Contents of Volume 32

Advances in Polar Science

CONTENTS (Volume 32, 2021)

Number 1

Editorial Note
Spatial variability in carbon dioxide exchange processes within wet sedge meadows in the Canadian High Arctic
Claire M. WRIGHT, Amy C. BLASER, Paul M. TREITZ & Neal A. SCOTT

Complete genome analysis of bacteriochlorophyll a-containing Roseicitreum antarcticum ZS2-28T reveals its adaptation to Antarctic intertidal environment
ZENG Yinxin, YU Yong, LI Huirong, LUO Wei & DING Haitao

Biomarker records of D5-6 columns in the eastern Antarctic Peninsula waters: responses of planktonic communities and bio-pump structures to sea ice global warming in the past centenary
YANG Dan, ZHANG Haisheng, HAN Zhengbing, HAN Xibin, ZHANG Yicheng, CHEN Wensheng, LIU Qian, PAN Jianming, FAN Gaojing, LE Fengfeng, LU Bing & HUANG Jing

Seabird and marine mammal at-sea distribution in the western Bering Sea and along the eastern Kamtchatka Peninsula
Claude R. JOIRIS

Assessment on India’s involvement and capacity-building in Arctic Science
Nikhil PAREEK

Leveraging the UAV to support Chinese Antarctic expeditions: a new perspective
LI Teng, ZHANG Baogang, CHENG Xiao, HUI Fengming & LI Yuansheng

Number 2

Editorial
Towards an integrated study of subglacial conditions in Princess Elizabeth Land, East Antarctica
TANG Xueyuan & SUN Bo

Characteristics and spatial distribution of strong warming events in the central Arctic (2000–2019)
ZHANG Zelu, ZHAO Jinping & BIAN Lingen
Factors contributing to rapid decline of Arctic sea ice in autumn
   LI Shuyao, CUI Hongyan, XU Junli, GONG Xiang, QIAO Fangli, YANG Yanzhao,
   WANG Ping, HAN Yuqun & SHAN Feng
Retrievals of Arctic sea ice melt pond depth and underlying ice thickness using optical data
   ZHANG hang, YU Miao, LU Peng, ZHOU Jiaru & LI Zhijun
Ocean stratification and sea-ice cover in Barents and Kara seas modulate sea-air methane flux:
satellite data
   Leonid YURGANOV, Dustin CARROLL, Andrey PNYUSHKOV, Igor POLYAKOV &
   Hong ZHANG
A case study based on ground observations of the conjugate ionospheric response to
interplanetary shock in polar regions
   HE Fang, HU Zejun, HU Hongqiao, HUANG Dehong & YU Yao
Traditional Arctic native fish storage methods and their role in the sustainable development of
the Arctic
   LUO Ying, Andrew Alexandrovich LOBANOV, HUI Fengming, Sergei Vasilevich
   ANDRONOV, Lidiya Petrovna LOBANOVA, Elena Nikolaevna BOGDANOVA, Irina
   Alexandrovna GRISHECHKINA, Andrei Ivanovich POPOV & Roman Yurievich FEDOROV

Number 3
Application of unmanned underwater vehicles in polar research
   ZENG Junbao, LI Shuo & LIU Ya
Utilization of clean energy and future trend of Antarctic research stations
   LI Zhao, LÜ Dongxiang, SUN Zilu & LI Chuan
Marine biogenic aerosols and their effects on aerosol-cloud interactions over the Southern
Ocean: a review
   XU Yifan, XU Guojie, CHEN Liqi & ZHANG Miming
The marine environmental evolution in the northern Norwegian Sea revealed by foraminifera
during the last 60 ka
   WANG Weiguo, ZHAO Mengwei, YANG Jichao, XIAO Wenshen, WANG Haoyin & LIU Yang
Characteristics of hydrogen/oxygen isotopes in water masses and implications for spatial
distribution of freshwater in the Amundsen Sea, Southern Ocean
   SHAO Hebin, HE Jianfeng, LUO Guangfu, LAN Musheng, YU Lejiang, GUO Guijun &
   LIAN Ergang
Different physiopsychological changes between AMS-susceptible and AMS-resistant
pre-selected Antarctic expeditioners in Tibet
   WU Xiaopei, LIU Shiying, WANG Xi, WANG Jianan, QIN Pengrui & XU Chengli
An introduction to the riometer system deployed at China-Iceland joint Arctic observatory and its
beam-forming correction method based on the preliminary data
   HE Fang, HU Zejun, HU Hongqiao, HUANG Dehong & YU Yao
Number 4

An outstanding example of cooperation between Arctic and non-Arctic countries in cryosphere and climate research: Sino-Finnish cooperation for more than 30 years

Matti LEPPÄRANTA, Timo VIHMA, Bin CHENG & LEI Ruibo

The rise of sea ice research collaboration between China and Finland

Matti LEPPÄRANTA, WU Huiding, ZHANG Zhanhai, LI Zhijun & Bin CHENG

Early glaciological and Quaternary Geology cooperation

Harry ZILLIACUS

Physics of Arctic landfast sea ice and implications on the cryosphere: an overview

ZHAI Mengxi, Matti LEPPÄRANTA, Bin CHENG, LEI Ruibo & ZHANG Fanyi

An overview of Antarctic polynyas: sea ice production, forcing mechanisms, temporal variability and water mass formation

WEI Zheng, ZHANG Zhaoru, Timo VIHMA, WANG Xiaqiao & CHEN Yuanjie

Observation and modelling of snow and sea ice mass balance and its sensitivity to atmospheric forcing during spring and summer 2007 in the Central Arctic

Bin CHENG, Timo VIHMA, Timo PALO, Marcel NICOLAUS, Sebastian GERLAND, Laura RONTU, Jari HAAPALA & Donald PEROVICH

An observational study of precipitation types in the Alaskan Arctic

YUE Handong, DOU Tingfeng, LI Shutong, LI Chuanjin, DING Minghu & XIAO Cunde

Variation of Antarctic marginal ice zone extent (1989–2019)

WANG Miaojiang, LIU Tingting, YANG Zijian, WU Bing & ZHU Xueming

Modelling on seasonal lake ice evolution in central Asian arid climate zone: a case study

LU Peng, Bin CHENG, Matti LEPPÄRANTA & LI Zhijun

The role of lake heat flux in the growth and melting of ice

Bin CHENG, XIE Fei, LU Peng, HUO Puzhen & Matti LEPPÄRANTA

Tensile strength of sea ice using splitting tests based on the digital image correlation method

CHEN Xiaodong, HE Shuaikang, HE Wenquan, WANG Zhaoyu & JI Shunying

Cover picture: snapshots of the long term cooperation between China and Finland

One special issue will be published in 2022

Contents of Volume 32, 2021