WOODS HOLE OCEANOGRAPHIC INSTITUTION

Woods Hole, Massachusetts

WHOI-88- 1

BIBLIOGRAPHY OF TECHNICAL REPORTS

1987

Compiled by Susan S. Putnam

April 1988

This report should be cited as: Woods Hole Oceanographic Institution
Technical Report WHOI-88- 1.

Approved for distribution

Dr. Robert B. Gagosian
Associate Director for Departmental Research

The technical reports prepared by the Woods Hole Oceanographic Institution in 1987 are listed in this bibliography. Inquiries about availability of extra copies will be handled on an individual basis. Initial distribution of the reports is controlled by the funding agencies. Reports are available through the:

National Technical Information Service
NTIS Order Desk
5285 Port Royal Road
Springfield, VA 22161

NTIS order numbers are included with each report listed or can be obtained through the Document Library.

The Document Library provides Interlibrary Loan service for all Institution reports and will assist with problems of identification.

When citing a report, it should be referenced as:
Woods Hole Oceanographic Institution Technical Report WHOI-87-No.

All reports listed are UNCLASSIFIED and approved for public release unless otherwise noted.

Document Library - Smith 206
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

TECHNICAL REPORTS - 1987

WHOI

87-1 Winget, Clifford L., Arthur R. M. Nowell, William E. Terry and Allan G. Gordon.

Sea Duct: A deep-sea computer-controlled recirculating flume for the study of sea floor stability. Aug 1987. Various paging. NTIS NO. AD-A187734.

WHOI

87- 2 Aubrey, David G., Virginia A. Fry and Daniel R. Lynch.

King's Bay/Cumberland Sound, Georgia. Part II: Numerical modelling. Mar 1987. 48p. NTIS NO. PB88-110390.

WHOI

87- 3 Feder, Meir and Ehud Weinstein.

Multipath time-delay estimation via the EM algorithm. Jan 1987. 29p. NTIS NO. PB88 8106844/AS.

WHOI

87- 4 Knapp, George P. and Marvel C. Stalcup.

Progress in the measurement of salinity and oxygen at the Woods Hole Oceanographic Institution. Jan 1987. 27p. NTIS NO. PB88-108089.

WHOI

87- 5 Putnam, Susan S., Compiler.

Bibliography of technical reports 1986. Apr 1987. 14p. NTIS NO. PB87 200226/LL.

WHOI

87- 6 Rabushka, Anne I., Editor.

Abstracts of papers submitted in 1986 for publication. 1987. Various paging. NTIS NO. PB87-219358/AS.

WHOI

87- 7 Blumenthal, Martin Benno.

Interpretation of equatorial current meter data as internal waves. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Jan 1987. 382p. NTIS NO. PB88-108113.

WHOI

87- 8 Berteaux, H. O. and Bryce Prindle.

Deep sea moorings fishbite handbook. Mar 1987. 193p. NTIS NO. AD-A180 451/7/WOT.

WHOI

87- 9 Pickart, Robert S.

The entrainment and homogenization of tracers within the cyclonic Gulf Stream recirculation gyre. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. May 1987. 210p. NTIS NO. AD-A182 341/8/WOT.

WHOI

87-10

Jacobson, Dean Martin.

The ecology and feeding biology of thecate heterotrophic dinoflagellates. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Feb 1987. 212p. NTIS NO. PB88-111711/AS.

WHOI

87-11

Rosenfeld, Leslie Karen.

Tidal band current variability over the northern California continental shelf. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Jan 1987. 240p. NTIS NO. PB88-111729/AS.

WHOI

87-12

Manheim, Frank T. and Allyn Vine.

Options for radioactive and other hazardous waste siting within the U.S. Exclusive Economic Zone. Mar 1987. 19p.

WHOI

87-13

White, Alan W., Editor.

Shellfish Diseases: Current Concerns in the Northeast. Proceedings of a Sea Grant - sponsored workshop held at the Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543, February 26, 1987. Mar 1987. 43p. NTIS NO. PB87-192704.

WHOI

87-14

Walden, Barrie B.

Recovery of low-level radioactive waste packages from deep ocean disposal sites. Mar 1987. 40p. NTIS NO. PB8 88106869/AS.

WHOI

87-15

Signell, Richard P.

Tide- and wind-forced currents in Buzzards Bay, Massachusetts. Mar 1987. 89p. NTIS NO. PB88-110580/AS.

WHOI

87-16

Lazarus, David, Amy Pallant and James D. Hays.

A data-base of Antarctic pre-Pleistocene sediment cores. May 1987. 39p. plus maps. NTIS NO. PB88-124151/AS.

WHOI

87-17

Honjo, Susumu, Christine M. Wooding, Amy Karowe and Bonnie L. Woodward.

Particle fluxes, north-eastern Nordic Seas: 1983-1986. Apr 1987. 84p. NTIS NO. AD-A183800.

WHOI

87-18

Honjo, Susumu, Christine M. Wooding and Gerold Wefer.

Current measurements from the northern Nordic Seas 1983-1986. Feb 1987. 65p. NTIS NO. AD-A183706.

WHOI

- 87-19 **Tarbell, Susan A., Philip L. Richardson and James F. Price.**
Moored current meter data from the Canary Basin near 32°N, 24°W (1984-1986) volume XL. May 1987. 34p. NTIS NO. PB88-108105.

WHOI

- 87-20 **Levy, Ellen and Susan A. Tarbell.**
A compilation of moored current meter data from the north Pacific, (The "Zonal" Experiment, 1983-1985) volume XLI. May 1987. 54p. plus microfiche. NTIS NO. AD-A 182 530.

WHOI

- 87-21 **Frye, Daniel E., Editor.**
Data telemetry, assimilation and ocean modeling semi-annual report for the period October 1, 1986 to April 1, 1987. Jun 1987. 33p. NTIS NO. AD-A181 899.

WHOI

- 87-22 **Rioux, Margaret A. and Terrence M. Rioux.**
SCUBA diving in the Galapagos Islands: A study of diving safety with recommendations. Jun 1987. 36p. NTIS NO. PB87-215679/AS.

WHOI

- 87-23 **Driscoll, Mavis Lynn.**
Application of Seasat altimetry to tectonic studies of fracture zones in the southern oceans. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Jun 1987. 165p.

WHOI

- 87-24 **Brink, Kenneth H. and David C. Chapman.**
Programs for computing properties of coastal-trapped waves and wind-driven motions over the continental shelf and slope. Second edition. Jun 1987. 119p. NTIS NO. PB88-107826.

WHOI

- 87-25 Not issued.

WHOI

- 87-26 **Smith, Wendy M.**
The effects of double-diffusion on a baroclinic vortex. Jul 1987. 59p. NTIS NO. PB8 88106877/AS.

WHOI

- 87-27 **Luetkemeyer, Kelly.**
Satellite image processing for the Agulhas Retroflexion Region. Jul 1987. 76p. NTIS NO. AD-A183012.

WHOI

- 87-28 **Vedova, B. Della and R. P. Von Herzen.**
Geothermal heat flux at the COST B-2 and B-3 wells, U.S. Atlantic continental margin. Jul 1987. 80p. NTIS NO. PB88-107040/AS.

- WHOI
87-29 **Rioux, Margaret A.**
Bibliography on diving and diver safety for a scientific diving program. Jul 1987. 57p. NTIS NO. PB88-113790/AS.
- WHOI
87-30 **Payne, Richard E.**
SEQUAL meteorological data from moorings S2, S5 and S6 (March 1983-1985). Jul 1987. 41p. NTIS NO. PB88-108048.
- WHOI
87-31 **Miller, James H.**
Estimation of sea surface wave spectra using acoustic tomography. Sc.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 172p. NTIS NO. AD-A187 837.
- WHOI
87-32 **Riley, James B.**
Laser diffraction particle sizing: Sampling and inversion. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 228p. NTIS NO. PB88-161 294/AS.
- WHOI
87-33 **Nelken, Haim.**
Thermally driven circulation. Sc.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 186p.
- WHOI
87-34 **Robinson, Elizabeth M.**
The effect of a shallow viscosity zone on mantle convection and its expression at the surface of the earth. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 320p. NTIS NO. PB88-175914/AS.
- WHOI
87-35 **Toomey, Douglas R.**
The tectonics and three-dimensional crustal structure of spreading centers: Microearthquake studies and tomographic inversion. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 210p. NTIS NO. PB88-163290/AS.
- WHOI
87-36 **Graham, David W.**
Helium and lead isotope geochemistry of oceanic volcanic rocks from the East Pacific and South Atlantic. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 252p. NTIS NO. PB88-175906/AS.
- WHOI
87-37 **Bushong, Paul J.**
Tomographic measurements of barotropic motions. O.E. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 48p.

- WHOI
87-38 **Diemer, Ferdinand J.**
A prony algorithm for shallow water waveguide analysis. O.E. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 186p.
- WHOI
87-39 **Cessi, Paola.**
On the role of topography and of boundary forcing in the ocean circulation. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 197p. NTIS NO. PB88-175922/AS.
- WHOI
87-40 **Payne, Richard E.**
Air temperature shield tests. Oct 1987. 22p. NTIS NO. AD-A187459.
- WHOI
87-41 **Bruce, John G.**
XBT observations between 10°N - 10°S in the Atlantic from ships of opportunity, complemented by AXBT surveys. Oct 1987. 373p. NTIS NO. PB88-161484/AS.
- WHOI
87-42 **Craddock, James E., Richard H. Backus and Mary Ann Daher.**
Midwater fish data report for warm-core Gulf Stream rings cruises 1981-1982. Oct 1987. 140p.
- WHOI
87-43 **Hoagland, Porter, III and James M. Broadus.**
Seabed material commodity and resource summaries. Oct 1987. 235p.
- WHOI
87-44 **Hay, Bernward J.**
Particle flux in the Western Black Sea in the present and over the last 5,000 years: Temporal variability, sources, transport mechanisms. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Sep 1987. 203p. NTIS NO. AD-A 188 487.
- WHOI
87-45 Not issued.
- WHOI
87-46 **Goldsmith, R. A. and P. L. Richardson.**
Reconstructing Columbus's first transatlantic track and landfall using climatological winds and currents. Nov 1987. 51p.
- WHOI
87-47 **Payne, Richard E.**
Tropic Heat MR meteorological data (April 1984-June 1985). Nov 1987. 24p.

WHOI

87-48

Barth, John A.

Stability of a coastal upwelling front over topography. Ph.D. Thesis. MIT/WHOI Joint Program in Oceanography. Oct 1987. 187p.

WHOI

87-49

Von der Heydt, Keith .

Optical Disk based Acquisition System (ODAS). Description and report following the first deployment during Prudhoe Bay Experiment Spring 1987 (PRUDEX). Nov 1987. 20p.

WHOI

87-50

Bocconcelli, Alessandro, Editor. H. Berteaux, A. Bocconcelli, P. Clay, K. Doherty, J. Hager, E. Mellinger and J. Valdes.

Real-time environmental Arctic monitoring (R-TEAM) interim report. Nov 1987. 66p. NTIS NO. AD-A189-948.

WHOI

87-51

Fry, Virginia A.

Tidal velocity asymmetries and bedload transport in shallow embayments. MSc. Thesis. Massachusetts Institute of Technology. Dec 1987. 55p. NTIS NO. PB88-161336/AS.

WHOI

87-52

James F. Price, Theresa K. McKee, W. Brechner Owens, James R. Valdes.

Site L SOFAR Float Experiment, 1982-1985. Dec 1987. 289p.

WHOI

87-53

Wilkin, John L.

A computer program for calculating frequencies and modal structures of free coastal-trapped waves. Dec 1987. 50p.

WHOI

87-54

Tupper, George H.

Technical activities associated with the ZONAL Pacific Array. Dec 1987. 113p.

WHOI

87-55

Fucile, Paul D. and James R. Valdes.

An FSK telemetry module for vector measuring current meters. Dec 1987. 38p.

WHOI

87-56

Schneider, David L. and Donald C. Bankston.

The determination of rare earth elements in marine sediments by ion-exchange separation and ICP emission spectrometry. Dec 1987. 42p.

DEPARTMENT INDEX

Administration

WHOI-87- 5, WHOI-87- 6, WHOI-87-29

Biology

WHOI-87-10, WHOI-87-42

Chemistry

WHOI-87-36, WHOI-87-56

Geology and Geophysics

WHOI-87- 2, WHOI-87-12, WHOI-87-13, WHOI-87-16, WHOI-87-17, WHOI-87-18,
WHOI-87-23, WHOI-87-28, WHOI-87-34, WHOI-87-35, WHOI-87-44, WHOI-87-51

Marine Policy and Ocean Management

WHOI-87-22, WHOI-87-43

Ocean Engineering

WHOI-87-1, WHOI-87- 3, WHOI-87- 8, WHOI-87-14, WHOI-87-31, WHOI-87-32,
WHOI-87-37, WHOI-87-38, WHOI-87-46, WHOI-87-49, WHOI-87-50

Physical Oceanography

WHOI-87- 4, WHOI-87- 7, WHOI-87- 9, WHOI-87-11, WHOI-87-15, WHOI-87-19,
WHOI-87-20, WHOI-87-21, WHOI-87-24, WHOI-87-26, WHOI-87-27, WHOI-87-30,
WHOI-87-33, WHOI-87-39, WHOI-87-40, WHOI-87-41, WHOI-87-47, WHOI-87-48,
WHOI-87-52, WHOI-87-53, WHOI-87-54, WHOI-87-55

AUTHOR INDEX

Aubrey, David G.	87- 2
Backus, Richard H.	87-42
Bankston, Donald C.	87-56
Barth, John A.	87-48
Berteaux, H. O.	87- 8, 87-50
Blumenthal, Martin Benno..	87- 7
Bocconcelli, Alessandro...	87-50
Brink, Kenneth H.	87-24
Broadus, James M.	87-43
Bruce, John G.	87-41
Bushong, Paul J.	87-37
Cessi, Paola	87-39
Chapman, David C.	87-24
Clay, P.	87-50
Craddock, James E.	87-42
Daher, Mary Ann.....	87-42
Diemer, Ferdinand J.	87-38
Doherty, K.	87-50
Driscoll, Mavis Lynn.....	87-23
Feder, Meir.....	87- 3
Fry, Virginia A.	87-51, 87- 2
Frye, Daniel E.	87-21
Fucile, Paul D.	87-55
Goldsmith, R. A.	87-46
Gordon, Allan G.	87- 1
Graham, David W.	87-36
Hager, J.	87-50
Hay, Bernward J.	87-44
Hays, James D.	87-16
Hoagland, Porter, III.....	87-43
Honjo, Susumu.....	87-18, 87-17
Jacobson, Dean Martin.....	87-10
Karowe, Amy.....	87-17
Knapp, George P.	87- 4
Lazarus, David.....	87-16
Levy, Ellen.....	87-20
Luetkemeyer, Kelly.....	87-27
Lynch, Daniel R.	87- 2

Manganini, Steven J.	87-17
Manheim, Frank T.	87-12
McKee, Theresa K.	87-52
Mellinger, E.	87-50
Miller, James H.	87-31
Nelken, Haim.....	87-33
Nowell, Arthur R. M.	87- 1
Owens, W. Brechner.....	87-52
Pallant, Amy.....	87-16
Payne, Richard E.	87-30, 87-40, 87-47
Pickart, Robert S.	87- 9
Price, James F.	87-52, 87-19
Prindle, Bryce.....	87- 8
Putnam, Susan S.	87- 5
Rabushka, Anne I.	87- 6
Richardson, P. L.	87-46
Richardson, Philip L.	87-19
Rioux, Margaret A.	87-22, 87-29
Rioux, Terrence M.	87-22
Robinson, Elizabeth M. ...	87-34
Rosenfeld, Leslie Karen...	87-11
Schneider, David L.	87-56
Signell, Richard P.	87-15
Smith, Wendy M.	87-26
Stalcup, Marvel C.	87- 4
Tarbell, Susan A.	87-19, 87-20
Terry, William E.	87- 1
Toomey, Douglas R.	87-35
Tupper, George H.	87-54
Valdes, J.	87-50, 87-52, 87-55
Vedova, B. Della.....	87-28
Vine, Allyn.....	87-12
Von der Heydt, Keith.....	87-49
Von Herzen, R. P.	87-28
Walden, Barrie B.	87-14
Wefer, Gerold.....	87-18
Weinstein, Ehud.....	87- 3
White, Alan W.	87-13
Wilkin, John L.	87-53
Winget, Clifford L.	87- 1
Wooding, Christine M.	87-18
Woodward, Bonnie L.	87-17

FUNDING AGENCIES

Andrew Mellon Foundation

WHOI-87-10

Battelle Memorial Institute

WHOI-87-15

Environmental Protection Agency

WHOI-87-14

J. N. Pew, Jr. Charitable Trust

WHOI-87-43

J. Seward Johnson Endowment

WHOI-87-22

Massachusetts Institute of Technology

WHOI-87-34

Mellon Foundation

WHOI-87-32

National Aeronautics and Space Administration, Geodynamics Program

WHOI-87-34

National Aeronautics and Space Administration, Traineeship Grant

WHOI-87-32

National Oceanic and Atmospheric Administration, National Sea Grant College Program Office

WHOI-87-13, WHOI-87-15, WHOI-87-43, WHOI-87-51

National Oceanic and Atmospheric Administration

WHOI-87-33

National Science Foundation

WHOI-87- 4, WHOI-87- 7, WHOI-87- 9, WHOI-87-10, WHOI-87-11,
WHOI-87-15, WHOI-87-16, WHOI-87-19, WHOI-87-23, WHOI-87-24,
WHOI-87-26, WHOI-87-30, WHOI-87-33, WHOI-87-34, WHOI-87-35,
WHOI-87-36, WHOI-87-39, WHOI-87-40, WHOI-87-41, WHOI-87-42,
WHOI-87-44, WHOI-87-46, WHOI-87-47, WHOI-87-48, WHOI-87-52,
WHOI-87-53, WHOI-87-56

National Science Foundation, Office of Atmospheric Sciences

WHOI-87-39

Navy, Office of Naval Research

WHOI-87- 1, WHOI-87- 7, WHOI-87- 8, WHOI-87- 9, WHOI-87-17,
WHOI-87-18, WHOI-87-20, WHOI-87-21, WHOI-87-23, WHOI-87-27,
WHOI-87-31, WHOI-87-33, WHOI-87-35, WHOI-87-40, WHOI-87-49,
WHOI-87-50, WHOI-87-54, WHOI-87-55

Navy, Office of Naval Research, Coastal Ocean Sciences Program

WHOI-87-48

Tinker Foundation

WHOI-87-22

U.S. Army Engineering Research Center

WHOI-87-51

U.S. Department of Energy

WHOI-87-56

Woods Hole Oceanographic Institution, Coastal Research Center

WHOI-87-10, WHOI-87-32, WHOI-87-51

Woods Hole Oceanographic Institution, Marine Policy and Ocean Management Center

WHOI-87-22

Woods Hole Oceanographic Institution, Sea Grant

WHOI-87-51

BIBLIOGRAPHIES OF TECHNICAL REPORTS

WHOI REF.	TITLE	NTIS ORDER NUMBER
81- 9	Bibliography of Reports, 1980	PB81-185167
82-14	Bibliography of Reports, 1981	PB81-237579
83- 2	Bibliography of Reports, 1982	PB83-191064
84- 1	Bibliography of Reports, 1983	PB84-173798
85- 2	Bibliography of Reports, 1984	PB85-201747
86- 4	Bibliography of Reports, 1985	PB86-214756/AS
87- 5	Bibliography of Reports, 1986	PE87-200226/LL

SUMMARIES

WHOI REF.	TITLE
81-36	Abstracts of papers submitted in 1980 for publication
82- 9	Abstracts of papers submitted in 1981 for publication
83- 3	Abstracts of papers submitted in 1982 for publication
84-11	Abstracts of papers submitted in 1983 for publication
85- 9	Abstracts of papers submitted in 1984 for publication
86- 2	Abstracts of papers submitted in 1985 for publication
87- 6	Abstracts of papers submitted in 1986 for publication

GEOPHYSICAL FLUID DYNAMICS

WHOI REF.	TITLE	NTIS ORDER NUMBER
80-53	Coherent features in geophysical flows.	AD-A094 433
81-102	Physics of convection.	AD-A114 366/8
82-45	Particle motions in fluids.	AD-A122 864
83-41	Baroclinic instability and ocean fronts.	AD-A166 898
84-44	Dynamic differentiations.	AD-A149 386/5/XAB
85-36	Chaos.	AD-A164 601
86-45	Order and disorder in turbulent shear flow.	AD-A177 571/7/XAB