Print

Dr. Steven J. Lentz: Curriculum Vitae

Steven J. Lentz
Seward Johnson Chair
Physical Oceanographer
Senior Scientist
Department of Physical Oceanography, MS #21
Woods Hole Oceanographic Institution
Woods Hole, MA 02543-1535

Telephone: 508-289-2808
Fax: 508-457-2181
E-mail: slentz@whoi.edu
Home Page:
http://www.whoi.edu/SteveLentz/

EDUCATION:

B.A., University of California, San Diego, 1977 (Mathematics)

B.A., University of California, San Diego, 1977 (Applied Mechanics and Engineering science)

Ph.D., Scripps Institution of Oceanography, 1984 (Oceanography)

PROFESSIONAL EXPERIENCE:

2000-present	Senior Scientist, Woods Hole Oceanographic Institution
1991-2000	Associate Scientist, Woods Hole Oceanographic Institution (tenure granted 1995)
1987-1991	Assistant Scientist, Woods Hole Oceanographic Institution
1985-1987	Visiting Investigator, Woods Hole Oceanographic Institution
1984-1985	Research Assistant, Scripps Institution of Oceanography
1978-1984	Graduate Research Assistant, Scripps Institute of Oceanography

AWARDS:

Graduated summa cum laude, Mathematics and Applied Mechanics & Engineering Science, 1977

Editors' Citation for Excellence in Refereeing for *JGR-Oceans*, 1993

AGU Fellow, 2009

PROFESSIONAL AFFILIATIONS:

Member, American Geophysical Union

Member, American Meteorological Society

RESEARCH INTERESTS:

Coastal oceanography including the wind-driven circulation, surface and bottom boundary layer dynamics, river plumes, surf-zone dynamics, tides, and coastal meteorology.

PROFESSIONAL ACTIVITIES:

WHOI (Non Education Related):

- Deep Submergence Ad Hoc Committee, 1991
- Sea Grant Review Committee, 1992
- Search Committee for new head of the Mooring Design group
- Trustee/Scientist Briefings, January 1993
- Member of the WHOI Ethics Committee, 1993-1994
- Mellon Awards Review Panel, 1993
- Seagoing Oceanographers – PO department, 1994
- Reengineering Library “Team”, 1994
- Upper Ocean Processes Group, 1996-2003
- Ad Hoc Committee Green Technology Awards, 1996
- PO Recruitment Committee, 1988-1996
- Ad Hoc Committee CRC proposals, 1996
- Gender Equity Committee 1999-2004
- TenSec, 2001-2003
- Ad Hoc Benefits Committee, 2005
- Gender Equity at Sea Committee, 2005- 2007
- Education Coordinator for PO, 2007, 2008
- COI Proposal Review Panel, 2007, 2010, 2011, 2012, 2013
- CICOR Coastal Committee, 2007
- Chair, Chapman Lecture, 2007
- Gender Equity Program Advisory Committee, 1990-2005
- Coastal Ocean Institute Rep for PO Department, 2011 –
- Chaired Promotion Committee, 2003, 2009, 2011-
- Mentoring Committees Sci. Staff (2 PO), (1 Biology), 2012

Outside WHOI (Other than Attendance at Society/National Meetings):

AGU, 1989

AMS, 1989

Chair, CoPO Inner Shelf Working Group, 1989Southern California Bight Physical Oceanography Workshop; Chairman of the shelf/slope circulation working group, 1990

AMS Committee on Coastal Meteorology and Oceanography, 1992

ONR Coastal Optics Workshop, March, 1992

CoOP Workshop – Wind-Driven Transport, July 1993

Navy Symposium on Coastal Oceanography and Littoral Warfare, August 1993

Planning Meeting for CoOP Field Program, November, 1993

NSF Panel, 1996

GLOBEC Meeting, November 1996

CoOP Inner-Shelf Study Meeting, 1988, 1990 (Session Chair), 1997

MABPOM Meeting, November, 1998, 199, 2001, 2003

Coastal Mixing and Optics, September, 1998

Eastern Pacific Ocean Conference, October, 1999

Vertical Mixing in the Coastal Ocean Workshop, April 2000

Coastal Observatory Science workshop, 2002

Gordon Research Conference on Coastal Ocean Circulation: Vice Chair, 1998-2001; Chair 2001- 2005

Coastal CO2 Workshop, September, 2005

Mentoring Physical Oceanography Women to Increase Retention (MPOWIR): Workshop participant (October, 2005)

Hypoxia in the northern Gulf of Mexico Assessing the state of the science (April 2006)

Ketchum Award Ceremony, U. Delaware, Nov. 2007

Editorial Board, *Journal of Physical Oceanography*, 2007-

Pattullo Conference, May, 2008

Pioneer Array Workshop (UMass), June 2012

Selected Major Collaborative Programs:

CODE (Coastal Ocean Dynamics Experiment)

SMILE (Shelf Mixed Layer Experiment)

AMASSEDS (A Multidisciplinary Amazon Shelf Sediment Study)

CoOP Duck (Coastal Ocean Processes study off Duck, N.C.)

GLOBEC Georges Bank (Global Ocean Ecosystem Dynamics)

CM&O (Coastal Mixing and Optics)

KAUST Red Sea (King Abdullah University of Science and Technology)

PARTICIPATION IN EDUCATION PROGRAM:

Educational Activities

Summer Student Fellowship Committee, 1994-1997

Post-Doctoral Scholar Representative, 2002-2005

Education Coordinator for PO Department, 2006-2012

Courses taught (MIT/WHOI Joint Program in Oceanography)

Dynamics of Shelf Circulation (1986, 1987, 1989, 1991, 1992, 1993, 1995, 2002, 2004)

Coastal Physical Oceanography (with Cenedese and Chapman, 2003)

Coastal Oceanography Reading Course 12.862 (with Lerczak and Cenedese)

Guest lecturer:

Estuarine and Coastal Fluid Dynamics Summer School Friday Harbor 2003, 2009, 2012

WHOI Geophysical Fluid Dynamics Summer Program 2007

Alpine Summer School on Buoyant Flows (Italy) 2010

Lecture, Palau Undergrads, September 2011

SUPERVISION AT WHOI:

Carol Alessi, 1987-2003

Craig Marquette, 1993-

Jim Churchill, 2005-

Advising:

Ph.D. Students MIT/WHOI: E. Dever (1991-1995), J. Austin (1994-1998), M. Bowen (1995-1999, W. R. Geyer primary adviser), M. Fewings (2003-2007), J. Benthuysen (2006-2010, L. Thomas primary adviser), R. Horwitz (2006-2012).

Post-Doctoral Scholars: K. Shearman (2001–2002), Irene Garcia Berdeal (2006-2007, Lerczak primary), Anthony Kirincich (2007–2009), Kristen Davis (2009–2010), Tom Connolly (2012-present), Ke Chen (2012-present, Gawarkiewicz primary)

Ph.D. dissertation committees: MIT/WHOI Joint Program – J. LaCasce (1992-1996), D. Fong (1994-1998), J. Pringle (1994-1998), S. Werner (1996-1999), L. Garland (1994-1999), J. Thompson (2003-2007), C. Moffat (2003-2007), A. Apostos (2004-2007), J. Benthuysen (2006-2010), E. Logvinov (2008-2010), V. Pavel (2008-2012), R. Chen (2009-2013), N. Woods (2009-2013), W. Bernstein (Biology, 2010-2013), M. Oltmanns (2011-present), M. Moulton (2012-present), R. Jackson (2012-present), D. Cherian (2012-present); S. Rennie (1994-1997), Virginia Institute of Marine Science; C. Janzen (1997-2000), University of Delaware, H. Deese (2008-2009), University of Maine.

Chair, Thesis Defense: C. Chen 1992, W. Shaw 1999, A. Russell 2002, J. Hyatt, 2006, G. Gerbi 2008, K. Silverthorne 2010.

Summer Student Fellows: S. Patch (1989 and 1990), M. Carr (1996), T. Connolly (2002), K. Silverthorne (2003), Orianna DeMasi (2007), Liam O'Suilleabhain (2009).

Undergraduates: Olavo Marquez (2012-2013, senior thesis)

CRUISE PARTICIPATION/FIELD WORK:

Deployment of moored array for surface mixed layer experiment over Northern California shelf, November, 1988

SMILE, CTD surveys and mooring work, February-March, 1989

SMILE, CTD surveys and mooring recovery, May 1989

Chief Scientist, CoOP -inner-shelf mooring deployment – August 1994

Chief Scientist, CoOP inner-shelf mooring recovery – December 1994

Chief Scientist, coastal mixing and optics deployment cruise on *R/V Oceanus*, July 29-August 10, 1996.

Coastal mixing and optics recovery cruise on *R/V Oceanus*, June 1997.

NCEX deployment cruise, September 16-24, 2004

NCEX turnaround cruise, October 24-29, 2004

Several 1 day trips on Tioga to deploy/recover moored array off south shore of Martha's Vineyard, 2007.

KAUST Red Sea cruises/field work October 2008 and April 2009

Tioga to recovery moored array off south shore of Martha's Vineyard, 2010

KAUST Red Sea cruises/field work October - November 2009 and May - June 2010

KAUST Red Sea cruises/field work November 2010 and May - June 2011

Palau - to study coral reef hydro-dynamics 2 weeks Sept. 2011

Saudi Arabia - KAUST project 2 weeks Dec 2011

Saudi Arabia - KAUST project 3 weeks May 2012

PAPERS IN REFEREED JOURNALS AND BOOKS:

Author or co-author of more than 80 refereed scientific publications.

Refereed Publications:

Chen, K., G. G. Gawarkiewicz, S. J. Lentz, *and* J. M. Bane, 2014. Diagnosing the warming of the Northeastern U.S. Coastal Ocean in 2012: A linkage between the atmospheric jet stream variability and ocean response. *J. Geophys. Res. Oceans,* 119, 218–227, *doi: 10.1002/2013JC009393.*

Shamberger, K., A. Cohen, Y. Golbuu, D. McCorkle, S. Lentz, and H. Barkley, 2014. Diverse coral communities in naturally acidified waters of a Western Pacific Reef. *Geophysical Research Letters*, 41, *doi:10.1002/2013GL058489.*

Horwitz, R., and S. J. Lentz, 2014. Inner shelf response to cross-shelf wind stress: the importance of the cross-shelf density gradient in an idealized numerical model and field observations. *J. Phys. Oceanogr.*, 44, 86–103, doi: http://dx.doi.org/10.1175/JPO-D-13-075.1.

Churchill, J., S. Lentz, J. T. Farrar, and Y. Abualnaja, 2014. Properties of Red Sea coastal currents. *Cont. Shelf Res*., 78, 51–61.

Lentz, S., J. Churchill, C. Marquette, and J. Smith, 2013. Evaluation and recommendations for improving the accuracy of an inexpensive water temperature logger. *J. Atmos. Oceanic Technol.*, 30, 1576–1582. doi: http://dx.doi.org/10.1175/JTECH-D-12-00204.1

Kirincich, Anthony R., Steven J. Lentz, J. Thomas Farrar, and Neil K. Ganju, 2013. The Spatial Structure of Tidal and Mean Circulation over the Inner Shelf South of Martha's Vineyard, Massachusetts. *J. Phys. Oceanogr.*, 43, 1940–1958, doi: http://dx.doi.org/10.1175/JPO-

Moffat, C., and S. J. Lentz, 2012. On the response of a buoyant plume to downwelling-favorable wind stress. *J. Phys. Oceanogr*., 42(7), doi:10.1175/JPO-D-11-015.1.

Lentz, S. J., and M. R. Fewings, 2012. The wind-and wave-driven inner-shelf circulation. *Annual Reviews of Marine Science*, 4, 317-343, doi: 10.1146/annuvrev-marine-120709-142745.

Ganju, N. K., Lentz, S. J., A. R. Kirincich, and J. T. Farrar, 2011. Complex mean circulation over the inner shelf south of Martha's Vineyard revealed by observations and a high-resolution model. *J. Geophys. Res*., 116, C10036, doi:10.1029/2011JC007035.

Fewings, M. R., and S. J. Lentz, 2011. Summertime cooling of the shallow continental shelf. *J. Geophys. Res*., 116, C07015, doi:10.1029/2010JC006744.

Sutherland, D. A., F. Straneo, S. J. Lentz, and P. Saint-Laurent, 2011. Observations of fresh, anticyclonic eddies in the Hudson Strait outflow. *Journal of Marine Systems*, 88, 375-384, doi:10.1016/j.jmarsys.2010.12.004.

Davis, et al, 2011. Observations of the thermal environment on Red Sea platform reefs: a heat budget analysis. *Coral Reefs*, 30, 25-36, doi:10.1007/s00338-011-0740-8.

Fewings, M. R., and S. J. Lentz, 2010. Momentum balances on the inner continental shelf at Martha's Vineyard Coastal Observatory. *Journal of Geophysical Research*, 115, C12023, doi:10.1029/2009JC005578.

Lentz, S. J., R. K. Shearman, and A. J. Plueddemann, 2010. Heat and salt balances over the New England continental shelf, August 1996 to June 1997. *Journal of Geophysical Research*, 115, C07017, doi:10.1029/2009JC006073.

Shearman, R. K., and S. J. Lentz, 2010. Long-term sea surface temperature variability along the U.S. east coast. *Journal of Physical Oceanography*, 40(5), 1004-1017.

Brink, K. H., and S. J. Lentz, 2010. Buoyancy arrest and bottom Ekman Transport: Part II, Oscillating Flow. *Journal of Physical Oceanography,* 40(4), 636-655.

Brink, K H., and S. J. Lentz, 2010. Buoyancy arrest and bottom Ekman transport, Part I, Steady Flow. *Journal of Physical Oceanography,* 40(4), 621-635.

Lentz, S. J., 2010. The mean along-isobath heat and salt balances over the Middle Atlantic Bight continental shelf. *Journal of Physical Oceanography*, 40(5), 934-948.

Kirincich, A. R., S. J. Lentz, and G. P. Gerbi, 2010. Calculating Reynolds stresses from ADCP measurements in the presence of surface gravity waves using the cospectra fit method. *Journal of Atmospheric and Oceanic Technology*, 27(5), 889-907.

Herbers, T. H. C., and S. J. Lentz, 2010. Observing directional properties of ocean swell with an Acoustic Doppler Current Profiler (ADCP). *Journal of Atmospheric and Oceanic Technology*, 27, 210-225.

Kirincich, A. R., S. J. Lentz, and J. A. Barth, 2009. Wave-driven inner-shelf motions on the Oregon Coast. *Journal of Physical Oceanography*, 39(11), 2942-2956.

Cowles, G. W., S. J. Lentz, C. Chen, Q. Xu, and R. C. Beardsley, 2008. Comparison of observed and model-computed low frequency circulation and hydrography on the New England shelf. *Journal of Geophysical Research*, 113, C09015, doi:10.1029/2007JC004394.

Lentz, S. J., M. Fewings, P. Howd, J. Fredericks, and K. Hathaway, 2008. Observations and a model of undertow over the inner continental shelf. *Journal of Physical Oceanography*, 38(11), 2341-2357.

Fewings, M., S. J. Lentz, and J. Fredericks, 2008. Observations of cross-shore flow driven by cross-shore winds on the inner continental shelf. *Journal of Physical Oceanography*, 38(11), 2358-2378.

Lentz, S. J., 2008. Seasonal variations in the circulation of the Middle Atlantic Bight continental shelf. *Journal of Physical Oceanography* , 38(7), 1486-1500.

Lentz, S. J., 2008. Observations and a model of the mean circulation over the Middle Atlantic Bight continental Shelf. *Journal of Physical Oceanography*, 38(6), 1203-1221.

Sobarzo, M., R. K. Shearman, and S. J. Lentz, 2007. Near-inertial motions over the continental shelf off Concepcion, Central Chile.

Progress in Oceanography (Chile), 75(3), 348-362.

Lentz, S. J., and J. Largier, 2006. The influence of wind forcing on the Chesapeake Bay buoyant coastal current. *Journal of Physical Oceanography*, 36(7), 1305-1316.

Chapman, D. C., and S. J. Lentz, 2005. Acceleration of a stratified current over a sloping bottom, driven by an alongshelf pressure gradient. *Journal of Physical Oceanography,* 35, 1305-1317.

Lentz, S. J., 2004. The response of buoyant coastal plumes to upwelling-favorable winds. *Journal of Physical Oceanography*, 34(11), 2458-2469.

Lentz, S. J., and D. C. Chapman, 2004. The importance of non-linear cross-shelf momentum flux during wind-driven coastal upwelling. *Journal of Physical Oceanography*, 34, 2444-2457.

Plueddemann, Albert J., Steven J. Lentz, and Eugene A. Terray, 2003. Comparison of five current meters in a tidally dominated flow. *Current Measurement Technology, 2003*, *Proceedings of the IEEE/OES Seventh Working Conference on Current Measurement Technology,* 13-15 March 2003 Page(s): 176 – 181.

Shearman, R. K., and S. J. Lentz, 2003. Observations of tidal variability on the New England Shelf. *Journal of Geophysical Research,* 109, C06010,doi:10.1029/2003JC001972.

Shearman, R. K., and S. J. Lentz, 2003. Dynamics of mean and subtidal flow on the New England Shelf, *Journal of Geophysical Research* , 108(C8), 3281, doi:10.1029/2002 HC991416.

Beardsley, R. C., S. J. Lentz, R. A. Weller, R. Limeburner, J. D. Irish, and J. B. Edson, 2003. Surface forcing on the southern flank of Georges Bank February–August 1995. *Journal of Geophysical Research*, (GLOBEC special section), 108(C11), 8007, doi:10.1029/2002 JC001359.

Werner, S. R., R. C. Beardsley, S. J. Lentz, D. Hebert, and N. Oakey, 2003. Observations and modeling of the tidal bottom boundary layer on the southern flank of Georges Bank. *Journal of Geophysical Research*, (GLOBEC Special Issue), 108(C11), 8005, doi:10.1029/ 2001JC001271.

Lentz, S. J., R. C. Beardsley, J. D. Irish, J. Manning, P. C. Smith, and R. A. Weller. 2003. Temperature and salt balances on Georges Bank February-August 1995. *Journal of Geo-physical Research*, 108(C11), doi:10.1029/2001JC001220.

Lentz, S. J., 2003. A climatology of salty intrusions over the continental shelf from Georges Bank to Cape Hatteras. *Journal of Geophysical Research*, 108(C10), 3326, doi: 10.1029/ 2003JC001859.

Lentz, S. J., S. Elgar, and R. T. Guza, 2003. Observations of the flow field near the nose of a buoyant coastal current. *Journal of Physical Oceanography*, 33, 933-943.

Lentz, S., R. K Shearman, S. Anderson, A. Plueddemann, and J. Edson, 2003. Evolution of stratification over the New England shelf during the Coastal Mixing and Optics study, August 1996-June 1997. *Journal of Geophysical Research*, 108(C1), 3008, doi:10.1029/ 2001JC001121.

Pawlowicz, R., R. Beardsley, and S. Lentz, 2002. Classical tidal harmonic analysis with errors in MATLAB using T_TIDE. *Computers and Geosciences*, 28(8), 929-937.

Lentz, S. J., and K. R. Helfrich, 2002. Buoyant gravity currents along a sloping bottom in a rotating fluid. *Journal of Fluid Mechanics*, 464, 251-278.

Garland, E. D., C. A. Zimmer, and S. J. Lentz, 2002. Larval distributions in inner-shelf waters: The roles of wind-driven cross-shelf currents and diel vertical migrations. *Limnology and Oceanography*, 47(3), 803-817.

Austin, J. A., and S. J. Lentz, 2002. The inner shelf response to wind-driven upwelling and downwelling. *Journal of Physical Oceanography*, 32(7), 2171-2193.

Lentz, S. J., 2001. The influence of stratification on the wind-driven cross-shelf circulation over the North Carolina shelf. *Journal of Physical Oceanography*, 31(9), 2749-2760.

Lentz, S., and J. Trowbridge, 2001. A dynamical description of fall and winter mean current profiles over the northern California Shelf. *Journal of Physical Oceanography*, 31(4), 914-931.

Lentz, S., M. Carr, and T. H. C. Herbers, 2001. Barotropic tides on the North Carolina shelf. *Journal of Physical Oceanography*, 31(7), 1843-1859.

Lentz, S., and B. Raubenheimer, 1999. Field observations of wave setup. *Journal of Geophysical Research*, 104(C11), 25,867-25,875.

Rennie, S. E., J. L. Largier, and S. J. Lentz, 1999. Observations of a pulsed buoyancy current downstream of Chesapeake Bay. *Journal of Geophysical Research*, 104(C8), 18,227-18,240.

Lentz, S., R. T. Guza, S. Elgar, F. Feddersen, and T. H. C. Herbers, 1999. Momentum balances on the North Carolina inner shelf. *Journal of Geophysical Research*, 104(C8), 18,205-18,226.

Austin, J. A., and S. J. Lentz, 1999. The relationship between synoptic weather systems and meteorological forcing on the North Carolina inner shelf. *Journal of Geophysical Research*, 104(C8), 18,159-18,185.

Shay, L. K., S. J. Lentz, H. C. Graber, and B. K. Haus, 1998. Current structure variations detected by high frequency radar and vector measuring current meters. *Journal of Atmospheric and Oceanic Technology*, 15(1), Part 2, 237-256.

Trowbridge, J. H., and S. J. Lentz, 1998. Dynamics of the bottom boundary layer on the northern California shelf. *Journal of Physical Oceanography*, 28(10), 2075-2093.

Geyer, W. R., R. C. Beardsley, S. J. Lentz, J. Candela, R. Limeburner, W. E. Johns, B. M. Castro, and I. D. Soares, 1996. Physical oceanography of the Amazon Shelf. *Continental Shelf Research*, 16 (AMASSEDS Special Issue), 575-616.

Beardsley, R. C., E. P. Dever, S. J. Lentz, and J. P. Dean, 1998. Surface heat flux variability over the northern California shelf. *Journal of Geophysical Research,* 103(C10), 21,553-21,586.

Chapman, D. C., and S. J. Lentz, 1997. Adjustment of stratified flow over a sloping bottom. *Journal of Physical Oceanography*, 27(2), 340-356.

Limeburner, R., R. C. Beardsley, I. D. Soares, S. J. Lentz, and J. Candela, 1995. Lagrangian flow observations of the Amazon River discharge in the North Atlantic. *Journal of Geophysical Research*, 100(C2), 2401-2415.

Lentz, S. J., B. Butman, and A. J. Williams, III, 1995. A comparison of BASS and VACM current observations during STRESS*. Journal of Atmospheric and Oceanic Technology*, 12(6), 1328-1337.

Lentz, S. J., and R. Limeburner, 1995. The Amazon River Plume during AMASSEDS: Spatial characteristics and salinity variability. *Journal of Geophysical Research,* 100(C2), 2355-2375.

Lentz, S. J., 1995. U.S. contributions to the physical oceanography of continental shelves in the early 1990's. *Reviews of Geophysics*, Supplement 33(2), 1225-1236.

Lentz, S. J., 1995. The Amazon River Plume during AMASSEDS: Subtidal current variability and the importance of wind forcing. *Journal of Geophysical Research,* 100(C2), 2377-2390.

Lentz, S. J., 1995. Sensitivity of the inner-shelf circulation to the form of the eddy viscosity profile. *Journal of Physical Oceanography*, 25 (1), 19-28.

Lentz, S. J., 1995. Seasonal variations in the horizontal structure of the Amazon Plume inferred from historical hydrographic data. *Journal of Geophysical Research*, 100(C2), 2391-2400.

Beardsley, R. C., J. Candela, R. Limeburner, W. R. Geyer, S. J. Lentz, B. M. Castro, D. Cacchione, and N. Carneiro, 1995. The M_2 tide on the Amazon Shelf. *Journal of Geophysical Research*, 100(C2), 2283-2319.

Samelson, R. M., and S. J. Lentz, 1994. The horizontal momentum balance in the marine atmospheric boundary layer during CODE-2. *Journal of Atmospheric Sciences*, 51(24), 3745-3757.

Lentz, S. J., 1994. Current dynamics over the northern California inner shelf. *Journal of Physical Oceanography*, 24(12), 2461-2478.

Dever, E. P., and S. J. Lentz, 1994. Heat and salt balances over the northern California shelf in winter and spring. *Journal of Geophysical Research*, 99(C8), 16,001-16,017.

Chapman, D. C., and S. J. Lentz, 1994. Trapping of a coastal density front by the bottom boundary layer. *Journal of Physical Oceanography*, 24(7), 1464-1479.

Lentz, S. J., 1993. The accuracy of tide-gauge measurements at subtidal frequencies. *Journal of Atmospheric and Oceanic Technology*, 10(2), 238-245.

Patch, S. K., E. P. Dever, R. C. Beardsley, and S. J. Lentz, 1992. Response characteristics of the VACM compass and vane follower. *Journal of Atmospheric and Oceanic Technology,* 9(4), 459-469.

Lentz, S. J., 1992. The surface boundary layer in coastal upwelling regions. *Journal of Physical Oceanography*, 22(12), 1517-1539.

Trowbridge, J. H., and S. J. Lentz, 1991. Asymmetric behavior of an oceanic boundary layer above a sloping bottom. *Journal of Physical Oceanography*, 21(8), 1171-1185.

Lentz, S. J., and J. H. Trowbridge, 1991. The bottom boundary layer over the northern California shelf. *Journal of Physical Oceanography*, 21(8), 1186-1201.

Lentz, S. J., and D. C. Chapman, 1989. Seasonal differences in the current and temperature variability over the northern California shelf during the Coastal Ocean Dynamics Experiment (CODE). *Journal of Geophysical Research*, 94(C9), 12,571-12,572.

Huyer, A., P. M. Kosro, S. J. Lentz, and R. C. Beardsley, 1989. Poleward flow in the California Current System. In: Poleward Flows Along Eastern Ocean Boundaries, S. J. Neshyba, Christopher N. K. Mooers, R. L. Smith, and R. T. Barber (editors). *Coastal and Estuarine Studies*, 34, 142-159.

Chapman, D. C., S. J. Lentz, and K. H. Brink, 1988. A comparison of empirical and dynamical hindcasts of low-frequency, wind-driven motions over a continental shelf. *Journal of Geophysical Research*, 93(C10), 12,409-12,422.

Lentz, S. J., 1987. A heat budget for the northern California Shelf during CODE-2. *Journal of Geophysical Research*, 92(C13), 14,491-14,509.

Lentz, S. J., 1987. A description of the 1981 and 1982 spring transitions over the northern California Shelf. *Journal of Geophysical Research*, 92(C2), 1545-1568.

Beardsley, R. C., and S. J. Lentz, 1987. The Coastal Ocean Dynamics Experiment (CODE) collection: An Introduction. *Journal of Geophysical Research*, 92(C2), 1455-1463.

Lentz, S. J., and C. D. Winant, 1986. Subinertial currents on the southern California Shelf. *Journal of Physical Oceanography*, 16, 1737-1750.

Books

Lentz, S., 2012. Buoyant coastal currents. *Buoyancy-Driven Flows*, Eric P. Chassignet, Claudia Cenedese, and Jacques Verron, Eds., Cambridge University Press, 164-202.

Lentz, S. J., editor, 1990. *CODE (Coastal Ocean Dynamics Experiment): A Collection of Reprints.* Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, 817 + vii pp.

OTHER PUBLICATIONS: (unreviewed media, etc.)

Non-refereed Publications

Irish, J., A. Plueddemann, and S. J. Lentz, 1995. A comparison of ADCP and VMCM/VACM current observations. *Proceedings of the IEEE Fifth Working Conference on Current Measurements,* February 7-9, 1995, St. Petersburg, FL., Institute of Electrical and Electronics Engineers, New York; pp. 59-64.

Geyer, Wayne R., Robert C. Beardsley, Julio Candela, B. Castro, R. Legeckis, Steven J. Lentz, Richard Limeburner, L. Miranda, and John H. Trowbridge, 1991. The physical oceanography of the Amazon outflow. *Oceanography,* 4, 8-14.

Patch, Sarah K., Robert C. Beardsley, and Steven J. Lentz, 1990. A note on the response characteristics of the VACM compass. In: *Proceedings of the IEEE Fourth Working Conference on Current Measurements*, G. F. Appell and T. B. Curtin, editors; Institute of Electrical and Electronics Engineers, New York; pp. 129-133.

AmasSeds Research Group, 1990. A multidisciplinary Amazon Shelf Sediment Study. *Eos, Transactions, American Geophysical Union*, 71(45), 1771, 1776-1777.

Lentz, Steven J., 1988. The surface boundary layer over the continental shelf. *Woods Hole Oceanographic Institution 1988 Annual Report*

, Woods Hole, Massachusetts, pp. 23-25.

Lentz, Steven J., 1986. The spatial coherence of motions in the ocean offshore of the San Onofre Nuclear Generating Station during the winter. *Final Report to the Marine Review Committee, Solana Beach, California*, 47 pp.

Thesis

Lentz, Steven J., 1984. Subinertial motions on the southern California Continental Shelf. Ph.D. dissertation, University of California, San Diego, 145 pp.

Technical Reports

Galbraith, N., A. Plueddemann, S. Lentz, S. Anderson, M. Baumgartner, and J. Edson, 1999. Coastal mixing and optics experiment moored array data report. *Woods Hole Oceana-graphic Institution Technical Report* WHOI-99-15, 162 pp.

Galbraith, Nancy, William Ostrom, Bryan Way, Steve Lentz, Steve Anderson, Mark Baumgartner, Al Plueddemann, and Jim Edson, 1997. Coastal mixing and optics experiment: Mooring deployment cruise report, R/V *Oceanus* Cruise Number 284, July 31-August 11, 1996. *Woods Hole Oceanographic Institution Technical Report* WHOI-97-13, 92 pp.

Beardsley, R. C., S. J. Lentz, R. A. Weller, J. D. Irish, K. H. Brink, and R. Limeburner, 1997. A preliminary description of the heat budget, southern flank of Georges Bank, spring-summer, 1996. *ICES Council Meeting Papers*, International Council for the Exploration of the Sea (ICES), Copenhagen (Denmark), 4 pp.

Marquette, C., and S. J. Lentz, 1996. Evaluation and modification of SeaBird's Seagauge pressure recorder. *Woods Hole Oceanographic Institution, Upper Ocean Processes Group, Technical Note 16*, 2 pp.

Alessi, C., S. J. Lentz, and J. Austin, 1996. Coastal ocean processes inner-shelf study: Coastal and moored physical oceanographic measurements. *Woods Hole Oceanographic Institution Technical Report* WHOI-96-06, 142 pp.

Lentz, Steve, William Ostrom, and Richard Pieper, 1995. *GLOBEC stratification process study mooring recovery, R/V Endeavor Cruise No.271 to Georges Bank, August22-27, 1995*. Woods Hole Oceanographic Institution, Woods Hole, Mass., 54 pp.

Fredericks, J. J., J. H. Trowbridge, A. J. Williams III, S. J. Lentz, B. Butman, and T. F. Gross, 1993. Fluid mechanical measurements within the bottom boundary layer over the northern California continental shelf during STRESS. *Woods Hole Oceanographic Institution Technical Report* WHOI-93-32, 116 pp.

Alessi, C. A., S. J. Lentz, R. C. Beardsley, B. Castro, and W. R. Geyer, 1992. A Multi-disciplinary Amazon Shelf SEDiment Study (AmasSeds): Physical oceanography, moored array component, and data presentation. *Woods Hole Oceanographic Institution Technical Report* WHOI-92-36, 100 pp.

Alessi, C. A., S. J. Lentz, and R. C. Beardsley, 1991. Shelf Mixed Layer Experiment (SMILE) Program Description and Coastal and Moored Array Data Report. *Woods Hole Oceanographic Institution Technical Report* WHOI-91-39*,* 221 pp.

Winant, D. Clinton, U. Send, and Steven J. Lentz, 1985. CODE-2: Moored current observations. In: CODE-2: Moored array and large-scale data report, Richard Limeburner, editor; *Woods Hole Oceanographic Institution Technical Report* WHOI-85-35, pp. 73-107.

Lentz, Steven J., and Clinton D. Winant, 1979. Ocean Station Del Mar current meter campaign 1978-1979 data report. *SIO Reference No.79-27*, Scripps Institution of Oceanography, University of California, San Diego, 77 pp.

PAPERS PRESENTED AT MEETINGS AND INVITED LECTURES:

December, 1986: A heat budget estimate for the Northern California shelf during the summer of 1982. AGU.

April, 1987: A heat budget estimate for the Northern California shelf during the summer. WHOI.

April, 1987: A heat budget estimate for the Northern California shelf during the summer. OSU.

May, 1987: A heat budget estimate for the Northern California shelf during the summer. North Carolina State.

August, 1987: Why the water on the Northern California shelf is cold during the summer. Summer lecture series at WHOI.

January, 1988: Differences in the current variability over the Northern California shelf. Ocean Sciences meeting.

December, 1988: The surface mixed layer over the Northern California continental shelf. AGU (Session Chair).

May 1989: SMILE Update. WHOI Buoy Lunch.

December 1989: The shelf mixed layer experiment: A preliminary look at the moored observations (with R. Beardsley). AGU (Session Chair).

December 1989: The bottom mixed layer over the northern California continental shelf (with J. Trowbridge). AGU.

May 1990: The bottom boundary layer over the continental shelf – a mixed-up, slanted perspective. WHOI Physical Oceanography seminar.

December 1990: Moored current observations on the Amazon inner and mid-shelf. AGU.

June 1991: The surface boundary layer in coastal upwelling regions. WHOI Physical Oceanography seminar.

March 1992: An overview of coastal physical oceanography. ONR Coastal Optics Workshop.

March 1992: The Amazon Plume. WHOI Trustees Executive Committee.

March 1992: Dual-rotor VACM deployed during AMASSEDS. WHOI Buoy Lunch.

October 1992: The surface mixed-layer in coastal upwelling regions. EPOC meeting.

December 1992: Is the inner-shelf circulation sensitive to the form of the eddy-viscosity profile? AGU.

March 1993: The Amazon Plume. UCONN.

June 1993: The Amazon Plume. WHOI.

June 1993: The continental shelf surface and bottom boundary layers. Invited speaker Gordon Research Conference.

July, 1993: Wind-Driven transport – physical oceanography overview. Invited speaker CoOP workshop.

August 1993: Inner-Shelf dynamics overview. Invited speaker. Navy Symposium on Coastal Oceanography and Littoral Warfare.

March 1994: Comparison of BASS and VACM during STRESS. Buoy Lunch.

September 1994: Structure and dynamics of the bottom boundary layer during STRESS. EPOC meeting.

December 1995: CoOP overview talk. AGU.

December 1995: CoOP inner-shelf momentum balances. AGU.

October 1996: Invited speaker seminar series at Univ. Delaware.

October 1996: Momentum balances over the North Carolina inner shelf. WHOI PO seminar.

December 1996: A preliminary description of the heat budget, Southern Flank of Georges Bank, Spring-Summer, 1995: Part II. Ocean Response. Lentz, Beardsley, Irish, Brink, Limeburner, and Manning. AGU.

June 1997: Inner-Shelf dynamics off North Carolina. Invited speaker Gordon Research Conference.

November 1997: Evolution of the thermal stratification in the Middle Atlantic Bight during the coastal mixing and optics program, August 1996-June 1997.

February 1998: Evolution of the thermal stratification in the Middle Atlantic Bight during the coastal mixing and optics program, August 1996-June 1997.

February 1998: The influence of stratification on the wind-driven cross-shelf circulation over the North Carolina shelf. Ocean Sciences meeting. Invited paper.

September 1998: Mean current profiles over the Northern California shelf in fall and winter. Invited speaker, Bill Grant Symposium.

October 1998: The wind-driven cross-shelf circulation over the North Carolina inner shelf. John Hopkins.

October 1999: Fall and winter mean current profiles over the northern California shelf. EPOC meeting.

October 1999: The influence of stratification on the wind-driven cross-shelf circulation over the North Carolina inner shelf. MABPOM meeting.

January 2000: Current variability on the New England shelf during the coastal mixing and optics program, August 2006-June 1997. Ocean Sciences meeting.

October 2000: Observations of the flow field at the nose of a buoyant coastal current. COFDL talk.

December 2000: A scaling for buoyant coastal currents over a slope. AGU.

June 2001: A scaling for a buoyant coastal plume over a slope. Poster, Gordon Research Conference.

October 2001: The flow field near the nose of a buoyant coastal current. MABPOM meeting.

December 2001: The flow field near the nose of a buoyant coastal current. AGU.

January, 2002: Buoyant gravity currents along a slope. PO Seminar.

November 2002: Analysis of observations from the coastal mixing and optics moored array. ONR site review.

December 2002: A new perspective on wind-driven coastal upwelling, the importance of non-linear momentum flux. AGU.

October 2003: The response of river plumes to upwelling favorable winds. MABPOM meeting.

January 2004: The response of river plumes to upwelling favorable winds. Ocean Sciences meeting.

2004: Freshwater pathway from a buoyant discharge event 8200 years ago. PO informal lunch talk.

2005: Wind-Driven coastal upwelling -The importance of cross-shelf momentum Flux. WHOI PO Seminar.

December, 2005: Observations of shoaling internal tidal waves during NCEX. AGU.

September 2005: Undertow – something to worry about? EPOC.

April 2006: Hypoxia in the northern Gulf of Mexico assessing the state of science. New Orleans

May 2006: Undertow offshore of the surfzone – the role of waves in exchange across the inner shelf. University of Delaware.

January 2007: Undertow offshore of the surfzone. WHOI PO Seminar.

June 2007: Observational evidence for Ekman layer dynamics in the oceanic surface and bottom boundary layers. GFD.

March 2008: A brief overview of inner shelf circulation and dynamics – wind and wave forcing.

Ocean Sciences meeting. Invited speaker.

June 2009: A brief overview of inner shelf circulation and dynamics – wind and wave forcing.

Invited speaker Gordon Research Conference.

September 2009: Hudson Shelf Valley. Rutgers. Invited talk.

February 2010: Two talks on Hudson Shelf Valley, high resolution modeling – Neil Ganju, 1st author. Ocean Sciences meeting.

July 2012: Wave-driven flow over a Red Sea platform reef. International Coral Reef Symposium (Cairns, Australia)

November 2012: The Cold Pool revisited. MABPOM

June 2013: Vertical structure of the circulation and dynamics in Hudson Shelf Valley. Gordon Research Conference.

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Mail: Woods Hole Oceanographic Institution, 266 Woods Hole Road, Woods Hole, MA 02543, USA.
E-Contact: info@whoi.edu; press relations: media@whoi.edu, tel. (508) 457-2000
Problems or questions about the site, please contact webdev@whoi.edu