



WHOI Contributions to the Scientific Literature Monthly Activity Report

Articles Received in March 1998

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Acosta, J., P. Herranz, A. Munoz, C. Palomo, J.L. Sanz, and E. Uchupi.

Seismic profiles in Tenerife insular margin: Teide project. Preliminary results.

Geogaceta, 20(2):335-338, 1996.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Adkins, Jess F., Edward A. Boyle, Lloyd Keigwin, and Elsa Cortijo.

Variability of the North Atlantic thermohaline circulation during the last interglacial period. *Nature*, 390:154-156, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Aharonov, E., M. Spiegelman, and P. Kelemen.

Three-dimensional flow and reaction in porous media: Implications for the Earth's mantle and sedimentary basins. *J. Geophys. Res.*, 102(B7):14821-14833, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

**Allen, Ben, Chris von Alt, Tom Austin, Ned Forrester, Rob Goldsborough,
Mike Purcell, and Roger Stokey.**

REMUS: A small, low cost AUV; System description, field trials and performance results. *Oceans '97*, 2:994-999, 1997.

Contracts: N00014-96-5021, Rutgers University, Sub-contract 743.06, OCE93-14823.

Department of WHOI Author: AOPE.

Contribution Number: **9514**

Arnason, J.G., D.K. Bird, S. Bernstein, and P.B. Kelemen.

Gold and platinum-group element mineralization in the Kruuse Fjord gabbro complex, East Greenland. *Econ.Geol.*, 92:490501, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Ashjian, Carin J., Sharon L. Smith, and Peter V.Z. Lane.

The Northeast Water Polynya during summer 1992: Distribution and aspects of secondary production of copepods. *J.Geophys.Res.*, 100(3):4371-4388, 1995.

Contracts: WHOI Postdoctoral Scholar Award.

Department of WHOI Author: BIO.

Contribution Number: **NONE**

Ashjian, C.J., S. Smith, F. Bignami, T. Hopkins, and P. Lane.

Distribution of zooplankton in the Northeast Water Polynya during summer 1992.

J.Mar.Syst., 10(1-4):279-298, 1997.

Department of WHOI Author: BIO.

Contribution Number: **NONE**

Aubrey, David G.

Sea-level changes. *Geotimes*, 41(2):45, 1996.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Austin, Thomas C., Roger Stokey, Chris von Alt, Richard Arthur, and Robert Goldsborough.

"RATS", A relative acoustic tracking system developed for deep ocean navigation.

Oceans '97, 1:535-540, 1997.

Contracts: ONR N00014-95-C-0161.

Department of WHOI Author: AOPE.

Contribution Number: **9510**

Austin, Thomas C., Richard Arthur, Dezhang Chu, and Alan Hinton.

A sediment imaging system using acoustic tomographic techniques.

Oceans '97, 2:769-772, 1997.

Contracts: ONR N00014-95-1-0408.

Department of WHOI Author: AOPE.

Contribution Number: **9509**

Ayers, J.C., S.K. Dittmer, and G.D. Layne.

Partitioning of elements between peridotite and H₂O at 2.0-3.0 Gpa and 900-1100°C, and application to models of subduction zone processes.

Earth Planet.Sci.Lett., 150(3)part 4:381-398, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Ballard, Robert D. and Rick Archbold.

Lost liners by Robert D. Ballard and Rick Archbold, paintings by Ken Marschall; historical consultation by Eric Sauder. Hyperion, New York, NY, 223 pp., 1997.
Department of WHOI Author: AOPE.
Contribution Number: **NONE**

Ballard, Robert D., and Spencer Dunmore.

Exploring the Lusitania: Probing the mysteries of the sinking that changed history by Robert D. Ballard and Spencer Dunmore.
Warner Book, New York., 227 pp., 1995.
Department of WHOI Author: AOPE.
Contribution Number: **NONE**

Ballard, Robert D. and Malcolm McConnell.

Explorations: My quest for adventure and discovery under the sea by Robert D. Ballard and Malcolm McConnell. Hyperion, New York, NY, 407 pp., 1995.
Department of WHOI Author: AOPE.
Contribution Number: **NONE**

Barrett, D., M. Grosenbaugh, and M. Triantafyllou.

The optimal control of a flexible hull robotic undersea vehicle propelled by an oscillating foil. *SNAME Transactions*, 104:81-100, 1996.
Department of WHOI Author: AOPE.
Contribution Number: **NONE**

Beck, J.W., E.R.M. Druffel, and A.P. McNichol.

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Department of WHOI Author: GEOL.
Contribution Number: **NONE**

Benfield, M.C., P.H. Wiebe, T.K. Stanton, C.S. Davis, S.M. Gallager, and C.H. Greene.

3D mapping of zooplankton distributions in a stratified region of Georges Bank: Results from optical and acoustic sensing.
Int.Counc.Explor.Sea C.M., T:50, 1997.
Department of WHOI Author: BIO., AOPE.
Contribution Number: **NONE**

Bergamaschi, B.A., E. Tsamakis, R.G. Keil, T.I. Eglinton, D.B. Montlucon, and J.I. Hedges.

The effect of grain size and surface area on organic matter, lignin and carbohydrate concentration and molecular composition in Peru Margin sediments.

Geochim.cosmochim.Acta, 61(6):1247-1260, 1997.

Department of WHOI Author: MCG.

Contribution Number: **NONE**

Berggren, William A. and Richard D. Norris.

Biostratigraphy, phylogeny and systematics of Paleocene trochospiral planktic foraminifera. *Micropaleontology*, 43(Suppl 1):105-112, 1997.

Contracts: NSF OCE-9115436, NSF EAR-9205002, NSF EAR-9505836.

Department of WHOI Author: GEOL.

Contribution Number: **9480**

Bickert, T., W.B. Curry, and G. Wefer.

Late pliocene to holocene (2.6-0 MA) Western Equatorial Atlantic deep-water circulation: Inferences from benthic stable isotopes. *Proc.Ocean*

Drill.Prog.,Sci.Res. N.J. Shackleton, W.B. Curry, C. Richter, and T.J.Bralower, eds, Ocean Drilling Program, College Station TX, 154:239-251, 1997.

Contracts: OCE91-16303, Deutsche Forschungsgemeinschaft (We 992/18).

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Bidigare, Robert R., Arnim Fluegge, Katherine H. Freeman, Kristi L. Hanson, John M. Hayes, David Hollander, John P. Jasper, Linda L. King, Edward A. Laws, Jeffrey Milder, Frank J. Millero, Richard Pancost, Brian N. Popp, Paul A. Steinberg, and Stuart G. Wakeham.

Consistent fractionation of ^{13}C in nature and in the laboratory: Growth-rate effects in some haptophyte algae.

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Department of WHOI Author: GEOL.

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Bloch, Elisabeth, Rachel Reinhard, Siegfried Burggraf, Doris Hafenbradl, Holger W. Jannasch, and Karl O. Stetter.

Pyrolobus fumarius, gen. and sp. nov. represents a novel group of archaea, extending the upper temperature limit for life to 113°C.

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Contracts: NSF OCE92-00458.

Department of WHOI Author: BIO.

Contribution Number: **9339**

Bonneville, Alain and Richard P. Von Herzen.

Heat flow over Reunion hot spot track: Additional evidence for thermal rejuvenation of oceanic lithosphere.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Bowen, M.F. and B. Fletcher.

High-resolution, wide-area dam inspections by automated ROVs.

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Department of WHOI Author: AOPE.

Contribution Number: **NONE**

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Unmanned Vehicles, 1(3):18-21, 1996.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

Bradley, C.R., R.A. Stephen, L.M. Dorman, and J.A. Orcutt.

Very low frequency (0.2-10.0 Hz) seismoacoustic noise below the seafloor.

J.Geophys.Res., 102(B2):11703-11718, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Brewer, Peter G., Catherine Goyet, and Gernot Friederich.

Direct observation of the oceanic CO₂ increase revisited.

Natl.Acad.Sci., 94:8308-8313, 1997.

Department of WHOI Author: MCG.

Contribution Number: **NONE**

Brink, K.H.

Time dependent motions and the nonlinear bottom Ekman layer.

J.Mar.Res., 55:613-631, 1997.

Department of WHOI Author: PO.

Contribution Number: **NONE**

Byrnie, R.H. and E.R. Sholkovitz.

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Cann, J.R., D.K. Blackman, D.K. Smith, E. McAllister, B. Janssen, S. Mello, E. Avgerinos, A.R. Pascoe, and J. Escarin.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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Contracts: NOAA Sea Grant NA87-AA-0-OM093,

NOAA Sea Grant NA86-AA-D-S6090.

Department of WHOI Author: BIO.

Contribution Number: **8244**

Chapman, N.R., L. Jasche, M.A. McDonald, H. Schmidt, and M. Johnson.

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Department of WHOI Author: AOPE.

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Chayes, Dale, Andrew Maffei, and Gregory Myers.

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Contracts: NSF OCE95-09870, JOI JSC 2-94.

Department of WHOI Author: ADMIN.

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Clough, L.M., W.G. Ambrose, Jr., C.J. Ashjian, D. Piepenburg, P.E. Renaud, and S.L. Smith.

Meroplankton in the Northeast Water Polynya: Insights from oceanographic parameters and benthic abundance patterns. *J.Mar.Syst.*, 10(1-4):343-357, 1997.

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Department of WHOI Author: GEOL., ADMIN.

Contribution Number: **NONE**

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The effect of colony topography on climate signals in coral skeleton.
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Department of WHOI Author: GEOL.
Contribution Number: **NONE**

Crago, T.I.,

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Department of WHOI Author: ADMIN.
Contribution Number: **NONE**

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Contracts: NOAA Grant No. NA46RG0470 on Sea Grant No. A/S-14.
Department of WHOI Author: ADMIN.
Contribution Number: **NONE**

Cullen, James L. and W.B. Curry.

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Contracts: USSAC-JOI Grant.
Department of WHOI Author: GEOL.
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Oceanic transport of subpolar climate signals to mid-depth subtropical waters.
Nature, 391:575-577, 1998.
Contracts: NOAA NA36GP0137.
Department of WHOI Author: PO.
Contribution Number: **9449**

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Contracts: OCE91-16303, JOI/USSAC Grant.
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Contribution Number: **9206**

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Department of WHOI Author: GEOL.

Contribution Number: **9020**

DeGrandpre, M.D., T.R. Hammar, S.P. Smith, and F.L. Sayles.

In situ measurements of seawater pCO₂. *Limnol.Oceanogr.*, 40(5):969-975, 1995.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

Denniston, R.F., C.K. Shearer, G.D. Layne, and D.T. Vaniman.

SIMS analyses of minor and trace element distributions in fracture calcite from Yucca Mountain, Nevada, USA.

Geochim.Cosmochim.Acta, 61(9):1803-1818, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Detrick, Robert, John Collins, Graham Kent, Jian Lin, Douglas Toomey, Andrew Barclay, Emilie Hooft, Allegra Hosford, and Stefan Hussenoeder.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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Department of WHOI Author: AOPE.

Contribution Number: **NONE**

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Department of WHOI Author: MCG.

Contribution Number: **NONE**

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Oceanic turbulence dissipation measurements in SWADE.

J.Phys.Oceanogr., 26(5):808-815, 1996.

Department of WHOI Author: AOPE.,

Contribution Number: **NONE**

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Geophysica, 33(2):17-27, 1997.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

Driscoll, Neal and Elazar Uchupi.

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Contracts: ONR N00014-96-1-0026.

Department of WHOI Author: GEOL.

Contribution Number: **9486**

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Driscoll, Neal and Roger Flood.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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One library, one bib record, two OPACs, two systems.

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Department of WHOI Author: ADMIN.

Contribution Number: **NONE**

Dunlap, W.J., G. Hirth, and C. Teyssier.

Thermomechanical evolution of a ductile duplex.

Tectonics, 16(6):983-1000, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Eiler, J.M., K.A. Farley, J.W. Valley, E. Hauri, H. Craig, S.R. Hart, and E.M. Stolper.

Oxygen isotope variations in ocean island basalt phenocrysts.

Geochim.Cosmochim.Acta, 61(11):2281-2293, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Escartin, J., G. Hirth, and B. Evans.

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Earth Planet.Sci.Lett., 151(3)part 4:181-189, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

Fairall, C.W., A.B. White, J.B. Edson, and J.E. Hare.

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J.Atmos.Oceanic Technol., 14(3)part 1:338-359, 1997.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

Ffield, Amy, John Toole, and Doug Wilson.

Seasonal circulation in the South Indian Ocean.

Geophys.Res.Lett., 24(22):2773-2776, 1997.

Department of WHOI Author: PO.

Contribution Number: **NONE**

Fofonoff, N.P.

Dynamical effects of cabbelling on thermocline structure.

Okeanologiya, 35(6):824-832, 1995.

Department of WHOI Author: PO.

Contribution Number: **NONE**

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Department of WHOI Author: GEOL.,

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Department of WHOI Author: GEOL.

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Forrester, Ned C., Roger P. Stokey, Christopher von Alt, Ben G. Allen, Robert G. Goldsborough, Michael J. Purcell, and Thomas C. Austin.

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Contracts: ONR N00014-93-C-0097, NSF OCE-9314823, NOAA Undersea Research Program 732.

Department of WHOI Author: AOPE.

Contribution Number: **9506**

Fousquet, Y., H. Ondreas, J.-L. Charlou, J.-P. Donval, J. Radford-Knoery, I. Costa, N. Lourenco, and M.K. Tivey.

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Department of WHOI Author: MCG.

Contribution Number: **NONE**

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J.Atmos.Oceanic Technol., 14:822-834, 1997.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

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Efficient equalizer update algorithms for acoustic communication channels of varying complexity. *Oceans '97*, :580-585, 1997.

Department of WHOI Author: AOPE.

Contribution Number: **NONE**

Fucile, Paul, Allan Gordon, Frank Bahr, and Jerome Dean.

Fiber optic control of an undulating platform. *Oceans '97*, 1:105-108, 1997.

Department of WHOI Author: PO., AOPE.

Contribution Number: **NONE**

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Automated systems and techniques utilized at the NOSAMS sample preparation laboratory: An update of productivity and quality issues.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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Correlation between the texture and composition of dunite: Constraints on the interaction of melt migration and deformation. *EOS*, 77:F840-841, 1996.

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Modes of harbor wave response to excitation by internal waves. *Proceedings of the 1-st International Conference: Port/Coast Environment, Varna, Bulgaria, March 6 - April 4, 1997*, 2:285-291, 1997.

Department of WHOI Author: GEOL., PO.

Contribution Number: **NONE**

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Modeling the mechanical and flow-induced noise on the surface suspended acoustic receiver. *Oceans '97*, 2:748-753, 1997.

Contracts: ONR N00014-92-J-1269, APRA MDA-972-93-1-0004.

Department of WHOI Author: AOPE.

Contribution Number: **9515**

Goldsborough, III, Robert G.

A fiber optic telemetry system for multiple oceanographic platforms.

Oceans '97, 1:93-97, 1997.

Department of WHOI Author: AOPE.,

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Gregg, Tracy K.

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Quantification of submarine lava-flow morphology through analog experiments. *Geology*, 23(1):73-76, 1995.

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Department of WHOI Author: PO.

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Department of WHOI Author: MCG.

Contribution Number: **NONE**

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J.Phys.Oceanogr., 27(6):1018-1037, 1997.

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Contribution Number: **9350**

Hart, S.R.

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Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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Hoagland, P., Jin, D.

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Department of WHOI Author: MPC.

Contribution Number: **NONE**

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Contribution Number: **NONE**

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Epilogue: Oyster pond - three decades of change. In: *A coastal pond: studied by oceanographic methods*. K.O. Emery, ed. Oyster Pond Environmental Trust Inc., Woods Hole, MA, :79-106, 1997.

Department of WHOI Author: GEOL.

Contribution Number: **NONE**

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