978).
- Spiess, F. N., P. L. F., M. Bender, D. Kadko, J. Zampol, and I. Ford. MANOP Site Surveys, Sites M and H. A Report of INDOMED Leg 1. URI Publication. (1978).
- Spiess, F. N., C. D. Lowenstein, and D. E. Boegeman. Fine grained deep ocean survey techniques. *Offshore Technology Conference.* OTC 3135:715-725. (1978).
- Crane, K. Hydrothermal stress drops and convective patterns at three mid-ocean spreading centers. *Tectonophysics.* 55:215-238. (1979).
- Crane, K. The Galapagos Rift at 86°W: Morphological wave forms: evidence for a propagating rift. *Geophysical Res.* 84:6011-6018. (1979).
- Field, M. E. and S. M. Clarke. Small-scale slumps and slides and their significance for basin slope processes, southern California boarderland. ***Geology of continental slopes***, L. J. Doyle and O. H. Pilkey, Eds. (Tulsa, Okla., Soc. of Economic Paleontologists and Mineralogists, 1979), pp. 223-230.
- Kastens, K. A., K. C. Macdonald, and K. Becker. The Tamayo Transform Fault in the mouth of the Gulf of California. *Mar. Geophys. Res.* 4:129-151. (1979).
- Lonsdale, P. A deep-sea hydrothermal site on a strike-slip fault. *Nature.* 281:531-534. (1979).
- Lonsdale, P., R. Flood, and C. D. Hollister. Disruption of Feni Ridge sediment drift by debris flows from Rockall Bank. *Mar. Geol.* 32:311-334. (1979).
- Lonsdale, P. and C. D. Hollister. Cut-offs at an abyssal meander. *Geology.* 7 (12):597-601. (1979).

- Lonsdale, P. and C. D. Hollister. A near-bottom traverse of Rockall Trough: Hydrographic and geologic inferences. *Oceanologica Acta*. 2 (1):91-105. (1979).
- Lonsdale, P. and A. Shor. The oblique intersection of the Mid-Atlantic Ridge and Charlie-Gibbs transform fault. *Tectonophysics*. 54:195-209. (1979).
- Lonsdale, P. F. and F. N. Spiess. A pair of young cratered volcanoes on the East Pacific Rise. *J. Geol.*(87):157-173. (1979).
- Luyendyk, B. P. Is magnetic secular variation recorded in the ocean crust: Analysis of deep towed magnetic anomalies measured on Cruises Tow Two and Seven Tow. SIO Reference 79-20. (1979).
- Macdonald, K. C., K. Kastens, F. N. Spiess, and S. P. Miller. Deep Tow studies of the Tamayo Transform Fault. *Mar. Geophys. Res.* 4:37-70. (1979).
- Mayer, L. A. Deep sea carbonates: Acoustic, physical and stratigraphic properties. *J. Sediment. Petrol.* 49 (3):0819-0836. (1979).
- Mayer, L. A. The origin of fine scale acoustic stratigraphy in deep-sea carbonates. *J. Geophys. Res.* 84 (B11):6177-6184. (1979).
- Ryan, W. B. F., K. A. Kastens, W. R. Normark, D. J. W. Piper, and G. R. Hess. Distributary channels, sand lobes and mesotopography of Navy Submarine Fan, California borderland with applications to ancient fan sediments. *Sedimentology*. 26:749-774. (1979).
- Spiess, F. N. (Chairman), W. Bascom, R. R. Colwell, J. Craven, and R. C. Vetter. Oceanlab concept review. Report of a study by a subcommittee of the Ocean Sciences Board, Assembly of Mathematical and Physical Sciences, National Research Council. 129 pp. (1980).
- Embley, R. W., P. J. Hoose, P. Lonsdale, L. Mayer, and B. E. Tucholke. Furrowed mud waves on the western Bermuda Rise. *Geol. Soc. Am. Bull.* 91:731-740. (1980).
- Ford, G. A. and W. R. Normark. Map showing a deep-tow geophysical study of the north end of the San Clemente fault, California borderland. USGS Mis., Field Studies Map MP-1230. (1980).
- Hess, G. R., B. Lawhead, G. S. Lichtman, K. C. Macdonald, S. M. Miller, W. R. Normark, and F. N. Spiess. Fine scale bathymetry used for submersible studies of the East Pacific Rise. Open File 80-542.4 pp + 2 maps. (1980).
- Lonsdale, P. Ecuadorian Subduction System: Reply. *Am. Assoc. Petrol. Geol. Bull.* (1980).
- Lonsdale, P. Manganese-nodule bedforms and thermohaline density flows in a deep-sea valley on Carnegie Ridge, Panama Basin. *J. Sediment. Petrol.* 50 (4):1033-1048. (1980).
- Lonsdale, P., J. Bischoff, V. M. Burns, M. Kastner, and R. Sweeney. A high-temperature hydrothermal deposit on the seabed at a Gulf of California spreading axis. *Earth Planet. Sci. Lett.* 49:8-20. (1980).
- Lonsdale, P. and D. Fornari. Geology of Malpelo Ridge, Panama Basin. *Mar. Geol.* 36:65-83. (1980).

- Lonsdale, P. and S. Smith. "Lower insular rise hills" shaped by a bottom boundary current in the mid-Pacific. *Mar. Geol.* 34:M19-M25. (1980).
- Lonsdale, P. and F. N. Spiess. ***Deep-tow observations at the crest of the East Pacific Rise near 8°45'N***, vol. 54. (U.S. Government Printing Office, Washington, D.C., 1980).
- Lowenstein, C. D., K. A. Kastens, and F. N. Spiess. Display processing for side-scan sonar images. *Offshore Technology Conference*. OTC 3681:49-53. (1980).
- Lupton, J. E., G. P. Klinkhamer, W. R. Normark, R. Haymon, K. C. Macdonald, R. F. Weiss, and G. Craig. Helium-3 and manganese at the 21°N East Pacific Rise hydrothermal site. *Earth and Planet. Sci. Letts.* 50:115-127. (1980).
- Macdonald, K. C., K. Becker, F. N. Spiess, and R. D. Ballard. Hydrothermal heat flux of the "black smoker" vents on the East Pacific Rise. *Earth Plant. Sci. Lett.* 48:1-7. (1980).
- Macdonald, K. C., S. P. Miller, S. P. Huestis, and F. N. Spiess. Three-dimensional modelling of a magnetic reversal boundary from inversion of Deep-Tow measurements. *J. Geophys. Res.* 85 (B7):3670-3680. (1980).
- Malfait, B. T. and T. H. van Andel. A modern oceanic hardground on the Carnegie Ridge in the eastern equatorial Pacific. *Sedimentology.* 27:467-496. (1980).
- McCave, I. N., P. Lonsdale, C. D. Hollister, and W. D. Gardner. Sediment transport over the Hatton and Gardar contourite drifts. *J. Sediment. Petrol.* 50 (4):1049-1062. (1980).
- Mudie, J. D. and K. A. Kastens. Computer aided piloting of a deeply towed vehicle. *Ocean. Eng.* 7:743-754. (1980).
- Normark, W. R. Definition of the plate boundary along the East Pacific Rise off Mexico. *Marine Geodesy.* 4:290-43. (1980).
- Normark, W. R., T. R. Alpha, and G. R. Hess. Geomorphic features on Navy submarine fan, California continental borderland. *USGS Misc. Field Studies Map*, MF-1135. (1980).
- Normark, W. R., G. A. Ford, and T. E. Chase. Trackline map and acoustic profiles showing deep-tow geophysical data from the northern segment of the San Clemente fault, California borderland. *USGS Open file* 80-932. (1980).
- Normark, W. R., G. R. Hess, D. A. V. Stow, and A. J. Bowen. Sediment waves on the Monterey fan levee: A preliminary physical interpretation. *Marine Geology.* 37:1-18. (1980).
- Shor, A., C. Hollister, P. Lonsdale, and D. Spencer. Charlie-Gibbs fracture zone: bottom-water transport and its geological effects. *Deep-Sea Res.* 27A:325-345. (1980).
- Spiess, F. N. ***Some origins and perspectives in deep-ocean instrumentation development***. (Springer-Verlag, New York, 1980).
- Spiess, F. N. East Pacific Rise: Hot springs and geophysical experiments. *Science.* 207 (4438):1421-1432. (1980).

- Spiess, F. N. Ocean acoustic remote sensing of the sea floor. NOAA Workshop on Ocean Acoustic Remote Sensing. II:11-1 - 11-38. (1980).
- Spiess, F. N. Guest Editorial. *Marine Geodesy*. 3 (1):1-2. (1980).
- Spiess, F. N. Acoustic techniques for marine geodesy. *Marine Geodesy*. 3 (1):13-27. (1980).
- Spiess, F. N. Marine geodesy in relation to plate tectonics. Applications of Marine Geodesy in Support of National Objectives in Ocean Science, Engineering and Operations. CEGS-TR-80-1:B-34 - B-36. (1980).
- Spiess, F. N., Apparatus and method for supporting oceanographic equipment at selected ocean depths. U. S. Patent 4,215,572, 1980.
- Spiess, F. N., C. D. Lowenstein, D. E. Boegeman, and F. V. Pavlicek, Precision transponder and method for communication therewith. U. S. Patent 4,214,314, 1980.
- Tyce, R. C., L. A. Mayer, and F. N. Spiess. Near-bottom seismic profiling: High lateral variability, anomalous amplitudes, and estimates of attenuation. *J. Acoust. Soc. Am.* 68 (5):1391-1402. (1980).
- Wishner, K. F. The biomass of the deep-sea benthopelagic plankton. *Deep-Sea Res.* 27:203-216. (1980).
- Wishner, K. F. Aspects of the community ecology of deep-sea, benthopelagic plankton, with special attention to Gymnopleid copepods. *Mar. Biology*. 60:179-187. (1980).
- Wishner, K. F. Near bottom scatterers in the Ecuador Trench. *Deep Sea Research*. 27:217-223. (1980).
- Alexander, C. M. The complex vibrations and implied drag of a long oceanographic wire in cross-flow. *Ocean Engr.* 8 (4):379-406. (1981).
- Aubouin, J., J. F. Stephan, V. Renard, J. Roump, and P. Lonsdale. Subduction of the Cocos plate in the Mid-America Trench. *Nature*. 294:146-150. (1981).
- Flood, R. D. Longitudinal triangular ripples in the Blake-Bahama Basin. *Marine Geology*. 39:M13-20. (1981).
- Fyfe, W. S. and P. Lonsdale. ***Hydrothermal activity. I. Upper Mantle and Crust***, vol. 7. (John Wiley & Sons, Inc., 1981).
- Kastens, K. A. and M. B. Cita. Tsunami-induced sediment transport in the abyssal Mediterranean Sea. *Geol. Soc. of Amer. Bull.* 92 (Part I):845-857. (1981).
- Lonsdale, P. Drifts of reworked pelagic sediment in the southwest Pacific. *Mar. Geol.* 43:153-193. (1981).
- Lonsdale, P., C. D. Hollister, and L. Mayer. Erosion and deposition in interplain channels of the Maury Channel System, Northeast Atlantic. *Oceanologica Acta*. 4 (2):185-201. (1981).
- Mayer, L. A. Erosional troughs in deep-sea carbonates and their relationship to basement structure. *Mar. Geol.* 39:59-80. (1981).
- Spiess, F. N. Acoustical oceanography. Sesquicentennial Symposium Proceedings, Naval Oceanography, 8-11 May. (1981).

- Spiess, F. N. RUWS search. Final report for Grant period 1 March 1980 - 31 October 1980. (1981).
- Spiess, F. N. and J. K. Orzech. Location of ancient amphorae in the deep waters of the Eastern Mediterranean Sea by the deep tow vehicle. Proc. 10th Conference on Underwater Archaeology(1):149-159. (1981).
- Lonsdale, P., R. Batiza, and T. Simkin. Metallogenesis at seamounts on the East Pacific Rise. Mar. Technol. Soc. J. 16:54-61. (1982).
- McCave, I. N., C. D. Hollister, E. P. Laine, P. Lonsdale, and M. J. Richardson. Erosion and deposition on the eastern margin of the Bermuda Rise in the late Quaternary. Deep-Sea Res. 29 (5A):535-561. (1982).
- Moore, G., P. Lonsdale, and R. von Huene. Near-bottom observations of the Middle America Trench off Guatemala. Initial Reports of the Deep Sea Drilling Project. 67:707-718. (1982).
- Simoneit, B. R. T. and P. Lonsdale. Hydrothermal petroleum in mineralized mounds at the seabed at Guaymas Basin. Nature. 295:198-202. (1982).
- Spiess, F. N. and P. F. Lonsdale. Deep tow rise crest exploration techniques. Mar. Technol. Soc. J. 16 (3):67-74. (1982).
- Lonsdale, P. East Pacific Rise hydrogeology site surveys. Joint Oceanographic Institutions Final Technical Report for the Period August 1, 1981 through May 31, 1983. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. (1983).
- Spiess, F. N. and V. C. Anderson, Wide swath precision echo sounder, in *U.S. Patent 4,400,803*, 1983.
- Spiess, F. N., C. S. Cox, E. E. Hays, R. P. Porter, and F. A. Roberts. Seafloor referenced positioning: Needs and opportunities. Panel on Ocean Bottom Positioning of the National Research Council's Committee on Geodesy: 54. (1983).
- Kastens, K. and F. N. Spiess. Dissolution and collapse features on the Eastern Mediterranean Ridge. Mar. Geol. 56:181-193. (1984).
- Kastens, K. A. Earthquakes as a triggering mechanism for debris flows and turbidites on the Calabrian Ridge. Marine Geology. 55:13-33. (1984).
- Lichtman, G. S., W. R. Normark, and F. N. Spiess. Comparative photogeologic study of a small segment of the East Pacific Rise axis near 21°N latitude. Geol. Soc. Am. Bull. 95:743-752. (1984).
- Lichtman, G. S., W. R. Normark, and F. N. Spiess. Photogeologic study of a small segment of the East Pacific Rise axis near 21°N latitude. Geol. Soc. Am. Bull. 95:743-752. (1984).
- Lonsdale, P. F. Hot vents and hydrocarbon seeps in the Gulf of California. Oceanus. 27 (3):21-24. (1984).
- Macdonald, K. C. VEMA Transform Fault: Structure and tectonics. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. Final Report to NSF OCE80-18433. (1984).

- Spiess, F. N., R. Hessler, G. Wilson, M. Weydert, and P. Rude. Echo I Cruise Report. SIO Reference 84-3. Marine Physical Laboratory, Scripps Institution of Oceanography, San Diego, CA. 22. (1984).
- Spiess, F. N. and M. Weydert. Cruise report: RAMA Leg 1 MANOP sites C&R. SIO Reference 84-8. (1984).
- Barr, M., C. C. Counselman, III, J. Levine, K. C. McNally, M. K. McNutt, B. K. Meade, R. J. Mitchell, R. H. Rapp, P. Vanicek, F. N. Spiess, J. H. Whitcomb, and O. W. Williams. Geodesy: A look to the future – Committee on Geodesy (B. D. Tapley. (chairman)]. (National Research Council, National Academy Press, Washington, D.C., 1985).
- Hey, R. N. Galapagos Rift System: High resolution study of propagating rifts. Report. SIO, UCSD. (1985).
- Koski, R. A., P. F. Lonsdale, W. C. Shanks, M. Berndt, and S. S. Howe. Mineralogy and geochemistry of a sediment-hosted hydrothermal sulfide deposit from the Southern Trough of Guaymas Basin, Gulf of California. *J. Geophys. Res.* 90 (B8):6695-6707. (1985).
- Lonsdale, P. and K. Becker. Hydrothermal plumes, hot springs, and conductive heat flow in the Southern Trough of Guaymas Basin. *Earth Planet. Sci. Lett.* 73:211-225. (1985).
- Merewether, R., M. Olsson, and P. Lonsdale. Acoustically detected hydrocarbon plumes rising from 2 kilometer depths in Guaymas Basin, Gulf of California. *J. Geophys. Res.* 90 (B4):3075-3085. (1985).
- Miller, S. P., K. C. Macdonald, and P. F. Lonsdale. Near bottom magnetic profile across the Red Sea. *Marine Geophys. Res.* 7:401-418. (1985).
- Seymour, R. J. and F. N. Spiess. Large column-supported floating platforms. In: *Ocean space Utilization '85, Proc. Inter. Symposium, Nihon University*:629-636. (1985).
- Spiess, F. N. Analysis of a possible sea floor strain measurement system. *Marine Geodesy.* 9:385-398. (1985).
- Spiess, F. N. Sub-oceanic geodetic measurements. *Special Issue of AGU/IEEE.* GE-23:502-510. (1985).
- Weydert, M. Measurements of the acoustic backscatter of manganese nodules. *J. Acoust. Soc. Am.* 78:2115-2121. (1985).
- Spiess, F. N. Analysis of a possible sea floor strain measurement system. *Marine Geodesy.* 9 (4):385-398. (1985).
- Kastens, K. A., K. C. Macdonald, S. P. Miller, and P. J. Fox. Deep-Tow studies of the Vema Fracture Zone. 2. Evidence for tectonism and bottom currents in the sediments of the transform valley floor. *J. Geophys. Res.* 91:3355-3367. (1986).
- Macdonald, K. C., D. A. Castillo, S. P. Miller, P. J. Fox, K. A. Kastens, and E. Bonatti. Deep-Tow studies of the Vema Fracture Zone. 1. Tectonics of a major slow slipping transform fault and its intersection with the Mid-Atlantic Ridge. *J. Geophys. Res.* 91:3334-3354. (1986).

- Weydert, M. Manganese nodule distributions at a site in the Eastern North Pacific. *Marine Mining*. 5 (4):357-392. (1986).
- Chave, A. D., M. E. Ander, M. A. Zumberge, J. A. Hildebrand, and F. N. Spiess. Polar ice test of the scale dependence of G. *Nature (Scientific Correspondence)*. 326:250-251. (1987).
- Delaney, J. R., F. N. Spiess, S. C. Solomon, R. Hessler, J. L. Kasten, J. A. Baross, R. T. Holcomb, D. Norton, R. E. McDuff, F. Saylos, J. J. Whitehead, D. Abbott, and L. Olsen. Scientific rationale for establishing long-term ocean bottom observatory/laboratory systems, *Ibid.* Workshop report 389-411. (1987).
- Hildebrand, J. A., A. D. Chave, F. N. Spiess, R. L. Parker, M. E. Ander, G. E. Backus, and M. A. Zumberge. On the feasibility of an oceanic measurement of the Newtonian gravitational constant. *EOS*. 69, 1246. (1987).
- McIntyre, M. C. Improvements in sound velocity measurement. *J. Mar. Technol. Soc.* 21 (4):68-74. (1987).
- Spiess, F. N. ***Marine acoustical techniques***, vol. 24, Part B, Chapter 11. (Academic Press, Inc., New York, 1987).
- Spiess, F. N. Seafloor geodesy by the year 2000. *EOS*. 68, 1241. (1987).
- Spiess, F. N. Seafloor research and ocean technology. *J. Marine Technology Society*. 21 (2):5-17. (1987).
- Spiess, F. N. Acoustic approaches to geodesy in relation to geophysics. In: *Proc. Int. Symp. on Marine Positioning, 14-17 October 1986*, U. S. Geological Survey, Reston, VA:448-451. (1987).
- Spiess, F. N. Book review: *Marine mineral exploration* (by H. Kunzendorf (Editor)). *EOS Trans. Amer. Geophys. Union*. 69, 5:60. (1987).
- Spiess, F. N., J. A. Hildebrand, and D. E. Boegeman. New systems for seafloor studies. ***EOS***. (1987). 68, 1335.
- Spiess, F. N. Deep-ocean near-bottom surveying techniques. *Marine Minerals: Advanced in Research and Resource Assessment* 259-275. (1987).
- McIntyre, M. C. Results of a seafloor positioning system sea-trial. ***EOS, Trans. Amer. Geophys. Union***. 69, 1150. (1988).
- McIntyre, M. C. A seafloor positioning system. *Pacific Congress on Marine Science and Technology Proceedings*. (1988).
- McIntyre, M. C. Using GPS in a system to measure seafloor geodynamics. *Chapman Conference on GPS Measurements for Geodynamics*. (1988).
- Spiess, F. N. "Up periscope!" Observations on ocean research policy and administration (as seen from below). *Marine Technol. Soc. J.* 23 (2):40-49. (1989).
- Boegeman, D. E., C. D. Lowenstein, and F. N. Spiess, A method for the direct measurement of propagation velocity. U.S. Patent No. 4,926,395, 1990.
- Paull, C. K., F. N. Spiess, J. R. Curray, and D. C. Twichell. Origin of Florida Canyon and the role of spring sapping on the formation of submarine box canyons. *Geol. Soc. Am. Bull.* 102:502-515. (1990).

- Spiess, F. N., D. E. Boegeman, C. D. Lowenstein, and M. C. McIntyre. Seafloor strain and plate motion measurement. **EOS, Trans. Am. Geophys. Union.**
- Genin, A., P. K. Dayton, P. F. Lonsdale, and F. N. Spiess. Corals on seamount peaks provide evidence of current acceleration over deep-sea topography. *Nature*. 322 (6074):59-61. (1986).
- McIntyre, M. C. Design and testing of a seafloor geodetic system. Scripps Institution of Oceanography, San Diego, CA. SIO Reference 89-9. (1989).
- Spiess, F. N., D. E. Boegeman, C. D. Lowenstein, and M. O. McIntyre. Precise seafloor positioning - A Report. In: Proc. Int. Symp. on Marine Positioning. (1990).
- Paull, C. K., D. C. Twichell, F. N. Spiess, and J. R. Curray. Morphological development of the Florida Escarpment: Observations on the generation of time transgressive unconformities in carbonate terrains. *Marine Geology*. 101:181-201. (1991).
- Antrim, L., J.-C. Sempere, K. C. Macdonald, and F. N. Spiess. Fine scale study of a small overlapping spreading center system at 12°54'N on the East Pacific Rise. Not Decided. (in prep).
- Hey, R. N., M. C. Kleinrock, S. P. Miller, T. M. Atwater, and R. C. Searle. Sea Beam/Deep Tow Investigation of an active oceanic propagating rift system, Galapagos 95.5°W. *J. Geophys. Res.* (in press).

Ph.D. Dissertations

- Loughridge, M. S. Fine-scale topography and magnetic anomalies of the deep sea floor off Southern California. Ph.D. Harvard University (Published as SIO Reference 68-2) (1968).
- Normark, W. R. Growth patterns of deep sea fans. Univ. of Calif., San Diego, CA. (1969).
- Larson, R. L. Near-bottom studies of the East Pacific Rise Crest and tectonics of the Gulf of California. Univ. of Calif. San Diego. (1970).
- Luyendyk, B. P. Geological and geophysical observations in an abyssal hill area using a deeply towed instrument package. Univ. of Calif. San Diego. (1970).
- Johnson, D. A. Studies of deep sea erosion using deep towed instrumentation. (1971).
- Atwater, T. M. A detailed near-bottom geophysical study of the Gorda Rise and implications of plate tectonics for the Cenozoic-tectonic evolution of Western North America. Ph.D. Thesis. University of California, San Diego. San Diego, CA. (1972).
- Grow, J. A. A geophysical study of the Central Aleutian Arc. (1972).
- Klitgord, K. D. Near-bottom geophysical surveys and their implications on the crustal generation process, Seafloor spreading history of the Pacific and the geomagnetic time scale: 0-6 mybp. Ph.D. Thesis. Univ. of Calif. San Diego. San Diego, CA. (1974).
- Lonsdale, P. F. Abyssal geomorphology of a depositional environment at the exit of the Samoan Passage. (1974).
- Malfait, B. T. The Carnegie Ridge near 86°W: Structure, sedimentation and near bottom observations. Oregon State University, Dept of Oceanography. Corvallis, OR. (1974).
- Macdonald, K. C. Detailed studies of the structure and tectonics, near-bottom magnetic anomalies and microearthquake seismicity of the Mid-Atlantic Ridge near 37°N. MIT/Woods Hole Oceanographic Institution. (1975).
- Crane, K. Hydrothermal activity and near-axis structure at mid-ocean spreading centers. Ph.D. Thesis. Univ. of Calif., San Diego. La Jolla, CA. (1977).
- Tyce, R. C. Near-bottom observations of sea-floor acoustics. Ph.D. Thesis. University of California, San Diego. San Diego, CA. (1977).
- Flood, R. D. Studies of deep-sea sedimentary microtopography in the North Atlantic Ocean. MIT/Woods Hole Oceanographic Institution. (1978).
- Karas, M. C. Studies of manganese nodules using deep-tow photographs and side-looking sonars. (1978).

- Mayer, L. A. The origin and geologic setting of high-frequency acoustic reflectors in deep-sea carbonates. Ph.D. Thesis. University of Calif., San Diego. (1979).
- Shih, J. S. F. Investigation of Reykjanes Ridge. Ph.D Thesis. Mass. Institute of Tech. Boston, MA. (1979).
- Wishner, K. F. The biomass and ecology of the deep sea benthopelagic (near bottom plankton). Ph.D. Thesis. University of California, San Diego, San Diego, CA. (1979).
- Alexander, C. M. The complex vibrations and implied drag of a long oceanographic wire in cross-flow. Ph.D. Dissertation. University of California, San Diego, Scripps Institution of Oceanography. San Diego, CA. (1980).
- Kastens, K. A. Structural causes and sedimentological effects of "Cobblestone" topography in the Eastern Mediterranean Sea. Univ. of Calif., San Diego. (1981).
- Weydert, M. Acoustic backscatter of the deep seafloor. Scripps Institution of Oceanography, University of California. San Diego, CA. (1985).
- Sempere, J. Occurance and evolution of overlapping spreading centers. Ph.D Thesis. University of California. San Diego, CA. (1986).