Print

FAMOS: FAMOS Workshop #2, October 22-25, 2013

FAMOS Workshop #2, October 22-25, 2013

Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

October 22, 2013: FAMOS School for young scientists, Redfield Auditorium

October 23-25, 2013: FAMOS workshop, Redfield Auditorium

A. *List of Participants*
B. *Workshop Final Agenda*
C. *2nd FAMOS Workshop Logistics Package*

FAMOS School for Young Scientists

1. Amala Mahadevan (Woods Hole Oceanographic Institution, USA): "Submesoscale processes, biophysical interactions, and the Arctic"
2. Michael Karcher (Alfred Wegener Institute, Germany): "Atlantic Water circulation in the Arctic Ocean"
3. Ron Kwok (Jet Propulsion Laboratory, USA): "Arctic sea ice deformation, thickness, and large-scale mass balance"
4. Outreach Discussion: Michael Steele (Polar Science Center, Applied Physics Laboratory, Univ. of Washington) "What is computer modeling? (...of climate)"
5. John Marshall (MIT, USA): "Building and removing stratification in the Arctic Ocean"
6. Marika Holland (NCAR, USA): "Using coupled climate models to investigate the predictability of sea ice"

SESSION 1: Sea Ice Highlights Session

1. Don Perovich (CRREL, USA): *"2012 and 2013 sea ice conditions and results of 2012 sea ice outlook"*
2. Rick Allard et al. (NRL, USA): *"An Assessment of the Navy's Sea Ice Outlook Predictions for 2013"*
3. Daniel L. Feltham et al. (University of Reading, UK):"The changing Arctic sea ice cover: challenges to understanding and models"
4. Sinead L. Farrell et al. (University of Maryland, USA): *" An update on Arctic sea ice thickness conditions from airborne and satellite altimetry* "

SESSION 2: Sea Ice Modeling and Observations

1. Andrew Roberts (Naval Postgraduate School, Monterey, California, USA): " *Sea Ice Dynamics Scaling in the Regional Arctic System Model"*
2. Torge Martin et al. (University of Washington, USA): *"Trends in momentum transfer into the Arctic Ocean and the role of optimum ice concentration"*
3. Bruno Tremblay (McGill University, Canada): *"Lagrangian sea ice tracking technique for seasonal prediction of sea ice conditions"*
4. Frederic Dupont et al. (CMC, Environment Canada): *"Environment Canada 1/12th ice-ocean Arctic-Atlantic model: improving the ice"*

Discussion: Roberts and Martin Sea Ice Discussion for FAMOS and
Torge Sea Ice Discussion for FAMOS

SESSION 3: Poster Session (see one-slide poster summary presentations and/or posters at poster session below)

SESSION 4: Arctic Ocean Dynamics and Properties from Observations and Model Results

Summary of " Arctic Ocean dynamics and properties from observations and model results" poster session

1. Golubeva Elena et al. (Institute of Computational Mathematics and Mathematical Geophysics, Novosibirsk, Russia): " Variability of the Atlantic Water properties in the Arctic Ocean: 1948-2012 model results"

2. David A. Hebert et al. (NRL, USA): "Assessing the U.S. Navy Coupled Ice-Ocean Model vs. Recent Arctic Observations
3. Yanni Ding(Maryland University, USA): "Arctic Ocean circulation in the CMIP5 models"
4. Chen Chen et al. (UMASS, Dartmouth, USA): "The 35-year high-resolution AO-FVCOM model experiment" (Coming soon)

Discussion: Working group on Circulation experiments (conveners: Karcher and Aksenov)

SESSION 5: Ecosystem and Biogeochemical Modeling

Summary of ecosystem and biochemical modeling poster session

1. Patricia Matrai (Bigelow Laboratory for Ocean Sciences, USA): "A brief introduction to the PPARR 5 adventure: A Net Primary Production Algorithm Round Robin focused on the Arctic Ocean"
2. Jean-Éric Tremblay (University of Laval, Canada): "What have we learned on the seasonality of nutrient dynamics and the vertical distribution of primary production in the stratified Beaufort Sea?" (coming soon)
3. Katya Popova (Marine Systems Modelling, National Oceanography Centre, U. Southampton, UK): "Modeling beauty contest: Arctic ecosystems in seven models competing for the next UK Earth System Model biogeochemistry"

Discussion

SESSION 6: Climate States, Freshwater and Heat Content

Summary of climate states, freshwater and heat content poster session

1. An T Nguyen et al. (MIT, USA): "Progress and Assessment of the Arctic & sub-polar North Atlantic state estimate"
2. Wieslaw Maslowski (NPS, USA): "Modeling Seasonal to Decadal Climate Variability using the Regional Arctic System Model"
3. Benjamin Rabe (Alfred Wegener Institute, Germany): "Arctic freshwater changes and regional implications"
4. Thomas Haine (The Johns Hopkins University, USA): "New synthesis of Arctic freshwater budget and fluxes"
5. Claudia Cenedese (WHOI, USA): " Laboratory experiments investigating the influence of subglacial discharge on submarine melting of Greenland's Glaciers"
6. Jiayan Yang and Andrey Proshutinsky (WHOI, USA): "Dynamics of the Beaufort Gyre: A Balance between Ekman Pumping and Eddy Flux"

Discussion(Coming Soon)

SESSION 7: 2013-2014 FAMOS Coordinated Experiments

1. Popova Ekaterina (NOC Southampton, UK): "Some ideas for FAMOS coordinated ecosystem studies *Role of advection in Arctic Ocean ecosystem dynamics"*
2. Sheldon Bacon (NOC, Southampton, UK): "Arctic Ice and Ocean Heat and Freshwater Fluxes: A FAMOS Model Intercomparison Project"
3. Aksenov Yevgeny (NOC Southampton, UK): "Coordinated water circulation experiments"
4. John Toole (WHOI, USA): "Coordinated mixing experiments"
5. Dmitri Dukhovskoy (Florida State University): "Coordinated Greenland freshwater flux experiment"
6. Torge Martin and Andrew Roberts: "Coordinated sea ice experiments" (coming soon)

SESSION 3: POSTER SESSION

One Slide Poster Presentations

A. Sea Ice

1. Edward Blanchard-Wrigglesworth (UW,USA): "Predictability of sea ice conditions" (coming soon)
2. Peter Davis (University of Oxford, UK): "Spin up of the Beaufort Gyre and the effects of Arctic sea ice cover"
3. Dmitry Dukhovskoy et al. (Florida State University, USA): "Sea ice model evaluation: A topological approach"
4. Daniela Flocco et al. (University of Reading, UK): "The impact of refreezing of melt ponds on Arctic sea ice thinning" (coming soon)
5. Phillip Griewank (Max-Planck-Institute for Meteorology, Hamburg, Germany): "Impact of parameterizing sea-ice salinity" (coming soon)
6. Giulia Castellani et al. (Alfred Wegner Institute, Germany): "Implementation of sea-ice roughness dependent drag coefficients in a coupled sea-ice-ocean model and assessment of the effects in the sea-ice drift in the Arctic."
7. Jary Haapala et al. (Finnish Meterological Institute, Finland): "Small scale ice dynamics revealed by the coastal ice radar"
8. Yukie Hata (McGill University, Canada): "In-Situ Internal Sea-Ice Stress Data from Canadian Arctic Archipelago and Modeling Anisotoropic Behavior of Sea Ice"
9. Christophe Herbaut et al. (LOCEAN, CNRS/Universite' Pierre et Maris Curie, Paris, France): "Variability of the Barents Sea winter sea ice in 1979-2011. (coming soon)

10. Polona Itkin (Alfred Wegener Institute, Bremerhaven, Germany): "Sea ice running Atlantic Water?"
11. Ann Keen et al. (Ridley Met Office, Hadley Centre, UK): "Drivers of Arctic sea ice decline in the HadGEM1 coupled model"
12. Alexander Komarov et al. (University of Manitoba, Canada): "Detection of Wind Speed and Sea Ice Motion in the Marginal Ice Zone from RADARSAT-2 Images"
13. Mi Ok Kwon (The Korea Maritime and Ocean University, Korea): "Numerical simulation on oceanic state and sea ice distribution of the Arctic Ocean"
14. De Silva, Lianarachchi Waruna Arampath (The University of Tokyo, Japan): "Numerical investigation of sea ice prediction to support ice navigation in the Northern Sea route"
15. Einar Olason (Max-Planck Institute of Meteorology, Germany): "Dynamical modeling of Kara Sea land-fast ice"
16. Jamie Rae (Met office Hadley Centre, United Kingdom): "A sensitivity study of the sea ice simulation in the global coupled climate model, HadGEM3"
17. Julia M. Ruth et al. (University of Maryland, USA): "Assessment of Arctic sea ice freeboard from photon-counting laser altimetry: Pre-launch activities for NASA's ICESat-2 Mission"
18. Michel Tsamados (University of Reading, UK): "Impact of variable drag coefficients on Arctic sea ice and ocean spin-up and down"
19. WITHDRAWN: Wilbert Weijer et al. (Los Alamos National Laboratories): "The Arctic ocean/sea ice system in a high-resolution coupled climate model"
20. James Williams (McGill University, Canada): "Using Algebraic Multigrid to Precondition the Viscous Plastic Sea Ice Momentum Equations" (coming soon)
21. Jinping Zhao (Ocean Iniversity of China, China): "Non-numerical forecasting of sea ice concentration induced by lateral melting"

B. Arctic Ocean Dynamics and Properties from Observations and Model Results

1. Evgeny Aksenov (Southampton Oceaongraphic Center, UK): "Preconditioning of the Arctic outflow west of Greenland: Ocean Circulation in the Lincoln Sea"
2. Tachanat Bhatrasataponkul (Florida State University, USA): "Pathways and transformation of Greenland's excessive freshwater in the Nordic Sea" (coming soon)
3. Beth Curry (University of Washington, Applied Physics Laboratory, USA): "Davis Strait observations"
4. Seth Danielson (IMS UAF, USA): "Circulation variability on the Bering-Chukchi shelves in resopnse to local and remote wind forcing" (coming soon)
5. Dustin Carroll (University of Oregon, USA): "Oceanic response to buoyancy, wind nad tidal forcing in a Greenlandic glacial fjord"
6. Vera Fofonova (AWI, Germany): "The simulation of circuation in the Laptev Sea shelf zone using FVCOM"
7. Renske Gelderloos (University of Oxford, UK): "Modeling the Canadian Archipelago"
8. Simon Higginson et al. (Bedford Institute of Oceanography, Canada): "Validation of the CONCEPTS 1/12 degree ARctic-Atlantic ice-ocean model: Water masses and transports"
9. Pål Erik Isachsen (Norwegian Meteorological Institute, Norway): "Ocean eddy fluxes in the Arctic and their parameterization in climate Models"
10. Jennifer Jackson (ASL Environmental Sciences, Canada): "The formation, transport, and fate of Beaufort Shelf Winter Water in the Canadian Beufort Sea from 2009-2011.
11. Markus Janout (AWI, Germany): "Semidiurnal tides on the Laptev Sea shelf with implications for shear and mixing"
12. Hyunjung Lee (Korea Polar Research Institute, Korea): "Annual variability in water column structure regarding heat content and freshwater content in the Pacific sector of Arctic Ocean, last 3 years" (coming soon)
13. Ho Jin Lee (th eKorea Maritime and Ocean University, Korea): "Tidal mixing effect on the Arctic Sea circulation and sea ice distribution using OGCM" (coming soon)
14. Zhenxia Long and William Perrie (Bedford Institute of Oceanography, Canada): "Impacts of climate change on sub-surface water temperature"
15. Maria Luneva (NOC, UK): "Effect of mixing nad ageostrophic circulations induced by tides on multi-decadal scale on the changes in ice, temperature and salinity fields"
16. Charlotte Marcinko (NOC, Southampton, UK): "Characterizing horizontal variability in the Arctic Ocean" (coming soon)
17. Aleksi Nummelin (Geophysical Institute, University of Bergen, Norway): "Role of the changing river runoff in the Arctic ocean stratification"
18. Cecilia Peralta-Ferriz (Univ. of WA, USA): "Evolution of mixed layer depth in the Arctic from historic CTD data"
19. Mike Spall (WHOI, USA): "A simple model for the halocline and Atlantic Water circulation in the Arctic"
20. Arlid Sundfjord et al. (Norwegian Polar Institute, Tromso, Norway): "Upper-ocean vertical fluxes in the Atlantic Water inflow region North of Svalbard"
21. Mary-Louise Timmermans (Yale University, USA): "Pacific Summer Water in the Central Canada Basin"

C. Climate States, Freshwater and Heat Content

1. Yanni Ding et al. (University of Maryland, USA): "Seasonal Arctic heat budgets in CMIP5 models"
2. Ayan Chaudhuri (AER, USA): "Impact of atmospheric forcing uncertanties on Arctic state estimates" (not available)
3. John Guthrie (Polar Science Center, Applied Physicas Laboratory, University of Washington, USA)" "Recent Microstructure Observations from the Eurasian Basin"
4. WITHDRAWN: Amber M. Holdsworth (University of Alberta, Canada): "The Labrador Sea as a "Vital Organ" in the Earth System"
5. WITHDRAWN: Richard Krishfield et al. (WHOI, USA): "Deterioation of perennial sea ice in the Beaufort Gyre from 2003 to 2012 and its impact on the oceanic freshwater cycle" (File not available.)
6. Camille Lique (Oxford University, UK) "Vertical mixing and heat flux study"
7. Steffen Malskaer Olsen (Polar Oceanography, Danish Meteorological Institute, Denmark): "Variability of the Arctic Ocean freshwater reservoir in a coupled climate model" (not available)
8. Per Pemberton (Stockholm University, Sweden): "Tracing sources and sinks of freshwater in a regional Arctic Ocean model"
9. Will Perrie and Zhenxia Long (Bedford Institute of Oceanography, Canada): "Impacts of climate change on fresh water content and sea surface height in the Beaufort Sea"
10. Gennady Platov (Institute of Computational Mathematics an dMathematical Geophysics, Novosibirsk, Russia): "On the freshwater content modeling in the Arctic basin: A sensitivity study"
11. WITHDRAWN: Andrey Proshutinsky (WHOI, USA): "Atmospheric forcing uncertainties to drive simulation of freshwater content variability"
12. Hyodae Seo (WHOI, USA): "Dynamics of the near-surface wind response to Arctic sea ice"
13. William Williams (Institute of Ocean Sciences, Canada): :The changes observed between 2012 and 2013 in the Beaufort Gyre and their casues"
14. Jonathan Whitefield (University of Alaska Fairbanks, USA): "A new high-resolution forcing of Arctic river discharge"

D. Ecosystem and Biogeochemical Modeling

1. Fillippa Fransner (Stockholm University, Sweden): "Tracing terrestrial dissovled organic carbon in the Baltic Sea - a 3D model study"
2. WITHDRAWN: Ho Kyung Ha (Korea Polar Research Institute, Incheaon, Korea): "Measurement of suspended particulate matter beneath Arctic sea ice during the summer season of rapid melting"
3. Rubao Ji et al. (WHOI, USA): "Phenology of Sea Ice an dPrimary Production in the Arctic Ocean"
4. Meibing Jin (IARC, USA): "Ocean mixing under sea ice with multi-column ocean grid in CESM and its impact on ecosystem dynamics"
5. Valentina Malakhova and Elena Golubeva (Institute of Computational MAthematics and MAthematical Geophysics, Novosibirsk, Russia): "Modeling of subsea permafrost related methane emissions in the East Siberian Arctic Shelf"
6. Molly A. Palmer (ExxonMobil Research and Engineering, USA): "A new 1-D biogeochemical model of the Chukchi Sea, Arctic Ocean: modeling the impacts of sea ice retreat, thinning, and melt pond proliferation on the summer phytoplankton bloom"
7. Josie Robinson (National Oceanography Centre, U. Southampton, UK): "Is the melting of Arctic sea-ice blurring the biological boundaries between ocean basins?"
8. WITHDRAWN: Natalia Shakhov et al. (IARC, UAF, USA): "Lateral transport of methane in the Pacific sector of the Arctic Ocean as referred rom water circulation pattern"
9. Nadja Steiner (Institute of Ocean Sciences, Fisheries and Oceans Canada, Canada): "Model intercomparisons within the SCOR WG BEPSII (Biogeochemical Exchange Processes at Sea-Ice Interfaces) - Overview and early results"
10. Jean-Éric Temblay (University of Laval, Canada): "Nutrients and biological productiivty in the Arctic Ocean: an overview of major issues" (coming soon)

Last updated: June 6, 2014

Copyright ©2007 Woods Hole Oceanographic Institution, All Rights Reserved.
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