

CURRICULUM VITAE: ANN ELIZABETH GARGETT

November 2015

Present Positions

Emerita Professor
Center for Coastal Physical Oceanography
Department of Ocean, Earth and Atmospheric Sciences
Old Dominion University, Norfolk VA 23529 USA

Emerita Senior Scientist
Institute of Ocean Sciences, Patricia Bay
Sidney B.C. V8L 4B2 Canada

Adjunct Professor
Skidaway Institute of Oceanography
University of Georgia
10 Ocean Science Circle, Savannah GA 31411 USA

Adjunct Professor
School of Ocean and Earth Sciences
University of Victoria, Victoria B.C. Canada

Citizenship: Canadian

Advanced Degrees:

1966 BSc. (Hons.) in Mathematics and Physics, University of Manitoba
1970 PhD. (Physics), University of British Columbia

Professional History:

1966 Summer Woods Hole Oceanographic Institution, Summer Student Fellow

1967-1970 National Research Council of Canada Graduate Scholarships, for graduate program at the Institute of Oceanography, University of British Columbia

1969 Summer NATO Student Fellow, Advanced Study Institute in Fluid Dynamics, Bangor, Wales

1971 NATO Post-Doctoral Fellowship, held at the National Institute of Oceanography (now S.O.C.), U.K.

1972 Research Scientist 2, Institute of Ocean Sciences, Patricia Bay

1977 Guest Investigator, Woods Hole Oceanographic Institution

1980 Visiting Scientist, Department of Oceanography, University of Washington

December 1982 - June 1983 Green's Fellow at Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography

1984 Research Scientist 3, Institute of Ocean Sciences, Patricia Bay

1989 Research Scientist 4, Institute of Ocean Sciences, Patricia Bay

1992-2001	Research Scientist 5, Institute of Ocean Sciences, Patricia Bay
1994-1995	Visiting Scientist, Centre IFREMER, Brest, France
2001-2008	Professor, Dept. of Ocean Earth and Atmospheric Sciences Old Dominion University, Norfolk VA USA
2005-	Adjunct Professor, Skidaway Institute of Oceanography, University System of Georgia, Savannah GA USA
2008-	Emerita Professor, Old Dominion University
2008-	Emerita Senior Scientist, Institute of Ocean Sciences, Victoria BC
2012-	Adjunct Professor, University of Victoria, Victoria, BC

Science Service Activities:

1990-96	Associate Editor, Journal of Physical Oceanography
1991-1994	Member: AGU Regional Advisory Committee for United States and Canada
1996-1999	Council of The Oceanography Society
1997-2000	NSERC (Natural Sciences and Engineering Research Council) Grant Selection Committee, Environmental Earth Sciences
1997-2001	SCOR WG-108 on Double Diffusion in Oceanography
1999-2003	NATO Advisory Panel of the Environmental and Earth Science and Technology Sub-Program
1999	Member, Research Review Committee for the Scripps Institution of Oceanography
1999-2001	Section Editor (Dispersion and Diffusion), The Encyclopedia of Oceanography
2000-2001	Science Committee for NEPTUNE Canada
2001	Member, Dalhousie University Oceanography Department Review Committee
2002-2004	Member of Scientific Steering Committee, Coastal Ocean Processes (CoOP) Project
2002	Member of Scientific Steering Committee, Scientific Cabled Observatories for Time Series (SCOTS)
2002-2003	Member NAS/NRC Committee on the Implementation of Seafloor Observatories
2003-	Board of Editors, Journal of Marine Research

2004	Member, ORION Committee on Sensors for Ocean Observatories
2004	Member, ORION Committee on Coastal Observing Systems
2005	Chair, Visiting Committee for the Physical Oceanography Dept, Woods Hole Oceanographic Institution
2005-6	Member, Regional Cabled Observatory Joint Advisory Committee (RCOJAC) for ORION-NeptuneCanada
2006-8	Member, ORION STAC (Science and Technology Advisory Committee)

Selected Awards and Recognition:

1991	Fellow of the Royal Society of Canada, Science Academy (Canadian equivalent of the U. S. National Academy of Science)
1991	H. Burr Steinbach Visiting Scholar, Woods Hole Oceanographic Institution/MIT Joint Program
1992	Editor's Award, American Meteorological Society
1992	Editor's Award, Journal of Geophysical Research (Oceans)
1993	Invited speaker, Pacific Northwest Oceanography Graduate Students Retreat
1996	Science Visitor, Dalhousie University Oceanography Graduate Student Society
2003	Inaugural "Henry Stommel Visiting Scholar", Woods Hole Oceanographic Institution
2009	Editor's Award, Cold Regions Science
2015	Tully Medal of the Canadian Meteorological and Oceanographical Society

Selected Invited Lectures:

Joint Oceanographic Assembly: Halifax, 1982

The Oceanography Society Inaugural Meeting, Monterey, 1989.

NATO Advanced Study Institute in "Advanced Physical Oceanographic Numerical Modelling", 1985

ASLO Special Symposium "What controls phytoplankton production in nutrient-rich areas of the open sea?", Feb. 1991.

The Oceanography Society Meeting, "Fluxes in the Vertical Ocean", April 1997.

Chapman Conference on "Coastal Oceanography", June 1997.

ICES Symposium on "Recruitment Dynamics of Exploited Populations: Physical-Biological Interactions", September 1997.

University of Washington Warren Wooster Lecture in Ocean and Fisheries Sciences, March 1999.

ICES Annual Science Symposium, September 2000.

Acoustical Society of America 142nd Meeting, December 2001: Special Session on "Turbulence and Finescale Studies"

CAIMS (Canadian Applied and Industrial Mathematics Society) 2002 Annual Meeting

Rachel Carson Lecture, AGU/CGU/SEG Joint Assembly, 2004

Gordon Conference on Coastal Oceanography, June 2013

Research Funding (USA):

NSF(OCE) Collaborative Research: LES & modeling of turbulence on shallow shelves under combined Langmuir, tidal and convection forcing; with comparison to VADCP observations
09/15/09-08/31/12 \$554,972

NSF(OPP) Interactive effects of UV and vertical mixing on phytoplankton and bacterioplankton in the Ross Sea
04/01/02 - 08/31/08 \$248,429

NSF(OCE) Doppler turbulence techniques for ocean observatories: an interactive approach using in situ measurements and LES models.
04/01/02 - 03/31/09 \$819,734

NSF(OTIC) A two-stage towing system for swath-mapping ocean turbulence
04/01/02 - 07/31/08 \$160,167

Recent Conference Presentations:

Gargett, A. Mixing and transport by Langmuir Supercell events on shallow shelves. Gordon Research Conference on Coastal Oceanography, June 2013. (Invited lecturer)

Gargett, A. Untangling the time-dependent mixture of forces generating turbulence in shallow shelf seas. Ocean Sciences Meeting (February 2012).

Gargett, A. and D. Savidge. The role of Langmuir supercells in seasonally tuned cross-shelf transport of bioactive material. Ocean Sciences Meeting (March 2008).

Voulgaris, G., D. Savidge, **A. Gargett**, J. Morin, J. Amft, J. Nelson and W. Savidge. Physical controls on benthic exchanges on the mid-shelf of the South Atlantic Bight: ripple evolution and turbulence measurements. Ocean Sciences Meeting (March 2008).

P. Neale, C. Sobrino and **A. Gargett**. 2007. Ultraviolet Radiation Effects on Phytoplankton Productivity in a Changing Global Climate. oral presentation, European Photobiology Conference (UK September 2007).

Graduate Training Institutes:

JGOFS Summer Workshop on the Physics of Equatorial Oceans, June 1991.

NATO Advanced Study Institute in "Modelling Oceanic Climate Interactions", Feb. 1992.

MAST Course on "Ocean Turbulence: A Basic Environmental Property for Plankton" Sept. 1995

Refereed publications:

Gargett, A.E. and B.A. Hughes. 1972: On the interaction of surface and internal waves. *J. Fluid Mechanics*, 52(1), 179-191.

Gargett, A.E. 1975: Horizontal coherence of oceanic temperature structure. *J. Phys. Oceanogr.*, 22, 767-776.

Gargett, A.E. 1976: Generation of internal waves in the Strait of Georgia, British Columbia. *Deep Sea Research*, 23, 17-32.

Gargett, A.E. 1976: An investigation of the occurrence of oceanic turbulence with respect to finestructure. *J. Phys. Oceanogr.*, 6, 139-156.

Gargett, A.E. 1978: Microstructure and finestructure in an upper ocean frontal regime. *J. Geophys. Res.*, 83(C10), 5123-5133.

Gargett, A.E., T.B. Sanford and T.R. Osborn. 1979: Surface mixing layers in the Sargasso Sea. *J. Phys. Oceanogr.*, 9(6), 1090-1111.

Gargett, A.E. and T.R. Osborn. 1981: Small-scale shear measurements during the Fine and Microstructure Experiment (FAME). *J. Geophys. Res.*, 86, 1929-1944.

Gargett, A.E., P.J. Hendricks, T.B. Sanford, T.R. Osborn and A.J. Williams, III. 1981: A composite spectrum of vertical shear in the upper ocean. *J. Phys. Oceanogr.*, 11(9), 1258-1271.

Gargett, A.E. 1982: Turbulence measurements from a submersible. *Deep-Sea Res.*, 29A, 1141-1158.

Gargett, A.E. and R.W. Schmitt. 1982: Observations of salt fingers in the central waters of the eastern North Pacific. *J. Geophys. Res.*, 87, 8017-8029.

Denman, K.L. and **A.E. Gargett**. 1983: Time and space scales of vertical mixing and advection of phytoplankton in the upper ocean. *Limn. and Oceanogr.*, 28(5), 801-815.

Gargett, A.E. 1984: Vertical eddy diffusivity in the ocean interior. *J. Mar. Res.*, 42, 359-393.

Gargett, A.E. and G. Holloway. 1984: Dissipation and diffusion by internal wave breaking. *J. Mar. Res.*, 42, 15-27.

Gargett, A.E., T.R. Osborn, P.W. Nasmyth. 1984: Local isotropy and the decay of turbulence in a stratified fluid. *J. Fluid Mech.*, 144, 231-280.

Gargett, A.E. 1985: Evolution of scalar spectra with the decay of turbulence in a stratified fluid. *J. Fluid Mech.*, 159, 379-407.

Gargett, A.E., G. Östlund and C.S. Wong. 1986: Tritium time series from Ocean Station P. *J. Phys. Oceanogr.*, 16(10), 1720-1726.

Holloway, G. and **A.E. Gargett**. 1987: The inference of salt-fingering from towed microstructure observations. *J. Geophys. Res.*, 92(C2), 1963-1965.

Dewey, R.K., W.R. Crawford, **A.E. Gargett** and N.S. Oakey. 1987: A microstructure instrument for profiling oceanic turbulence in coastal bottom boundary layers. *J. Atmosph. and Oceanic Tech.*, 4, 288-297.

Gargett, A.E. 1988: A "large-eddy" approach to acoustic remote sensing of turbulent kinetic energy dissipation rate ϵ . *Atmosph-Ocean*, 26(4), 483-508.

Gargett, A.E. 1988: The scaling of turbulence in the presence of stable stratification. *J. Geophys. Res.*, 93(C5), 5021-5036.

Denman, K.L. and **A.E. Gargett**. 1988: Multiple thermoclines are barriers to vertical exchange in the subarctic Pacific during SUPER, May 1984. *J. Mar. Res.*, 46, 77-103.

Cummins, P.F., G. Holloway and A.E. **Gargett**. 1990: Sensitivity of the GFDL ocean general circulation model to a parameterization of vertical diffusion. *J. Phys. Oceanogr.*, 20(6): 817-830.

Gargett, A.E. 1990: Do we really know how to scale the turbulent kinetic energy dissipation rate ϵ due to breaking of oceanic internal waves? *J. Geophys. Res.*, 95(C9), 15971-15974.

Gargett, A.E. 1991: Physical processes and the maintenance of nutrient-rich euphotic zones. *Limnol. Oceanogr.*, 36, 1527-1545.

Gargett, A.E. and G. Holloway. 1992: Sensitivity of the GFDL ocean model to different diffusivities for heat and salt. *J. Phys. Oceanogr.*, 22(10), 1158-1177.

Gargett, A.E. 1994: Observing turbulence with a modified acoustic Doppler current profiler. *J. Atmosph. Oceanic Tech.*, 11(6), 1592-1610.

Gargett, A.E. and J.N. Moum. 1995: Mixing efficiencies in turbulent tidal fronts: results from direct and indirect measurements of density flux. *J. Phys., Oceanogr.*, 25, 2583-2608.

Gargett, A.E. and B. Ferron. 1996: The effects of differential vertical diffusion of T and S in a box model of thermohaline circulation. *J. Mar. Res.*, 54(5), 827-866.

Gargett, A.E. 1997: "Theories" and techniques for observing turbulence in the ocean euphotic zone. In *Lecture Notes on Plankton and Turbulence*, eds. C. Marrasé., E.Saiz and J.M.Redondo, Scientia Marina, 61(Suppl), 25-45.

Gargett, A. E. 1997: The optimal stability "window": a mechanism underlying decadal fluctuations in North Pacific salmon stocks? *Fish. Oceanogr.* , 6 (2), 109-117.

Ferron, B., H. Mercier, K. Speer, **A.E. Gargett** and K. Polzin 1997: Mixing in the Romanche Fracture Zone. *J. Phys. Oceanogr.*, 28, 1929-1945.

Merryfield, W.J., G. Holloway and **A.E. Gargett**. 1998: Differential vertical transport of heat and salt by weak stratified turbulence. *Geophys. Res. Letters*, 25, 2773-2776.

Merryfield, W. J., G. Holloway, and **A.E. Gargett**. 1999. A global ocean model with double-diffusive mixing, *J. Phys. Oceanogr.*, 29, 1124-1142.

Gargett, A. E. 1999: Velcro measurement of turbulence kinetic energy dissipation rate ϵ . *J. Atmosph. Oceanic Tech.*, 16(12), 1973-1993.

Li, M. , **A. E. Gargett** and K. Denman. 1999: Seasonal and interannual variability of estuarine circulation in a box model of the Strait of Georgia and Juan de Fuca Strait. *Atmosphere-Ocean*, 37(1), 1-19.

Li, M., **A. Gargett** and K. Denman. 2000: What determines seasonal and interannual variability of phytoplankton and zooplankton in strongly estuarine systems? Application to the semi-enclosed estuary of Strait of Georgia and Juan de Fuca Strait. *Est. Coastal and Shelf Sci.* 50, 467-488.

Gargett, A. E. 2001. Oceanographic dispersion. *in Encyclopedia of Environmetrics Vol.3*, ed. A. H. El-Shaarawi and W. W. Piegorsch. J. Wiley & Sons Ltd, 1446-1461.

Gargett, A. E., M. Li and R. M. Brown. 2001: Testing mechanistic explanations of observed correlations between environmental factors and marine fisheries. *Can. J. Fish. Aq. Sci.* 58(1), 208-219.

Gargett, A. E. 2003. Differential diffusion: an oceanographic primer. *Progr. Oceanogr.* 56 (3-4), 559-570.

Gargett, A. E., D. Stucchi and F. Whitney. 2003. Physical processes associated with high primary productivity in Saanich Inlet, British Columbia. *Estuarine, Coastal and Shelf Sci.* 56, 1141-1156.

Ruddick, B. and **A. E. Gargett**. 2003. Oceanic double-diffusion: introduction. *Progr. Oceanogr.* 56 (3-4), 381-393.

Gargett, A. E., W. J. Merryfield and G. Holloway. 2003. Direct numerical simulation of differential scalar diffusion in three-dimensional stratified turbulence. *J. Phys. Oceanogr.* 33(8), 1758-1782.

Gargett, A. J. Wells, A. E. Tejada-Martinez and C. E. Grosch. 2004. Langmuir supercells: a dominant mechanism for sediment resuspension and transport in shallow shelf seas. *Science* 306, 1925-1928.

Gargett, A. E. and J. R. Wells. 2007. Langmuir turbulence in shallow water: Part I. Observations. *J. Fluid Mechanics*, 576, 27-61.

Gargett, A. E. and T. Garner. 2008. Determining Thorpe scales from ship-lowered CTD profiles. *J. Atmos. Oceanic Tech.* 25(9), 1657-1670.

Gargett, A.E., A.E. Tejada-Martinez and C.E. Grosch. 2008. Measuring turbulent large eddy structures with an ADCP. 1. Vertical velocity variance. *J. Mar. Res.*, 66(2), 157-189.

Savidge, W. B., **A. Gargett**, R. A. Jahnke, J. R. Nelson, D. K. Savidge, R. T. Short, and G. Voulgaris. 2008. Forcing and dynamics of seafloor-water column exchange on a broad continental shelf. *Oceanography* 21(4), 179-184.

Gargett, A. E. 2009. Differential Diffusion. Encyclopedia of Ocean Sciences, 2nd edn (*J.H. Steele, K.K. Turekian and S. A. Thorpe*, Editors). Oxford: Academic Press.
<http://www.sciencedirect.com/science/article/pii/B978-0-12-374473-9.00619-6>

Gargett, A.E. 2009. Couette vs. Langmuir circulations: Comment on “On the helical flow of Langmuir circulation — Approaching the process of suspension freezing” by Dethleff, Kempema, Koch and Chubarenko. *Cold Regions Sci. and Tech.* 56, 58-60.

Tejada-Martínez, A. E., C. E. Grosch, **A. E. Gargett**, J. A. Polton, J. A. Smith and J. A. MacKinnon. 2009. A hybrid spectral/finite difference large-eddy simulator of turbulent processes in the upper ocean. *Ocean Modelling* 30, 115-142.

Gargett, A.E., A.E. Tejada-Martinez and C.E. Grosch. 2009. Measuring turbulent large eddy structures with an ADCP. 2. Horizontal velocity variance. *J. Mar. Res.* 67, 569-595.

Neale, P.J., C. Sobrino and **A.E. Gargett**. 2012. Vertical Mixing and the Effects of Solar Radiation on Photosystem II Electron Transport by Phytoplankton in the Ross Sea Polynya. *Deep-Sea Res. Part 1*, 10.1016/j.dsr.2012.01.011, 118-132.

Gargett, A. E. and C.E. Grosch. 2014. Turbulence process domination under the combined forcings of wind stress, the Langmuir vortex force, and surface cooling. *J. Phys. Oceanogr.* 44, 44-67.

Gargett, A. E., D. K. Savidge and J. R. Wells. 2014. Anatomy of a Langmuir supercell event. *J. Mar. Res.* 72, 127–163.

Papers submitted to refereed journals:

Gargett, A. E. and D. K. Savidge. 2015. Separation of short time series of currents into “fluctuations”, “tides”, and “mean” flow. Under review, *J. Physical Oceanogr.*

Papers submitted to non-refereed publications:

Invited review articles or book chapters:

Gargett, A.E. 1989: Ocean turbulence. *Ann. Rev. Fluid. Mech.*, **21**, 419-451.

Gargett, A. E. 2001. Oceanographic dispersion. *in* Encyclopedia of Environmetrics Vol.3, ed. A. H. El-Shaarawi and W. W. Piegorsch. J. Wiley & Sons Ltd, 1446-1461.

Gargett, A.E. and J. Marra. 2002: Effects of upper ocean physical processes - turbulence, advection, and air-sea interaction – on oceanic primary production. *The Sea*, Vol.12. Biological-Physical Interactions in the Ocean. Ed. A.R. Robinson, J.J. McCarthy and B.J. Rothschild. John Wiley & Sons, NY, 19-49.

Di Orto, D. and **A. E. Gargett**. 2005. Studies of turbulent processes using Doppler and acoustical scintillation techniques. Ch. 20 in *Sounds in the Sea: From Ocean Acoustics to Acoustical Oceanography*, H. Medwin. CUP, 643pp. ISBN 0 521 82950 X

Gargett, A. E. 2008. Differential diffusion. Encyclopedia of Ocean Sciences. Academic Press.

Committee Reports:

(major contributions to written reports)

Glenn, S. and T. Dickey. 2003. Scientific Cabled Observatories for Time Series (SCOTS) Report.

Detrick, R. S. Jr et al. 2003. Enabling Ocean Research in the 21st Century: Implementation of a Network of Ocean Observatories. Ocean Studies Board, National Research Council.

Non-refereed publications:

LeBlond, P.H. and **A.E. Gargett** 1970: Les ondes internes. Quebec Science, **12**, 12-14.

Gargett, A.E. 1980: Turbulence measurements through a train of breaking internal waves in Knight Inlet, B.C. In Fjord Oceanography, ed. H.J. Freeland and D.M. Farmer, Plenum Publ.

Gargett, A.E. 1984. Internal waves and mixing in the ocean: Observations and speculations. In Proceedings of The Second 'Aha Haliko'a Hawaiian Winter Workshop, ed P. Muller, Dept. of Oceanography, University of Hawaii.

Gargett, A.E. 1986: Small-scale parameterization in large-scale ocean models. In Advanced Physical Oceanographic Numerical Modelling, ed. J.J. O'Brien. Reidel Publishing Co., 145-154.

Altman, D. B., and **A. E. Gargett**. 1990: Differential property transport due to incomplete mixing in a stratified fluid. Stratified Flows, E. J. List and G. H. Jirka, Eds., American Society of Civil Engineers, New York, 454-460.

Gargett, A.E. 1988: Reynolds number effects on turbulence in the presence of stable stratification. Small-Scale Turbulence and Mixing in the Ocean, ed. J.C.J. Nihoul and B.M. Jamart. Elsevier Science Publishers, 517-528.

Gargett, A.E., P. Cummins and G. Holloway 1989: Effects of variable diffusivity in the GFDL model. Parameterization of Small-Scale Processes, Proceedings of the Hawaiian Winter workshop, University of Hawaii at Manoa, ed. P. Muller and D. Henderson, 11-20.

Gargett, A.E. 1993: Parameterizing the effects of small-scale mixing in large-scale numerical models. Modelling Oceanic Climate Interactions, ed. J. Willebrand and D.L.T. Anderson. Springer-Verlag, 185-204.

Gargett, A.E. 1993: Measurement and analysis of the energy-containing eddies of turbulent flows in the coastal ocean. Statistical Methods in Physical Oceanography, Proceedings of the Ah'a Hulikoa Hawaiian Winter Workshop 1993, ed. P. Muller, SEOST, U. of Hawaii at Manoa, 1000 Pope Road, Honolulu HI 96822.

Gargett, A. E. 1997. Physics to fish: interactions between physics and biology on a variety of scales. Oceanography 10, 128-131.

Gargett, A.E., M. Li and R. Brown 1998: Testing the concept of an optimal stability "window". Biotic Impacts of Extratropical Climate Variability in the Pacific, Proceedings of the Ah'a Hulikoa Hawaiian Winter Workshop 1998, ed. G. Holloway, P. Muller and D. Henderson, SEOST, U. of Hawaii at Manoa, 1000 Pope Road, Honolulu HI 96822.

Holloway, G., **A. E. Gargett** and W. Merryfield. 2001. Differential diffusion in bistable conditions. *in* From Stirring to Mixing in a Stratified Ocean, ed. P. Muller and C. Garrett. Proceedings of the 'Aha Huliko'a Hawaiian Winter Workshop 2001, U. of Hawaii at Manoa, 1000 Pope Road, Honolulu HI 96822, 187-190.

Gargett, A. E. and J. Wells. 2005. Characteristics of Langmuir turbulence observed in shallow water. Proceedings of Turbulence and Shear Flow Phenomena , Eds. J. A. C. Humphrey, T. B. Gatski, J. K. Eaton, R. Friedrich, N. Kasagi and M. A. Leschziner, Volume 2, pp. 443-447

Savidge, D. K., J. A. Amft, **A.E. Gargett**, M. Archer, D. Conley, G. Voulgaris, L. Wyatt, K.-W. Gurgel. 2011. Assessment of WERA Long-Range HF-radar performance from the User's Perspective, Proceedings on the IEEE/OES/CWTM 10th Working Conference on Current Measurement Technology, pp. 31-38.

Data Reports:

- 1965 **A. Gargett:** Long term fluctuations in the Toronto temperature and precipitation record. Canadian Dept. of Transport, Meteorological Branch, Cir. 4199, Tech. 550. Awarded second place, Father James B. Macelwane Awards in Meteorology; A.M.S., 1966.
- 1976 **A.E. Gargett:** A method of examining the vertical background of ocean microstructure data obtained from horizontal tow. Inst. Of Ocean Sciences, P.O. Box 6000, Sidney, B.C., Canada, 29 pp.
- 1978 **A.E. Gargett** and T.R. Osborn: Dissipation measurements from the Fine and Microstructure Experiment. Man. Rep. No. 33, Inst. Of Oceanography, Univ. of British Columbia, Vancouver, B.C., Canada, 87 pp.
- 1980 **A.E. Gargett:** Data report and calibrations for turbulence measurements in Knight Inlet, B.C. from the PISCES IV submersible: November 1978. Inst. Of Ocean Sciences, P.O. Box 6000, Sidney, B.C., Canada, 71 pp.
- 1980 **A.E. Gargett**, P.J. Hendricks, T.B. Sanford, T.R. Osborn and A.J. Williams III. A composite spectrum of vertical shear in the upper ocean from the profilers EMVP, SCIMP and CAMEL. Inst. Of Ocean Sciences, P.O. Box 6000, Sidney, B.C., Canada, 38 pp.