EMILY SHROYER
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EDUCATION

- Postdoctoral Scholar, Woods Hole Oceanographic Institution, 2009-present.
- Ph.D. in Oceanography, College of Atmospheric and Oceanic Studies, Oregon State University, 2009.
- Bachelor of Science cum Laude in Physics, University of Alaska, Fairbanks, 2000.

WORK EXPERIENCE

- Partnership for Observations of the Global Ocean, Co-taught Graduate Physical Oceanography Module, St. George, Bermuda, 2010.
- Science Crew *USCGS Healy*, lead microstructure component of data acquisition, Shelf-Basin Interaction Program, PI: R. Pickart, Beaufort Shelf, September 2010.
- Woods Hole Partnership in Education Program, Co-taught Undergraduate Physical Oceanography Module, Woods Hole, MA, 2010.
- Science Crew *USCGS Healy*, Shelf-Basin Interaction Program, PI: R. Pickart, Beaufort Shelf, July 2009.
- Science Crew *R/V Wecoma,* Topographic Form Drag over Stonewall Bank, PI: J. Moum, Oregon Coast, June 2008.
- Science Crew *R/V Wecoma*, Dye release experiment, PI: M. Levine, Oregon Coast, June 2008.
- Science Crew *R/V Point Sur*, Test Cruise for Moored Hydrographic Profiler, PI: J. Barth, Oregon Coast, June 2007.
- Science Crew *R/V Oceanus*, Nonlinear Internal Wave Initiative, PI: J. Moum, New Jersey Shelf, August 2006.
- Teaching Assistant for Physical Oceanography (OC430/530), Professors: M. Levine and K. Sherman, Fall 2005.
- US Peace Corps Volunteer: Math and Science Teacher, Ghana, West Africa, June 2001-September 2003.
- Substitute Teacher, North Star Borough, Fairbanks, Alaska, January-May 2001.
- Math and Science Tutor, University of Alaska, Fairbanks, 1998-2000.
- Physics Research Assistant, University of Memphis, 1997.

PUBLICATIONS

- Moum, J.N., D.M. Farmer, **E.L. Shroyer**, W.D. Smyth, and L. Armi, Dissipative losses in nonlinear internal waves propagating across the continental shelf. J. Phys. Ocean., 37(7), 1989-1995, 2007.
- **Shroyer, E.L.**, Varicose Waves: A Science Box as part of Turbulence, Transfer and Exchange Small-Scale Processes in the Coastal Ocean by J.N. Moum, J.D. Nash and J.M. Klymak, Oceanography, 21(4), 28, 2008.

- **Shroyer, E.L.**, J.N. Moum, and J.D. Nash, Observations of polarity reversal in shoaling nonlinear waves, J. Phys. Ocean., 39, 691-701, 2009.
- **Shroyer, E.L.**, J.N. Moum, and J.D. Nash, Mode-2 waves on the continental shelf: ephemeral components of the NLIW field, J. Geophys. Res., 115, 2010, doi:10.1029/2009JC005605, C07001.
- **Shroyer, E.L.**, J.N. Moum, and J.D. Nash, Vertical heat flux and lateral mass transport in nonlinear internal waves. Geophys. Res. Letters, 37, L08601, 2010 doi:10.1029/2010GL042715.
- **Shroyer, E.L.**, J. Moum and J. Nash, Energy transformations and dissipation of nonlinear internal waves over New Jersey's continental shelf. Nonlinear Processes in Geophysics, "accepted".
- **Shroyer, E.L.**, J. Moum and J. Nash, Nonlinear Internal Waves over New Jersey's continental shelf, J. Geophys. Res., "submitted".
- Nash, J.D., S. Kelly, **E. Shroyer**, J. Moum, and T. Duda, Internal Tides and Nonlinear Internal Waves on the Continental Shelf: Why are they so unpredictable?, "in preparation".
- **Shroyer, E.L.** and A.J. Plueddemann, Wind-driven modification of the Alaskan Coastal Current, "in preparation".

AWARDS AND HONORS

- Woods Hole Oceanographic Institution Postdoctoral Scholar 2009.
- NortekUSA Student Equipment Grant 2008: Awarded use of Nortek Aquadopp profiler and travel funds.
- Wayne V. Burt Award 2006 in Physical Oceanography, College of Oceanic and Atmospheric Studies, Oregon State University.
- Honorable Mention, NSF Graduate Research Fellowship 2006.
- Physics Student of the Year 2000, University of Alaska, Fairbanks.

ACADEMIC PRESENTATIONS

- E.L. Shroyer, A. Plueddemann, and R. Pickart. Talk: International Polar Year Conference 2010, Oslo, Norway, Wind-driven transformation of the Alaskan Coastal Current in Barrow Canyon.
- E.L. Shroyer, J.D. Nash, and J.N. Moum. Invited Talk: AGU Ocean Sciences 2010, Energy, Mixing, and Vertical Heat Flux in Nonlinear Internal Waves over the New Jersey Continental Shelf.
- A. J. Plueddemann and E. L. Shroyer. Poster: AGU Ocean Sciences 2010, Coastal hydrography and volume transport offshore of Barrow, Alaska in summer.
- E.L. Shroyer, J.N. Moum, and J.D. Nash. Talk: ONR NLIWI Meeting 2009, The "life" cycle of NLIWs as seen from the R/V Oceanus.
- E.L. Shroyer, J.D. Nash, and J.N. Moum. Poster: PIMS Internal Wave Conference 2008, Energy Transformation within the NLIW field on the New Jersey shelf.
- E.L. Shroyer, J.N. Moum, and J.D. Nash. Poster: AGU Ocean Sciences 2008, Evolution of Shoaling Nonlinear Internal Waves over New Jersey's Continental Shelf.
- E.L. Shroyer, J.N. Moum, and J.D. Nash. Talk: ONR NLIWI Meeting 2007, NLIW shoaling: Observations from the NLIWI on the New Jersey shelf.

- E.L. Shroyer, J.N. Moum, and J.D. Nash. Poster: AGU Ocean Sciences 2006: Observations of Bottom-Trapped Large Amplitude Nonlinear Internal Waves off Oregon.

Institution Seminars

- E.L. Shroyer, J.N. Moum, and J.D. Nash, November 2010, University of Massachusetts, Amherst, Nonlinear Internal Waves on the Continental Shelf.
- E.L. Shroyer, J.N. Moum, and J.D. Nash, November 2009, Woods Hole Oceanographic Institution, Nonlinear Internal Waves on the New Jersey Continental Shelf.
- E.L. Shroyer, J.N. Moum, and J.D. Nash, January 2009, University of Alaska Fairbanks, Nonlinear Internal Waves on the New Jersey Continental Shelf.
- E.L. Shroyer, Guest Lecturer, College of Oceanic and Atmospheric Sciences, Math Preparatory Class, Nonlinear Internal Waves on the Continental Shelf.
- E.L. Shroyer, J.N. Moum, and J.D. Nash, January 2007, Oregon State University, College of Oceanic and Atmospheric Sciences, Wave Shoaling on the New Jersey Shelf.

Workshops

- Association of Early Career Polar Scientist IPY Workshop, June 2010.
- Pattullo Conference, MPOWIR, May 2010.
- Pacific Institute for Mathematical Sciences (PIMS) Internal Wave Conference, October 2008.

Funding

- Development of an Ice-Tethered Winch for the Seasonal Ice Zone, E. Shroyer, A. Plueddemann, and R. Krishfield. Submitted to the Office of Polar Programs.