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Research Interests

Ocean turbulence, small-scale biological/physical interactions, dynamical response of an autonomous underwater vehicles to realistic ocean processes, use of high-frequency acoustics for ocean observations, development of unique autonomous platforms and supporting instrumentation and processing

techniques.

Current Research

1. Phase II STTR-036: Development of a Compact Long-Range Underwater Velocity Sensor System, Vehicle Control Technology, \$150K, Sept 2009 –Mar 2011, **PI: L. Goodman**, ONR.
2. Phase II STTR N08-T016: Expendable Glider, Vehicle Control Technology, \$150K, 1 Nov 2009 –Apr 2011, **PI: L. Goodman**, ONR.
3. Use of an AUV to Quantify Submesoscale Mixing Processes, **PI: L. Goodman**, 1 Nov 2008 – 30 Sep 2011, NSF.
4. Development of Turbulent Biological Closure Parameterizations, **PI: L. Goodman**, Co-PI: A. Robinson, 1 Apr 2008-31 Mar 2010, ONR.

Recent Publications

Wang, Z., and **L. Goodman**, 2009. The evolution of a thin phytoplankton layer in strong turbulence, *Cont. Shelf Res.*, in press.

Goodman, L., and Z. Wang, 2009. Turbulence observations in the northern bight of Monterey Bay from a small AUV, *J. Marine Syst.*, in press.

Levine E.R., **L. Goodman**, and J. O'Donnell, 2009. Turbulence in coastal fronts near the mouths of Block Island and Long Island Sounds, *J. Marine Syst.*, in press.

Wang, Z., and **L. Goodman**, 2009. Evolution of the spatial structure of a thin phytoplankton layer into a turbulent field. *Mar. Ecol. Prog. Ser.* 374:57-74

MacDonald, D. G., **L. Goodman**, and R. D. Hetland, 2007. Turbulent dissipation in a near-field river plume: A comparison of control volume and microstructure observations with a numerical model, *J. Geophys. Res.* 112, C07026, doi:10.1029/2006JC004075.

Goodman, L., and A.R. Robinson, 2007. On the theory of advective effects on biological dynamics in the sea, III: The role of turbulence in biological physical Interactions. *Proc. Roy. Soc.* (in press).

Goodman, L., E.R. Levine, and R.G. Lueck, 2006. On closing turbulence budgets from an AUV, *J. Atmos. Ocean. Tech.* 23:997-990.

Oeschger, J., and **L. Goodman**, 2003. Acoustic scattering from a thermally driven buoyant plume revisited, *J. Acoust. Soc. Am.* 113(3), 1353.