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9:00-18:00 (UTC+8) May 25, 2023

Opening Ceremony

Chair: Jiuxin Shi Meeting Room:Conference Center Back Hall

9:00-9:30 Welcoming Address+POGOC Introduction+Group Photo

Keynote Lectures

Meeting Room:Conference Center Back Hall

9:30-10:00	Matthew England	Abyssal ocean overturning slowdown and warming driven by Antarctic meltwater
10:00-10:30	Wenju Cai	Southern Ocean heat uptake and El Nino variability under greenhouse warming
10:30-10:45		Tea Break
10:45-11:15	Meng Zhou	Perspectives on the Ross Sea Ecosystem studies and monitoring
11:15-11:45	Akiho Shibata	Asian cooperation in strengthening the Antarctic governance: towards 2026 ATCM in Japan

Session:Southern Ocean Heat Uptake and Its Climatic Impacts

Meeting Room:Conference Center Back Hall

Meeting Room:Conference C	enter Back Hall	Chair: Yiyong Luo
14:00-14:20 16:00-16:20 (UTC+10)	Helen Phillips	Mechanisms of poleward heat transport in the Antarctic Circumpolar Current (Online)
14:20-14:40	Yan Du	Evolution of the subantarctic mode water in the Southern Ocean
14:40-15:00	Lixiao Xu	Buoyancy and wind driven effects on recent changes of the Subantarctic Mode Water
15:00-15:20	Shiming Xu	Observing Antarctic Marginal Ice Zones with Satellite Altimetry Synergy – A Case Study of the Indian Ocean Sector during July, 2017
15:20-15:40	Zhi Li	Key role of Southern Ocean water masses in global heat uptake using Argo measurements
15:40-16:00	Yu Hong	Origins and pathways of the Antarctic Intermediate Water
16:00-16:35		Tea Break

		Chair: Fukai Liu
16:35-16:55	Kewei Lyu	Roles of surface forcing in shaping the Southern Ocean rapid warming
16:55-17:15	Xiaoming Hu	Role of seasonal energy transfer mechanism in the Antarctic Warming and its inter-model spread in CMIP6
17:15-17:35 5:15-5:35 (UTC-4)	Liping Zhang	The relative role of the subsurface Southern Ocean in driving negative Antarctic sea ice extent anomalies in 2016-2021 (Online)
17:35-17:55 5:35-5:55 (UTC-4)	Jia-Rui Shi	Climate change in the Southern Ocean: the rising temperature and enhanced zonal velocity (Online)



Session:Sustainability Use of Antarctic Marine Living Resources and Antarctic Governance		
Meeting Room:The Second	Floor Conference Room	Chair: Yitong Chen
14:00-14:20	Li Chen	Legal Implementation of Madrid Protocol in China (Online)
14:20-14:40	Xuefeng Li	Antarctic blue carbon protection under the framework of Antarctic treaty system
14:40-15:00 15:40-16:00 (UTC+9)	Hyoung Chul Shin	Governance of Antarctic marine ecosystem conservation, a hot potato or a cool lodestar? (Online)
15:00-15:15		Tea Break
		Chair: Yang Liu
15:15-15:35	Yang Liu	Integrating Mesopelagic Fish into the assessment of marine protected areas under climate change scenarios
15:35-15:55	Yutian Ding	The Area 48 Krill Fishery: The difficult pace of upgrading the management system



AGENDA 9:00-17:00 (UTC+8) May 26, 2023 Session:Antarctic Shelf-basin Exchanges and Ice-ocean Interactions Meeting Room:Conference Center Back Hall Chair: Zhaoru Zhana 9:00-9:20 Vulnerability of East Antarctic Ice Shelves to ocean processes and **Steve Rintoul** 11:00-11:20 (UTC+10) change (Online) 9:20-9:40 Sensitivity of the relationship between Antarctic ice shelves and iron Michael S. Dinniman 21:20-21:40 (UTC-4) supply to projected changes in the atmospheric forcing (Online) 9:40-10:00 Xiaozhou Ruan Ice-Shelf Meltwater Overturning in the Bellingshausen Sea (Online) 21:40-22:00 (UTC-4) Recent reduced abyssal overturning and ventilation in the Australian 10:00-10:20 Kathryn L. Gunn 12:00-12:20 (UTC+10) Antarctic Basin (Online) 10:20-10:35 Tea Break Chair: Chengyan Liu 10:35-10:55 Ice-ocean interactions sea-ice formation and break-out near ice Inga J. Smith shelves (Online) 14:35-14:55 (UTC+12) Impacts of Grounding Icebergs on Sea Ice, Polynyas and Circulation 10:55-11:15 Jiuxin Shi in Prydz Bay, Antarctica The influence of snow cover on landfast sea ice thickness in Prydz 11:15-11:35 Jiechen Zhao Bay, East Antarctica Chair: Libao Gao 14:00-14:20 Deep and shallow warm water intrusion on the continental shelf off Shigeru Aoki 15:00-15:20 (UTC+9) East Antarctic coasts (Online) Poleward shift of Circumpolar Deep Water threatens East Antarctic 14:20-14:40 Laura Herraiz 16:20-16:40 (UTC+10) Borreguero Ice Sheet (Online) Topography-mediated transport of warm deep water across the 14:40-15:00 Chengyan Liu continental shelf slope, East Antarctica Intrusion of warm modified circumpolar deep water and its impact on 15:00-15:20 Guijun Guo dense shelf water formation 15:20-15:35 Tea Break Chair: Jiuxin Shi The salinity budget of the Ross Sea continental shelf, Antarctica 15:35-15:55 **Zhaomin Wang** (Online)

15:55-16:15

16:15-16:35

16:35-16:55

18:35-18:55 (UTC+10)

Zhaoru Zhang

Lingqiao Cheng

Guy Williams

Effects of projected wind changes caused by the Amundsen Sea low

Interannual Variability of Winter Water in the Indian Ocean Sector of

on the high salinity shelf water formation in the Ross Sea

The New Golden Era of Polar Research and Exploration with

the Southern Ocean and Its Causes

Autonomous Systems (Online)



Session:Marine Biodiv	ersity and Biogeoche	emical Cycles in the Southern Ocean
Meeting Room:The Second	d Floor Conference Room	Chair: Yantao Liang
9:00-9:20 18:00-18:20 (UTC-7)	Jeomshik Hwang	Dissolved Organic Carbon Cycling in the Antarctic Seas Based on Radiocarbon Analysis(Online)
9:20-9:40	Yingxu Wu	Strong transport of anthropogenic carbon from the Antarctic shelf to deep Southern Ocean triggers rapid acidification
9:40-10:00 21:40-22:00 (UTC-4)	David Pez Espino	The Diversity of the Global Virome(Online)
10:00-10:20	Imali Kaushalya Herath	Isotopic constraints on sources and cycling of Nitrate in Polar Sea Ice
10:20-10:35		Tea Break
		Chair: Xiaotong Xiao
10:35-10:55	Guang Yang	Role of zooplankton in the Southern Ocean biogeochemical cycles
10:55-11:15	Liyang Zhan	A study on the role of sea ice in the N_2O cycle in the Prydz Bay, Antarctica
11:15-11:35	Jun Zhao	Does reactive iron contribute to the long-term preservation of marine organic carbon in the Antarctic sediment?
		Chair: Jun Zhao
14:00-14:20	Chunyang Li	A novel ATP dependent dimethylsulfoniopropionate lyase identified i Antarctic bacteria
14:20-14:40	Yongli Zhang	Iron limitation and uneven grazing pressure on phytoplankton co- lead the seasonal species succession in the Ross Ice Shelf Polynya
14:40-15:00	Meiaoxue Han	The distribution characteristics and potential roles of viruses in the Antarctic ice-edge algal blooms
15:00-15:20	Chaofeng Wang	Pelagic ciliate (Ciliophora) communities in the Southern Ocean: Bioindicator to water mass, habitat suitability classification and potential response to global warming
15:20-15:40	Fraser Kennedy	To be determined (Online)
POSTER		
Yutong Zheng	The Southern Ocean	rapid warming and related spiciness changes
Tingzhen Liu	Interannual variability of eddy activity in the Southern Ocean associated with the ENSO	
Hong Li	The observed enhancement of eddy from stress in the standing meanderings of the Antarctic Circumpolar Current	
Xubin Ni	The ocean response leaves behind a footprint in the Antarctic Intermediate Water heat content	
Kaiyan Xiao	Bird feathers as non-invasive bio-indicators of metals and pesticides in the Southern Ocean	
Yurong Mu	Climate-induced response of predators to the marine ecosystems in the Southern Ocean	