



## WHOI Contributions to the Scientific Literature Monthly Activity Report

### Articles Received in December 2004

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**Arbic, Brian K., and Glenn R. Flierl**

Baroclinically unstable geostrophic turbulence in the limits of strong and weak bottom Ekman friction: Application to midocean eddies. *J.Phys.Oceanogr.*, 34:2257-2273, 2004, doi: 10.1175/1520-0485(2004)034<2257:BUGTIT>2.0.CO;2.

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Department of WHOI Author: PO.

**Arkhipkin, Alexander I., Steven E. Campana, Jennifer FitzGerald, and Simon R. Thorrold**

Spatial and temporal variation in elemental signatures of statoliths from the Patagonian longfin squid (*Loligo gahi*). *Can.J.Fish.Aquat.Sci.*, 61:1212-1224, 2004, doi: 10.1139/F04-075.

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Department of WHOI Author: BIO.

**Ashjian, Carin J., Gaelin A. Rosenwaks, Peter H. Wiebe, Cabell S. Davis, Scott M. Gallager, Nancy J. Copley, Gareth L. Lawson, and Philip Alatalo**

Distribution of zooplankton on the continental shelf off Marguerite Bay, Antarctic Peninsula, during austral fall and winter, 2001. *Deep-Sea Res.II*, 51:2073-2098, 2004, doi: 10.1016/j.dsr2.2004.07.025.

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Contribution Number: **11129**

**Bach, Wolfgang, Carlos J. Garrido, Holger Paulick, Jason Harvey, and Martin Rosner**

Seawater-peridotite interactions: first insights from ODP Leg 209, MAR 15°N.

*Geochem. Geophys. Geosyst.*, 5,Q09F26,doi:10.1029/2004GC000744, 2004, doi: 10.1029/2004GC000744.

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Contribution Number: **11193**

**Band-Schmidt, C. J., L. Morquecho, C. H. Lechuga-Devéze, and D. M. Anderson**

Effects of growth medium, temperature, salinity and seawater source on the growth of *Gymnodinium catenatum* (Dinophyceae) from Bahía Concepción, Gulf of California, Mexico. *J. Plankton Res.*, 26:1459-1470, 2004, doi: 10.1093/plankt/fbh133.

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Contribution Number: **11205**

**Behn, Mark D., Jian Lin, and Maria T. Zuber**

Effects of hydrothermal cooling and magma injection on mid-ocean ridge temperature structure, deformation, and axial morphology. In: *Mid-Ocean Ridges Hydrothermal Interactions between the Lithosphere and Oceans*. Christopher German, Jian Lin and Lindsay M. Parson, eds. Washington, DC: American Geophysical Union, :151-165, 2004, doi: 10.1029/148GM06.

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Department of WHOI Author: GEOL.

Contribution Number: **11090**

**Camilli, R., B. Bingham, M. Jakuba, H. Singh, and J. Whelan**

Integrating in-situ chemical sampling with AUV control systems. *Oceans '04*, :101-109, 2004.

Department of WHOI Author: AOPE. MCG.

**Chaffey, Mark, Larry Bird, Jon Erickson, John Graybeal, Andy Hamilton, Kent Headley, Mike Kelley, Lance McBride, Ed Mellinger, Tim Meese, Tom O'Reilly, Walter Paul, Mike Risi, and Wayne Radochonski**

MBARI's buoy based seafloor observatory design. *Oceans '04*, :1975-1984, 2004.

Department of WHOI Author: AOPE.

**Chave, A. D., B. St. Arnaud, M. Abbott, J. R. Delaney, R. Johnson, E. Lazowska, A. R. Maffei, J. A. Orcutt, and L. Smarr**

A management concept for ocean observatories based on web services. *Oceans '04*, :2187-2193, 2004.

Department of WHOI Author: AOPE.

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Calibrating a 90-kHz multibeam sonar: illustrating protocols. *Oceans '04*, :438-442, 2004.

Department of WHOI Author: AOPE.

Contribution Number: **11223**

**Clift, Peter D., Ian H. Campbell, Malcolm S. Pringle, Andrew Carter, Xifan Zhang, Kip V. Hodges, Ali Athar Khan, and Charlotte M. Allen**

Thermochronology of the modern Indus River bedload: New insight into the controls on the marine stratigraphic record. *Tectonics*, 23,TC5013,doi:10.1029/2003TC001559, 2004, doi: 10.1029/2003TC001559.

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**Crisp, D., R. M. Atlas, F.-M. Breon, L. R. Brown, J. P. Burrows, P. Ciais, B. J. Connor, S. C. Doney, I. Y. Fung, D. J. Jacob, C. E. Miller, D. O'Brien, S. Pawson, J. T Randerson, P. Rayner, R. J. Salawitch, S. P Sander, B. Sen, G. L. Stephens, et al**

The Orbiting Carbon Observatory (OCO) mission. *Advanc.Space Res.*, 34:700-709, 2004, doi: 10.1016/j.asr.2003.08.062.

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Department of WHOI Author: MCG.

**Donnelly, Jeffrey P., Jessica Butler, Stuart Roll, Micah Wengren, and Thompson Webb, III**

A backbarrier overwash record of intense storms from Brigantine, New Jersey. *Mar.Geol.*, 210:107-121, 2004, doi: 10.1016/j.margeo.2004.05.005.

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Contribution Number: **10880**

**Dougherty, Amy J., Duncan M. FitzGerald, and Ilya V. Buynevich**

Evidence for storm-dominated early progradation of Castle Neck Barrier, Massachusetts, USA. *Mar.Geol.*, 210:123-134, 2004, doi: 10.1016/j.margeo.2004.05.006.

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**Edgcomb, Virginia P., Stephen J. Molyneaux, Mak A. Saito, Karen Lloyd, Simon Boer, Carl O. Wirsen, Michael S. Atkins, and Andreas Teske**

Sulfide ameliorates metal toxicity for deep-sea hydrothermal vent archaea.

*Appl.Environ.Microbiol.*, 70:2551-2555, 2004, doi: 10.1128/AEM.70.4.2551-2555.2004.

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**Falkowski, Paul G., and Cabell S. Davis**

Natural proportions. *Nature*, 431:131, 2004, doi: 10.1038/431131a.

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Department of WHOI Author: BIO.

**Fornari, Daniel, Maurice Tivey, Hans Schouten, Michael Perfit, Dana Yoerger, Al Bradley, Margo Edwards, Rachel Haymon, Daniel Scheirer, Karen Von Damm, Timothy Shank, and Adam Soule**

Submarine lava flow emplacement at the East Pacific Rise 9°50'N: implications for uppermost ocean crust stratigraphy and hydrothermal fluid circulation. In: *Mid-Ocean Ridges Hydrothermal Interactions between the Lithosphere and Oceans*. Christopher German, Jian Lin and Lindsay M. Parson, eds. Washington, DC: American Geophysical Union, :187-217, 2004, doi: 10.1029/148GM08.

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Department of WHOI Author: GEOL. AOPE. BIO.

Contribution Number: **11172**

**Freitag, L., and M. Stojanovic**

MMSE acquisition of DSSS acoustic communication signals. *Oceans '04*, :14-19, 2004.

Department of WHOI Author: AOPE.

**Fuchs, Heidi L., Lauren S. Mullineaux, and Andrew R. Solow**

Sinking behavior of gastropod larvae (*Ilyanassa obsoleta*) in turbulence. *Limnol.Oceanogr.*, 49:1937-1948, 2004.

Department of WHOI Author: BIO. MPC.

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Tracers of ocean mixing. In: *Treatise on Geochemistry*. Heinrich D. Holland and Karl K. Turekian, eds. New York, NY: Elsevier, 6:223-246, 2003.

Department of WHOI Author: MCG.

**Jiang, Houshuo, and Gustav-Adolf Paffenhofer**

Relation of behavior of copepod juveniles to potential predation by omnivorous copepods: an empirical-modeling study. *Mar.Ecol.Prog.Ser.*, 278:225-239, 2004.

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Contribution Number: **11066**

**Keigwin, Lloyd D.**

Radiocarbon and stable isotope constraints on last glacial maximum and Younger Dryas ventilation in the western North Atlantic. *Paleoceanography*, 19,PA4012,doi:10.1029/2004PA001029, 2004, doi: 10.1029/2004PA001029.

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**Kurz, Mark D., Joshua Curtice, Dempsey E. Lott, III, and Andy Solow**

Rapid helium isotopic variability in Mauna Kea shield lavas from the Hawaiian Scientific Drilling Project. *Geochem.Geophys.Geosyst.*, 5,Q04G14,doi:10.1029/2002GC000439, 2004, doi: 10.1029/2002GC000439.

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Contribution Number: **11086**

**Lawson, Gareth L., Peter H. Wiebe, Carin J. Ashjian, Scott M. Gallager, Cabell S. Davis, and Joseph D. Warren**

Acoustically-inferred zooplankton distribution in relation to hydrography west of the Antarctic Peninsula. *Deep-Sea Res. II*, 51:2041-2072, 2004, doi: 10.1016/j.dsr2.2004.07.022.

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**Ledwell, James R., Timothy F. Duda, Miles A. Sundermeyer, and Harvey E. Seim**

Mixing in a coastal environment: 1. A view from dye dispersion. *J.Geophys.Res.*, 109,C10013,doi:10.1029/2003JC002194, 2004, doi: 10.1029/2003JC002194.

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**Malins, Donald C., John J. Stegeman, Jack W. Anderson, Paul M. Johnson, Jordan Gold, and Katie M. Anderson**

Structural changes in gill DNA reveal the effects of contaminants on Puget Sound fish. *Environ.Health Perspect.*, 112:511-515, 2004, doi: 10.1289/ehp.6719.

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**Martin, W. R., and F. L. Sayles**

The recycling of biogenic material at the seafloor. In: *Treatise on Geochemistry*. Henry Elderfield, ed. San Diego, CA: Elsevier, 7:37-65, 2003.

Department of WHOI Author: MCG.

**Marvier, Michelle, Peter Kareiva, and Michael G. Neubert**

Habitat destruction, fragmentation, and disturbance promote invasion by habitat generalists in a multispecies metapopulation. *Risk Anal.*, 24:869-878, 2004, doi: 10.1111/j.0272-4332.2004.00485.x.

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Contribution Number: **11182**

**McCollom, Thomas M., and Jeffrey S. Seewald**

Experimental constraints on the hydrothermal reactivity of organic acids and acid anions: I. Formic acid and formate. *Geochim. Cosmochim. Acta*, 67:3625-3544, 2003, doi: 10.1016/S0016-7037(03)00136-4.

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Experimental study of the hydrothermal reactivity of organic acids and acid anions: II. Acetic acid, acetate, and valeric acid. *Geochim. Cosmochim. Acta*, 67:3645-3664, 2003, doi: 10.1016/S0016-7037(03)00135-2.

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**McPhee-Shaw, E. E., R. W. Sternberg, B. Mullenbach, and A. S. Ogston**

Observations of intermediate nepheloid layers on the northern California continental margin. *Cont. Shelf Res.*, 24:693-720, 2004, doi: 10.1016/j.csr.2004.01.004.

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**Mikada, H., and A. D. Chave**

Science requirements as the design drivers for ocean observatories. *Oceans '04*, :2164-2169, 2004.

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**Moore, Michael, Lisa Steiner, and Beatrice Jann**

Cetacean surveys in the Cape Verde Islands and the use of cookiecutter shark bite lesions as a population marker for fin whales. *Aquat.Mamm.*, 29:383-389, 2003.

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**Niehoff, Barbara**

The effect of food limitation on gonad development and egg production of the planktonic copepod *Calnus finmarchicus*. *J.Exp.Mar.Biol.Ecol.*, 307:237-259, 2004, doi: 10.1016/j.jembe.2004.02.006.

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**Pettitt, Robert A., Jr., Andrew Bowen, Robert Elder, Jonathan Howland, and Matthew Naiman**

Power system for the new Jason ROV. *Oceans '04*, :1727-1731, 2004.

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**Pizarro, Oscar, Ryan Eustice, and Hanumant Singh**

Large area 3D reconstructions from underwater surveys. *Oceans '04*, :678-687, 2004.

Department of WHOI Author: AOPE.

**Ravizza, G. E., and J. C. Zachos**

Records of Cenozoic Ocean Chemistry. In: *Treatise on Geochemistry*. Heinrich D. Holland and Karl K. Turekian, eds. New York, NY: Elsevier, 6:551-581, 2003.

Department of WHOI Author: GEOL.

**Robinson, Christie A., Joan M. Bernhard, Lisa A. Levin, Guillermo F. Mendoza, and Jessica K. Blanks**

Surficial hydrocarbon seep infauna from Blake Ridge (Atlantic Ocean, 2150 m) and the Gulf of Mexico (690-2240 m). *Mar.Ecol.*, 25:313-336, 2004, doi: 10.1111/j.1439-0485.2004.00034.x.

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Department of WHOI Author: GEOL.

**Roman, Chris, and Hanumant Singh**

Micro-bathymetric mapping using acoustic range images. *Oceans '04*, :1574-1579, 2004.

Department of WHOI Author: AOPE.

**Rzhanov, Y., L. Mayer, and D. Fornari**

Deep-sea image processing. *Oceans '04*, :647-652, 2004.

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**Sengco, Mario R., and Donald M. Anderson**

Controlling harmful algal blooms through clay flocculation. *J.Eukaryot.Microbiol.*, 51:169–172, 2004, doi: 10.1368/1066-5234(2004)051<0169:CHABTC>2.0.CO;2.

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Department of WHOI Author: BIO.

**Sessions, Alex L., Sean P. Sylva, Roger E. Summons, and John M. Hayes**

Isotopic exchange of carbon-bound hydrogen over geologic timescales.

*Geochim.Cosmochim.Acta*, 68:1545-1559, 2004, doi: 10.1016/j.gca.2003.06.004.

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Department of WHOI Author: GEOL.

**Seyfried, W. E., Jr., J. S. Seewald, M. E. Berndt, K. Ding, and D. I. Foustoukos**

Correction to “Chemistry of hydrothermal vent fluids from the Main Endeavour Field, northern Juan de Fuca Ridge: Geochemical controls in the aftermath of June 1999 seismic events”.

*J.Geophys.Res.*, 109,B07105,doi:10.1029/2004JB003219, 2004, doi:

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**Smith, Deborah K., Robert P. Dziak, Haru Matsumoto, Christopher G. Fox, and Maya Tolstoy**

Autonomous hydrophone array monitors seismic activity at northern Mid-Atlantic Ridge. *Eos*, 85:1,5, 2004.

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**Sonnichsen, F., A. Maffei, K. Asakawa, and X. Garcia**

Basic requirements and options for communication systems in scientific underwater cable networks. *Oceans '04*, :2211-2218, 2004.

Department of WHOI Author: AOPE. ADMIN.

**Talley, Wayne K., Di Jin, and Hauke Kite-Powell**

Post OPA-90 vessel spill differentials: transfers versus vessel accidents. *Marit.Policy Manage.*, 31:225-240, 2004, doi: 10.1080/0308883042000209571.

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Contribution Number: **11079**



**Tyack, Peter, Jonathan Gordon, and David Thompson**

Controlled exposure experiments to determine the effects of noise on large marine mammals. *Mar.Technol.Soc.J.*, 37:41-53, 2004.  
Department of WHOI Author: BIO.

**Vannucchi, Paola, Simone Galeotti, Peter D. Clift, Cesar R. Ranero, and Roland von Huene**

Long-term subduction-erosion along the Guatemalan margin of the Middle America Trench. *Geology*, 32:617-620, 2004, doi: 10.1130/G20422.1.

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Department of WHOI Author: GEOL.

**von Reden, K. F., J. C. Donoghue, K. L. Elder, A. R. Gagnon, D. Stuart Gerlach, V. S. Griffin, R. J. Healy, P. Long, A. P. McNichol, D. Percy, M. L. Roberts, R. J. Schneider, L. Xu, and J. M. Hayes**

Plans for expanded <sup>14</sup>C analysis at the NOSAMS facility - a status and progress report. *Nucl.Instrum.Meth.Phys.Res.B*, 223-224:50-54, 2004, doi: 10.1016/j.nimb.2004.04.014.

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Contribution Number: **10699**

**Williams, Albert J., III**

A solid state tilt meter for current meter attitude determination. *Oceans '04*, :1395-1398, 2004.  
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**Yu, Zhiming, Mario R. Sengco, and Donald M. Anderson**

Flocculation and removal of the brown tide organism, *Aureococcus anophagefferens* (Chrysophyceae), using clays. *J.Appl.Phycol.*, 16:101-110, 2004, doi: 10.1023/B:JAPH.0000044775.33548.38.

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Contribution Number: **10768**

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