

# Polar Climate Change: Driving Processes, Extreme Events, and Global Linkages

## Agenda

Meeting Room III, Hohai International Conference Center & Hotel

23-24 October 2017

### Sunday, 22 October

Registration

### Oral Sessions

### Monday, 23 October

Times	Title	Speaker
8:30-8:40	Welcome Speech by President	Hui Xu
8:40-8:50	Welcome and Introduction	Zhaomin Wang
8:50-9:00	Arctic Climate Change: State of Knowledge, Questions, and Challenges	Xiangdong Zhang
9:00-9:10	Photo	
<b>Arctic-Lower Latitude Linkage and Impacts (I)</b>		
Chair: Xiangdong Zhang		
9:10-9:30	Relationship between the Arctic climate change and winter extreme events in Eurasia and China	Yihui Ding
9:30-9:50	Impact of a changing Arctic cryosphere on the atmospheric circulation at mid and high latitudes	Yvan Orsolini
9:50-10:10	Role of sea ice and SST forcing in the Eurasian winter temperature trend in CFSv2 simulations	Wangqiu Wang
10:10-10:30	Dynamical link between the Barents-Kara Sea ice and the Arctic Oscillation	Xiaoyi Yang
10:30-10:50	Linkages between Arctic sea-ice changes and atmospheric circulation patterns in reanalysis data and model simulations	Ralf Jaiser
10:50-11:10	Coffee Break	
<b>Arctic processes, events, and modeling (I)</b>		
Chair: Zhaoyong Guan		
11:10-11:30	Positive and negative feedbacks related to the Arctic Oscillation revealed by air-sea heat fluxes	Jinping Zhao
11:30-11:50	Winter atmospheric circulation anomaly associated with recent Arctic winter warm anomalies	Bingyi Wu
11:50-12:10	Arctic Sea Level Variability: Observations and Simulations	Xianyao Chen
12:10-13:30	Buffet Lunch/Break	

<b>Antarctic Climate Change and its Global Linkage</b>		
Chair: Zhaomin Wang		
13:30-13:50	Extreme Meteorological and Sea Ice Events in the Antarctic	John Turner
13:50-14:05	Features of monthly and extreme precipitations at Progress station, Antarctica	Lejiang Yu
14:05-14:20	Influences of polynyas on shelf water in Prydz Bay	Jiuxing Shi
14:20-14:35	The evolution of the Southern Annular Mode (SAM) during the past 300 years	Cunde Xiao
14:35-14:50	Southern Hemisphere origins for interannual variations of Tibetan Plateau snow cover in boreal summer	Zhiwei Wu
14:50-15:05	The Annular Modes: intrinsic dynamics and the role of global-warming like forcing	Yang Zhang (NJU)
15:05-15:30	Coffee Break	
<b>Ice Shelf-Ocean Interactions</b>		
Chair: John Turner		
15:30-15:50	Rationale and design of the Southern Ocean Observing System	Dake Chen
15:50-16:10	Interaction of Greenland Outlet Glaciers with Ocean Waters	David Holland
16:10-16:30	The study of ice shelf-ocean interaction – techniques and recent results	Keith Nicholls
16:30-16:45	The interaction between Antarctic ice shelf and sea ice	Xiao Cheng
16:45-17:00	Hot Water Drill Project at Amery Ice Shelf, East Antarctica	Yuansheng Li
17:00-17:15	Modeling modified Circumpolar Deep Water intrusions onto the Prydz Bay continental shelf, East Antarctica	Chengyan Liu
17:15-17:30	Vertical modification on depth-integrated ice shelf water plume modeling based on an equilibrium vertical profile of suspended frazil ice concentration	Zhaomin Wang
17:30-18:30	Discussion Chair: John Turner and Zhaomin Wang	
18:30	Banquet	

**Tuesday, 24 October**

**Arctic in-situ observations and analysis**

Chair: Xiangdong Zhang

<b>Times</b>	<b>Title</b>	<b>Speaker</b>
8:30-8:50	Collapse of the winter Beaufort High associated with the pan-Arctic intrusion of North Atlantic cyclones: A response to thinning sea ice?	Kent Moore
8:50-9:10	MOSAiC as a platform for Arctic coupled system research	Matthew Shupe
9:10-9:30	Sea ice and ocean observations - essential for monitoring and modelling the Arctic climate	Stein Sandven
9:30-9:50	Improving sea ice thickness estimates by assimilating CryoSat-2 and SMOS sea ice thickness data simultaneously	Qinghua Yang
9:50-9:55	Introduction to Advances in Polar Science and call for papers	Xinke Cheng
9:55-10:20	Coffee Break	

**Synthesis of Arctic Observations and Modeling**

Chair: Annette Rinke

10:20-10:40	Mesoscale Wind Climatology and Variation in the Chukchi–Beaufort High-Resolution Atmospheric Reanalysis (CBHAR)	Jing Zhang
10:40-11:00	How good are ocean reanalyses in the polar regions?	Petteri Uotila
11:00-11:20	Continuously Amplified Warming in the Alaskan Arctic: Implications for Estimating Global Warming Hiatus	Tingjun Zhang
11:20-11:35	Effect of the Cycling WRF-3DVAR Data Assimilation of the Ship-borne Arctic Radiosonde Sounding on the Simulation of the Arctic Cyclone in mid-August 2016	Joo-Hong Kim
11:35-12:00	Discussion Chair: Annette Rinke and Xiangdong Zhang	
12:00-13:30	Buffet Lunch/Break	

**Arctic Processes, Events, and Modeling (II)**

Chair: Yongqi Gao

13:30-13:50	Atmosphere-ice-ocean interactions in the Arctic	Annette Rinke
13:50-14:05	An Intense Arctic Storm Occurring in Summer 2016 and Its Impacts on Melting Process of Sea Ice	Liran Peng
14:05-14:20	The AWI climate model: high-resolution climate modelling in CMIP6 and beyond	Tido Semmler
14:20-14:35	Sea ice kinematic and thermodynamic properties in the Arctic outflow region	Ruibo Lei
14:35-14:50	Applications of an Unstructured Grid Surface Wave Model (FVCOM-SWAVE) to the Arctic Ocean:	Yang Zhang (SIO)

	Effects of ice-wave interaction	
14:50-15:05	The Arctic sea ice simulation and prediction by FIO-ESM	Qi Shu
15:05-15:25	Climate warming induced changes in Arctic terrestrial ecohydrology regimes	Hotaek Park
15:25-15:50	Coffee Break	
<b>Arctic-Lower Latitude Linkage and its Impact (II)</b>		
Chair: Kent Moore		
15:50-16:10	Rapid increase of acidifying water in western Arctic Ocean and its driving forces linked to Global Change	Liqi Chen
16:10-16:30	The Eurasia–North Pacific Oscillation independent of both IHO and AO and its possible impacts on winter climate	Zhaoyong Guan
16:30-16:50	Nordic Center of Excellence: Arctic climate predictions: Pathways to Resilient,Sustainable Societies(ARCPATH)	Yongqi Gao
16:50-17:10	Polarized Response of East Asian Winter Temperature Extremes in the Era of Arctic Warming	Congwen Zhu
17:10-17:25	Impact of winter Ural blocking on Arctic sea ice: Short-time variability	Xiaodan Chen
17:25-17:40	Mass-induced sea level change in the northwestern North Pacific and its contribution to total sea level change	Xuhua Cheng
17:40-18:30	Discussion Chair: Zhaomin Wang, Xiangdong Zhang, John Turner, and Annette Rinke	
18:30	Closing	
18:30-20:00	Buffet Dinner	

## Poster Sessions

23-24 October		
No.	First Author	Title
1	Minghu Ding	Snowfall of west Antarctica and its linkage with ASL
2	Qing Ji	Construction of Snow Depth Statistical Model Based on Ice Mass Balance Buoys Data on Arctic Sea Ice
3	Xia Lin	Mean, Variability and Trend of Southern Ocean wind stress: Role of wind fluctuations
4	Tido Semmler	Large ensembles of uncoupled and coupled model experiments on the influence of Arctic sea ice decline on mid-latitude weather and climate
5	Xuezhu Wang	Oceanic and atmospheric response to Western Antarctic Ice Sheet collapse during Last Interglacial
6	Jianfen Wei	Variability of Fram Strait Sea Ice Export and its Role in Recently Accelerated Arctic Sea Ice Retreat
7	Yang Wu	On the Response of the Lorenz Energy Cycle for the Southern Ocean to Intensified Westerlies
8	Yang Wu	Decadal-mean impact of including ocean surface currents in bulk formulas on surface air-sea fluxes and ocean general circulation
9	Yang Wu	Impact of Synoptic Atmospheric Forcing on the Mean Ocean Circulation
10	Zhantang Xu	A semianalytical algorithm for quantitatively estimating sediment and atmospheric deposition flux from MODIS-derived sea ice albedo in the Bohai Sea, China
11	Naiming Yuan	Long term persistence enhances uncertainty of the sea ice extent variations over Antarctica
12	Xi Zhao	Will Sea ice leads increase as Arctic ice go thinner ?
13	Zhaoru Zhang	Seasonal Southern Hemisphere Multi-Variable Reflection of the Southern Annular Mode in Atmosphere and Ocean Reanalyses