

The Sixth Workshop on Baltic Sea Ice Climate

August 25–28, 2008

Lammi Biological Station, Finland

Second Announcement and Programme

The importance of sea ice in the Baltic Sea has been addressed in the Baltic Sea Ice Workshops. The ice has been identified as a key element in the water and energy cycles and ecological state of the Baltic Sea. The variability in sea ice conditions is high and due to the short thermal memory of the Baltic Sea closely connected to the actual weather conditions. The spatial and temporal long-term variability of the ice cover has been discussed in the Baltic Sea Ice Workshops, and in the previous one held in Hamburg in 2005 contributions from other seasonally ice covered seas were included. In the next, sixth workshop this general theme of the seasonal sea ice zone is kept going, which is particularly well suited now during the International Polar Year.

The international Sixth Workshop on Baltic Sea Ice Climate will be held in August 25–28, 2008 in Lammi Biological Station of the University Helsinki, Finland. The meeting will review research results related to the Baltic Sea ice past, present and future climate conditions. The workshop is a continuation of meetings each third year around the Baltic Sea. The First Workshop on Baltic Sea Ice climate was held in Finland August 1993, the second in Estonia 1996, the third in Poland 1999, the fourth in Sweden 2002, and the fifth in Germany 2005.

The workshop will be divided into sessions with particular emphasis on the topics listed below, identified as future challenging research areas from the discussion in the earlier Baltic Sea Ice workshops. Scientists from the Baltic Sea region and as well from other regional seas, seasonally covered by sea ice, are hereby kindly invited to participate in the Sixth Workshop on Baltic Sea Ice.

The workshop is organised by the Department of Physics of the University of Helsinki.

The scientific advisory committee

Prof. Matti Leppäranta, chair	University Helsinki, Finland
Dr. Ants Erm	Tallinn University of Technology, Estonia
Dr. Jari Haapala	Finnish Institute of Marine Research, Finland
Prof. Zhijun Li	Dalian University of Technology, China
Prof. Anders Omstedt	Göteborg University, Sweden
Dr. Natalia Schmelzer	BSH, Hamburg, Germany
Prof. Corinna Schrum	University of Bergen, Norway
Prof. Kunio Shirasawa	Hokkaido University, Japan
Dr. Marzenna Sztobryn	Institute of Water Management, Poland

Programme

Monday, August 25

- 12.00 *Lunch*
- 13:15 *Opening*
- Topic: Baltic Sea ice**
- 13.30 *Klaus Strübing: Charting the Baltic Sea ice – A historical review*
- 14.00 *Sönke Maus (co-authored by Frieder Enzmann, Markus Miedaner, Marco Stampanoni, Federica Marone, Manuel A. Hutterli, Markus Ammann, Christoph Hintermueller and Michael Kersten): Synchrotron-based X-ray micro-tomography: insights into sea ice microstructure*
- 14:30 *Jari Uusikivi: Influence of dissolved and particulate constituents on land fast sea ice optical properties*
- 15.00 *Coffee break*
- 15.30 *Natalija Schmelzer: Does navigation need an ice atlas? Ideas about an ice atlas for the area of the Western and Southern Baltic*
- 16.00 *Yevgeny Mironov (co-authored with A. Lebedev and Vadim Drabkin): The peculiarities of multi-year variability of ice phenomena in the eastern Gulf of Finland in the current century*
- 16.30 *Jevgeni Rjazin (co-authored by Ove Pärn and Jari Haapala): A survey to estimate appearance and performance of leads suitable to navigate, in the sea ice on the Gulf of Finland*
- 17.00 *Dinner*
- 20.00 *Sauna by the lake*

Tuesday, August 26

- 8.00 *Breakfast*
- Topic: Remote sensing**
- 9.00 *Rasmus Tonboe: Simulation of L-band thermal microwave signatures from Baltic Sea ice*
- 9.30 *Nina Maass (co-authored by Lars Kaleschke): Determining Baltic Sea ice thickness and concentration from L-band microwave radiometry*
- 10.00 *Juha Karvonen: Ice thickness charts produced by SAR imagery and HIGHTSI thermodynamic ice model*
- 10.30 *Coffee break*
- Topic: Sea ice biology**

- 11.00 *Keynote talk by Hermanni Kaartokallio: Sea ice ecology in the Baltic Sea*
- 12.00 *Lunch*
- 13.00 *Vladimir Melentyev: Spring-time thermobar as a governing factor of biological environment well-being (deep inland water bodies Ladoga, Geneva and Lake Como as example)*
- 13.30 *Gu Wei: The use of sea ice as a new freshwater resource in china*
- 14.00 *Xu Yingjun: Some active progress in changing Bohai sea ice into freshwater by desalination*
- 14.30 *Coffee break*
- 15.00 **Poster session**
- Susann Haase: The photochemical transformation of organic matter in sea ice and its impact on the functioning of the sea ice ecosystem*
- Anssi Vähätalo: Freeze-fractionation of organic matter in the Baltic Sea water*
- Tuomas Niskanen (c-authored by Patricj Eriksson and Jouni Vainio): Maximum ice cover extend areas in Baltic Sea during last 30 year period (from winter 1971 to 2001)*
- Sergey Klyachkin and Vadim Drabkin: The estimate of ice pile-up intensity and frequency on the eastern Gulf of Finland coasts using the dynamic model*
- 17.00 *Dinner*
- Evening programme open*

Wednesday, August 27

- 8.00 *Breakfast*
- Topic: Models**
- 9.15 *Sönke Maus: Geophysical property modelling of sea ice*
- 10.00 *Pekka Juuti: Latest development in ice model testing*
- 10.30 *Coffee break*
- 11.00 *Keynote talk by Kai Myrberg: Hydrography and circulation in the Baltic Sea*
- 12.00 *Lunch*
- 13.00 *Oleg Andrejev: Sea ice modelling*
- 13.30 *Andreas Lehmann (co-authored by Riikka Hietala): The role of brine release and sea ice drift for winter mixing and sea ice formation in the Northern Baltic Sea*

- 14.00 *Yusuke Kawaguchi*: Effects of along-shore winds on DSW discharge from coastal polynyas
- 14.30 *Coffee break*
- 15.00 *Li Ning*: The calculation of sea ice thickness in Bohai Sea
- 15.30 *Matti Leppäranta*: Two-phase thermodynamics sea ice model
- 16.00 *Juha Karvonen*: Evaluation of operational HIGHTSI thermodynamic ice model in the Baltic Sea for the winter 2007-2008
- 16.30 Closing discussion
- 17.00 *Dinner*

Departure

Wednesday evening; it is possible to stay overnight in the station and leave on Thursday morning.

Workshop Proceedings

The Proceedings of The Sixth Baltic Sea Ice Climate Workshop will be published in Report Series in Geophysics of the University of Helsinki. The manuscripts are due to September 30th, 2008. More detailed instructions will be given during the workshop in Lammi.

Travel instructions

Lammi Biological Station: See web site <http://www.helsinki.fi/lammi/english>.

Travelling to Lammi Biological Station from Helsinki

- 1a. From Helsinki Centre: take train (hourly) or bus (twice per hour) to Lahti
- 1b. From Helsinki Airport: take bus to Lahti (leaves every hour)
(Helsinki – Lahti is about 100 km)
- 1c. Coming from Russia, take train or bus to Lahti

- 2a. From Lahti take bus to Lammi centre (35 km) and then taxi to Lammi Biological Station (3 km)
- 2b. On Monday, 25 August transportation can be arranged by van from Lahti train station and bus station to Lammi Biological Station at about 10 – 11 hrs.

Foreign participants: Please, let me know when you can arrive to Lahti for the arrangements of transportation to the Station!

Accommodation costs

There is no workshop participation fee. The accommodation in the station costs 100 euros for the whole period of the workshop, including room and all meals.

Contact

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List of Participants

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Denmark

Rasmus T. Tonboe	Technical University of Denmark
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Estonia

Jevgeni Rjazin	Institute for Marine Systems, Tallinn University of Technology
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Finland

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