

Dr. Peter Winsor
Assistant Scientist
Ocean and Climate Change Institute Fellow
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Curriculum vitae

General information

Born October 19, 1969. Research interests include dynamics of ice covered seas, shelf-basin interactions, diapycnal mixing, sea ice thickness, polynyas, the large-scale climate of the Arctic Ocean, freshwater and implications for present and paleo-climate variability and instrument development. I use numerical modeling, field work and observations to approach these research problems.

Education:

- 2002 Ph.D. Göteborg University, Göteborg, Oceanography.
- 1997 B.S. Göteborg University, Göteborg, Oceanography.
- 1993 B.A., Komvux Göteborg, Electrical Engineering.

Additional education:

- Ice dynamics, held by Prof. Matti Lepperanta.
- Geophysical Fluid Dynamics, held by Prof. Gösta Walin.
- The biological pump, held by Prof. Anders Stigebrandt.
- Practical measuring techniques and research ships.
- Instrument technique, held by Prof. Johan Rodhe.
- Diapycnical mixing, held by Prof. Anders Stigebrandt.
- CTD measurements and technical repairs, Sea Bird Inc., Seattle.
- PROBE - a problem-solving model course, held by Prof. Anders Omstedt.

Major expeditions:

- 2005 Beringia Expedition – pan-arctic expedition traversing the Arctic from Barrow Alaska to Longyearbyen, Svalbard. PI for the Microstructure, LADCP and XBT program.
- 2003 One-month cruise to NW Australia, investigating the Leeuwin Current. PI: Ken Brink.
- 2002 Arctic Ocean 2002 expedition, 2 months to Svalbard and the East Greenland Current with I/B Oden. PI: Bert Rudels.
- 2001 Arctic Ocean 2001 expedition, 2 months to the Arctic Ocean with I/B Oden. PI: Göran Björk.
- 2000 Sediment transport in Skagerak, 10 weeks with R/V Skagerak. PI: Johan Rodhe.
- 1997-1999 Numerous oceanographic expeditions in Skagerak with R/V Skagerak. PI: Johan Rodhe.

Teaching:

- 2001 World Science Class, Arctic and Antarctica: Arctic Ocean-key to the future climate.
- 1998 Head of course and tutoring of Marine hydromechanics, a last year course in physical oceanography at Göteborg University.
- 1997 Geophysical mathematics, Göteborg University.
- 1996-1997 Assistant on several courses in Oceanography at Göteborg University.

Awards and Professional activities:

- 2005-2008 Appointed Fellow of the Ocean and Climate Change Institute at Woods Hole Oceanographic Institution
- 2005 NSF Postdoctoral Fellowship Panel
- 2005 Member NSF Science Steering Committee for the Bering Ecosystem Study (BEST)
- 2004 Guest Editor of Progress in Oceanography for special issue on the Nordic Seas.
- 2004-present Assistant Scientist at Woods Hole Oceanographic Institution, MA, USA.
- 2002-2004 Postdoctoral Fellowship at Woods Hole Oceanographic Institution, MA, USA.
- 1997-2003 Researcher within the Swedish Regional Climate Modeling Program (SWECLIM).
- Member, Steering Committee for Computers, Earth Sciences Centre, Göteborg University.
- Student Leader, Earth Science Days, Göteborg University.
- Member, AGU.
- Member, The Oceanography Society (TOS)
- Reviewer for NSF, Norwegian Research Council, Journal of Geophysical Research, Journal of Physical Oceanography, Deep-Sea Research, Ocean Modelling, Geophysical Research Letters, Cold Regions Science and Technology, and Polar Research.

Currently funded projects:

- The Arctic Ocean Boundary Current: Numerical modeling of key locations, NSF OPP 2004-2008. PI: P. Winsor
- Profiling Floats in the Arctic Ocean: Development and Field Test During the Beringia 2005 Cruise, NSF OPP. PIs: W. B. Owens and Peter Winsor
- An Exploratory Full-depth Section of Mixing Observations across the Arctic Ocean, NSF OPP. PI: P. Winsor

Research

Refereed publications:

1. Winsor, P., and G. Björk, 2000: Polynya activity in the Arctic Ocean from 1958 to 1997, *Journal of Geophysical Research*, 105(C4), 8789-8803.
2. Winsor P., Rodhe J., and A. Omstedt, 2001: Baltic Sea Ocean Climate-an analysis of 100 years of historical data with focus on the freshwater budget, *Climate Research*, 18(1/2), 1-15.
3. Winsor, P, 2001: Arctic sea ice thickness remained constant during the 1990s, *Geophysical Research Letters*, 28(6), 1039-1041.
4. Dokken, S. T., P. Winsor, T. Markus, J. Askne, and G. Björk, 2002: ERS SAR characterization of coastal polynyas in the Arctic, and comparison with SSM/I, and numerical model investigations, *Remote Sensing of Environment*, 80(2), 321-335.
5. Winsor, P., and D. C. Chapman, 2002: Distribution and interannual variability of dense water production from coastal polynyas on the Chukchi Shelf, *Journal of Geophysical Research*, 107(C7), 10.1029.
6. Rodhe, J., and P. Winsor, 2002: On the influence of the freshwater supply on the Baltic Sea mean salinity, *Tellus*, 54A, 175-186.

7. Björk, G., J. Söderkvist, P. Winsor, A. Nikolopoulos, and M. Steele, 2002: Return of the cold halocline layer to the Amundsen Basin: Implications for the sea ice mass balance, *Geophysical Research Letters*, 29(11), 10.1029.
8. Winsor, P., and D. C. Chapman, 2004: Pathways of Pacific Water across the Chukchi Sea: A numerical model study, *Journal of Geophysical Research*, 109, C03002, doi: 10.1029/2003JC001962.
9. Omstedt, A., C. Petterson, J. Rodhe, and P. Winsor, 2004: Baltic Sea climate: analysis of 200 years of data with a focus on air temperature, sea-level variation, ice extent, and large-scale atmospheric circulation, *Climate Research*, 25, 205-216.
10. V. Alfimov, V., A. Aldahan, G. Possnert, and P. Winsor, 2004: Anthropogenic I-129 in Seawater along a Transect from the Norwegian Coastal Current to the North Pole, *Marine Pollution Bulletin*, 49, 1097-1104.
11. Rudels, B., G. Björk, J. Nilsson, P. Winsor, I. Lake, and C. Nohr, 2005: The interactions between Arctic and Nordic Seas waters north of Fram Strait and East Greenland Current: results from the Arctic Ocean-02 Oden expedition, *Journal of Marine Systems*, 55, 1-30.
12. M. Timmermans, P. Winsor, and J. A. Whitehead, 2005: Deep-water transport over the Lomonosov Ridge, Arctic Ocean, *Journal of Physical Oceanography*, 35, 1489-1493.
13. G. Björk and P. Winsor, 2005: The deep waters of the Eurasian Basin, Arctic Ocean: Geothermal heat flow, mixing and renewal, *Deep-Sea Research*, revised July 2005.
14. Winsor, P., D. C. Chapman, S. Danielson, T. Weingartner, K. Aagaard, and L. King, 2005: Circulation features in northern Bering Sea inferred from drifters, moored current meters, and numerical modeling, in prep. for *Journal of Geophysical Research*.
15. Chapman, D. C., P. Winsor, L. D. Keigwin, and S. J. Lentz, 2005: The pathway and impact of fresh water discharge through Hudson Strait 8200 years ago, submitted to *Nature*. August 2005.
16. Danielson, S., K. Aagaard, T. Weingartner, S. Martin, P. Winsor, G. Gawarkiewicz, D. Quadfasel, and J. Meinke, 2005: A year in the St. Lawrence Island Polynya, submitted to *Journal of Geophysical Research*.
17. Johan Nilsson, J., G. Björk, B. Rudels, P. Winsor and Daniel Torres, 2005: Late-winter conditions and freshwater transport in the East Greenland Current: results from an icebreaker-based survey, submitted to *Progress in Oceanography*, August 2005.

Selected conference papers:

- Interaction between waters of the Arctic Ocean and the Nordic Seas north of Fram Strait and along the East Greenland Current: some results from the Arctic Ocean-02 Oden expedition. Rudels B., G. Björk, J. Nilsson, P. Winsor, I. Lake, and C. Nohr. Abstract for ACSYS meeting, 2003.
- Return of deep shelf/slope convection in the western Barents Sea? Schauer, U., B. Rudels, I. Fer, P. M. Haugan, R. Skogseth, G. Björk, and P. Winsor, presented at the Seventh Conference on Polar Meteorology and Oceanography and Joint Symposium on High-Latitude Climate Variations, Hyannis, MA, 2003.

- Dokken, S. T., P. Winsor, and G. Björk, 2001: Comparison of SSM/I and SAR imagery, Proceedings IEEE International Geoscience and Remote Sensing Symposium (IGARSS '99), Hamburg, Germany.
- Dokken, S. T., P. Winsor, J. Askne, and G. Björk, 2000: SAR, SSM/I and numerical model characterization of Arctic Ocean coastal polynyas, Proceedings ERS - ENVISAT Symposium, Göteborg, Sweden.
- Dokken, S. T., P. Winsor, J. Askne, and G. Björk, 1999: Temporal variability of polynyas from combined ERS and SSM/I investigations, Proceedings IEEE International Geoscience and Remote Sensing Symposium (IGARSS '99), Hamburg, Germany.

Invited Talks, Selected Lectures and Oral presentations:

- 2002 Invited by the Arctic Ocean Sciences Board (AOSB) to join expert panel on Arctic sea ice, Groningen, Holland.
- 2001 Invited speaker at the Swedish Society for Marine Sciences: Arctic Ocean and climate change.
- 2004 Oral presentation at the Fall AGU Meeting, San Francisco, December 2004: The deep waters of the Arctic Ocean: Recent observations and variability
- 2004 Speaker at the Nordic Seas Workshop, Lamont-Doherty Earth Observatory, NY, 6-9 April: The Flow Structure of the East Greenland Current from LADCP measurements: Some Preliminary Results from the AO-02 Oden Expedition
- 2002 Speaker at the Chapman conference on high-latitude oceanic processes, Quebec, 12-16 September.
- 2001 Arctic and global climate change, public lectures in Göteborg.
- 2000 Lecture at Polar Science Center, APL, University of Washington: Arctic sea ice thickness remained constant during the 1990s.
- 2000 Arctic Ocean and climate change, oral presentation at the Royal Swedish Academy of Science, Stockholm.
- 2000 Lecture at Ocean Science Meeting, San Antonio, Texas: Polynya activity in the Arctic Ocean.
- 1999 ESCA'30 conference on climate change in the coastal zone, Hamburg: Baltic Sea ocean climate-an analysis of 100 years of hydrographical data with focus on the freshwater budget.
- 1997 ACSYS meeting at Orcas Island, Seattle: A wind-driven polynya model.

Selected posters and abstracts:

- 2004 Towards and Arctic Profiling Floats Program for IPY and Beyond, Fall AGU Meeting, San Francisco, December 2004.
- 2001 Poster and abstract at the Royal Swedish Academy of Sciences, Stockholm: Hydrographic measurements from the Arctic Ocean 2001 expedition.
- 2001 Poster and abstract at the Royal Swedish Academy of Sciences, Stockholm: Distribution and interannual variability of dense water production from coastal polynyas on the Chukchi Shelf.
- 1997 Poster ACSYS meeting at Orcas Island, Seattle: A wind-driven polynya model.