

AWAKE
and Committee on Polar Research Polish Academy of Sciences

Workshop
Ocean influence on climate and cryosphere in the Arctic
Sopot, Poland – November 28-30, 2011

Agenda

I. LARGE SCALE EVENTS (OCEAN AND CLIMATE SCALE)

Monday, Nov. 28, 14:00 start

Session No 1 Chair: Jacek Jania

14:00 - **Tadeusz Niedźwiedź:** *Variability of atmospheric circulation above Spitsbergen and its influence on air temperature and precipitation*

14:30 - Rajmund Przybylak, Przemysław Wyszynski, Zsuzsanna Vízi, and Joanna Jankowska: *Atmospheric pressure changes in the Arctic from 1801 to 1920*

14:50 - Øyvind Nordli: *Long-term temperature variability on Svalbard 1898-2011*

15:10 - Waldemar Walczowski, Jan Piechura: *Atlantic Water - the important component of the European Arctic marine climate*

15:30 – 16:00 Coffee

Session No 2 Chair: Arild Sundfjord

16:00 - Iłona Goszczko: *Exchange processes between deep and shallow ocean regions near Spitsbergen and their possible impact on the glaciers' melting.*

16:20 - Stein Sandven, Florian Geyer, Kjell Kloster: *Sea ice drift and fluxes in the Fram Strait from satellite observations*

16:40 - Małgorzata Błaszczuk, Jacek Jania, Leszek Kolondra, Waldemar Walczowski, Mohamed Babiker: *Fluctuations of tidewater glaciers and calving rate in Southern Spitsbergen in recent decades*

17:00 - Witold Szczuciński, Wojciech Majewski, Marek Zajączkowski, Matthias Forwick, Georg Schettler: *Late Holocene record of glacial and marine influence in inner parts of Hornsund and Isfjorden, Svalbard*

19:00 - Icebreaker

II. LOCAL SCALE FEATURES (FJORDS AND SHORT-TERM)

Tuesday, Nov. 29

Session No 3 Chair: Øyvind Nordli

09:00 - Rajmund Przybylak, Andrzej Arażny, Marek Kejna: *Differentiation of air temperature and relative humidity in the Forlandsundet region (NW Spitsbergen) in summer 2010*

09:20 - Anna Rozwadowska, Izabela Górecka: *An impact of land topography and albedo on the surface distribution of solar radiation in the Hornsund fiord region – a model study.*

09:40 - Agnieszka Promińska, Waldemar Walczowski, Ilona Goszczko: *Variability of hydrological conditions in the Hornsund Fjord in summer 2001 – 2011*

10:00 - Agnieszka Promińska, Waldemar Walczowski: *Preliminary results from field observation in Hornsund in 2011. Comparison of hydrological conditions in Hornsund in 2010 - 2011.*

10:30 – 11:00 - Coffee

Session No 4 Chair: Rajmund Przybylak

10:30 - Arild Sundfjord, Ø. Leikvin: *Circulation and exchange in Hornsund Fjord, south-west Svalbard - measurements and model development*

10:50 - Michał Laska, Jacek Jania: *Water percolation and retention time in snow cover on Hans Glacier (Spitsbergen) during melting period*

11:10 - Jacek Jania, Dariusz Ignatiuk, Dariusz Puczko, Sebastian Sikora, S. Kostka, Waldemar Walczowski: *Short term and seasonal changes in dynamics of Hansbreen a tidewater glacier in southern Svalbard*

11:30 - Małgorzata Błaszczyk, Jacek Jania: *Iceberg flux from Svalbard tidewater glaciers to surrounded seas*

11:50 – 12:30 - Discussion

12:30 – 14:00 Lunch

III. DATA AND MODELLING

Tuesday, Nov. 29

Session No 5 Chair: Krzysztof Migala

14:00 - Ola M. Johannessen, Alexander Korabely: *Oceanographical database for climate research in the Arctic and subarctic areas*

14:20 - Stein Sandven, Hanne Sagen, Agnieszka Beszczynska-Moeller, Eberhard Fahrback: *The Fram Strait integrated ocean observing and modelling system*

14:40 - **Wieslaw Maslowski**, Robert Osinski, Stephen Okkonen, Jaromir Jakacki, Jaclyn Clement Kinney, Andrew F. Roberts, John J. Cassano, Anthony Craig, Matthew Higgins, William Gutowski, Dennis Lettenmaier: *Understanding Arctic Climate Feedbacks from Observations and Models*

15:10 - Robert Osinski, Wieslaw Maslowski, Jaromir Jakacki: *Eddy-resolving ocean modeling of the pan-Arctic region*

15:30 – 16:00 Coffee

Session No 6 Chair: Frank Nilsen

16:00 - Frank Nilsen & Juni Vaardal-Lunde: *A Simple Topographically Controlled Shelf Circulation Model - Intrusion of Atlantic Water on an Arctic Shelf*

16:20 - Stanislaw Massel: *On the surface waves generation due to glacier calving*

16:40 - Mariusz Grabiec, Jacek Jania, Tomasz Budzik, Dariusz Puczko, Grzegorz Gajek, Leszek Kolondra: *Development of subglacial drainage conduits in relation to geometry changes of Spitsbergen Glaciers*

17:00 - Krzysztof Migala, Kryza Maciej, Szymanowski Mariusz, Puczko Dariusz: *Spatial model of ablation on the Werenskiold Glacier, SW Spitsbergen*

19:00 Conference Dinner – Hotel Haffner

Wednesday, Nov. 30

Chair: Stein Sandven, Jan Piechura

09:00 - Joanna Szczucka: *Response of marine and terrestrial ecosystems to climate changes in Arctic – links between physical environment, biodiversity of zooplankton and seabird populations*

09:20 - 12:00 – Discussion and final reports

Subjects:

- 1) Atmosphere – Ocean, sea-ice, Shelf-Fjords-Land-Glaciers: connections and feedbacks
- 1) Recommendations for future and planning.
- 2) Possible publications.

POSTERS

1. Leszek Kolondra, Małgorzata Błaszczuk
Mapping of front position changes of tidewater glaciers of Hornsund Fiord (S Spitsbergen) basing upon satellite remote sensing and archive maps
2. Marek Kejna, Rajmund Przybylak, Andrzej Arażny
Spatial differentiation of radiation balance in the Kaffiøyra region (Svalbard, Arctic) in the summer season 2010
3. Beata Sternal, Witold Szczuciński, Matthias Forwick, Marek Zajączkowski, Stanisław Lorenc, Tore O. Vorren
Postglacial variability in near-bottom currents, sediment supply and ice rafting on continental shelf off SW Spitsbergen