

The 3rd Chinese- Finnish bilateral workshop on Polar Meteorology, Climate and Sea Ice: Towards Better Operational Services for the Society

Finnish Meteorological Institute (FMI), Helsinki, 5 -7 June, 2017

Street address: Erik Palménin aukio 1, FI-00560 HELSINKI

Meeting room Aura, ground floor

Monday 5 June, 2017

8:30 – 9:15 Registration in FMI main building, Dynamicum, ground floor

9:15 – 9:20 Opening of the workshop,

Jussi Kaurola, Deputy Director-General of FMI

Chair: Timo Vihma

9:20 – 9:30 A very brief self-introduction of each participant.

9:30 – 9:40 Review Finnish-Chinese collaboration from NMEFC perspectives, Zhigao Qiu

9:40 – 10:00 Invited talk by Feng Chen from COSCO Shipping Group: Navigation through the Arctic Northeast Passage and following Initiative of China One Belt One Road.

10:00 – 10:30 Introduction of recent research activities by Chinese Institutions/Universities

National Marine Environmental Forecasting Center, Dakui Wang, 5 min

Polar Research Institute of China, Bingru Li, 5 min

National Satellite Ocean Application Service, Qimao Wang, 5 min

Taiyuan University of Technology, Yingke Dou, 5 min

Beijing Normal University, Fengming Hui, 5 min

Shanghai Jiao Tong University, Zhaoru Zhang, 5 min

10:30 – 10:50 Coffee break

Chair from NMEFC (Lin Zhang)

10:50 – 11:25 Introduction of Finnish research activities

Research priorities during the Finnish chairmanship in the Arctic Council, Johanna Ekman, 10 min.

University of Helsinki, Matti Leppäranta, 10 min.

FMI Meteorological Research Unit, Timo Vihma, 5 min.

FMI Marine Research Unit, Jari Haapala, 5 min.

FMI Arctic Research Unit, Alexey Karpechko, 5 min.

Ice research

11:25 – 11:50 Annu Oikkonen: Small-scale sea ice deformation during N-ICE2015: From compact pack ice to marginal ice zone"

11:50 – 12:15 Lin Zhang: Arctic and Antarctic sea ice observation forecast and service in NMEFC.

12:15 – 13:30 lunch

Chair from NSOAS (Qimao Wang)

13:30 – 13:55 Bin Cheng: Snow and sea ice in the Arctic Ocean: Observation and modelling.

13:55 – 14:20 Bingrui Li: An introduction on Chinese National Arctic Research Expedition and Research.

14:20 – 14:40 Coffee break

Remote sensing research

Chair from PRIC (Bingrui Li)

14:40 – 15:05 Juha Karvonen: Sea ice parameter estimation from SAR and microwave radiometer imagery over Bohai Sea.

15:05 – 15:30 Lijian Shi: Polar Sea ice monitoring using HY-2A scatterometer measurements.

15:30 – 15:55 Markku Similä: Degree of sea ice ridging estimation based on dual-polarized C-band SAR data.

15:55 – 16:00 Short break.

Observations

Chair from UH (Matti Leppäranta)

16:00 – 16:25 Roberta Pirazzini: Exploitation of the existing Arctic observing systems (INTAROS WP2).

16:25 – 16:50 Yingke Dou: Design, integration and application of ice based unmanned observation station.

16:50 – 17:15 Xiao Deng: Multi-parameter monitoring methods of ice and snow conditions in the upstream of Heilongjiang River, China.

17:15 – 17:40 Xiaoyu Sun: Arctic Sea Ice Observation and Characteristic Analysis Based on CHINARE 2016.

17:40 – 18:00 Summary of day 1

18:00 – 22:00 A reception for seminar participants (sauna, snack + drink + food), FMI 5th floor.

Tuesday 6 June, 2017

Meteorological and oceanographic research and forecasting

Chair from FMI/MER (Marko Mäkynen)

9:00 – 9:25 Ting Qin: Cyclone activity in Arctic Ocean.

9:25 – 9:50 Qun Li: Dynamics of nonlinear internal waves and its role on water exchange across Kara strait.

9:50 – 10:15 Xi Liang: Assimilating Copernicus SST Data into a Pan-Arctic Ice-Ocean Coupled Model with a Local SEIK Filter.

10:15 – 10:40 Andrea Gierisch: Sea ice modelling in the Kara Sea.

10:40 – 11:00 Coffee break with posters

Chair from BNU (Fengming Hui)

11:00 – 11:25 Timo Vihma: Arctic climate change and its linkages with mid-latitudes.

11:25 – 11:50 Alexey Karpechko: Potential to use seasonal NAO forecasts to predict Baltic Sea ice.

11:50 – 12:15 Irene Suomi: Wind gust factor based on research aircraft measurements.

12:15 – 12:30 Discussion

12:20 – 13:30 Lunch

Antarctic Research

Chair from FMI/ARK (Alexey Karpechko)

13:30 – 13:55 Matti Leppäranta: Life cycle of seasonal lakes in Dronning Maud Land, Antarctica.

13:55 – 14:20 Guanghua Hao: Albedo variations of coastal landfast sea ice in Prydz Bay.

14:20 – 14:45 Qinzhen Sun: Impacts of data assimilation from the Southern Ocean on WRF model forecasts.

14:45 – 15:10 Fengming Hui: Satellite-based Sea-Ice Navigation for Prydz Bay, East Antarctica.

15:10 – 15:35 Zhaoru Zhang: Seasonal Southern Hemisphere multi-variable reflection of Climate Responses to Variations in the Southern Annular Mode in Atmosphere and Ocean Reanalyses.

15:35 – 16:00 Coffee break with posters.

Research addressing China, Finland, and surrounding seas

Chair from FMI/MET (Bin Cheng)

16:00 – 16:25 Lijuan Shi: Estimation of microwave atmospheric transmittance over China and Northern Europe.

16:25 – 16:50 Anliang Wang: Modified discrete element model for sea ice dynamics and its applications in the Bohai Sea.

16:50 – 17:15 Meiting Hou: Sensitivity of vegetation productivity to climate variability in Fennoscandia peninsula during 1982-2015.

17:15 – 17:30 Discussion

Posters by Marko Mäkynen, Juha Karvonen, Deng Xiao, Zeliang Liao, Bin Cheng, Katriina Veijola, Hanyang Gong, Timo Vihma, Ting Qin...

19:30 – 22:30 Workshop dinner, city center

Wednesday 7 June, 2017

9:00 – 9:10 Division into working groups for:

- In situ observations
- Remote sensing observations
- Modelling and process studies
- Climate research

9:10 – 11:00 Working groups discuss (including a coffee break).

11:00 – 12:00 Working group reports, 15 min each.

12:00 – 13:00 Lunch.

13:00 – 14:00 Summary of seminar activities (NMEFC).

14:00 – 17:00 Free discussions, departures.