

2023/24 Asian Forum for Polar Sciences (AFoPS) Activities



Siti Aisyah Alias
AFoPS Country Coordinator
(Malaysia)

Polar Expedition 2023-24

Research Collaboration

International Cooperation

Public Educations

Research Highlights

China - Research Expedition & New Station 2023-24

13th Chinese National
Expedition to the Arctic
Ocean to the North Pole. Chinese Research Vessel Xue
Long 2

Scientific observations on atmospheric environment, water chemistry, hydrological environment, bioecology etc. al had been conducted at the North Pole.



39th CHINARE

The third Successful Antarctica Expedition of two IceBreakers (October, 2022 to April, 2023) 163 days

Geophysics Ocean survey for 116 stations; 16 inland expedition members completed the Kunlun Station tour with 11 investigation projects such as glacial, meteorology, geophysiolgy, astronomy and space physics.

CHINARE 39th

40th Chinese National Expedition to the Antarctic by sending out three vessels, Xuelong, Xuelong 2 and a cargo vessel "Tian Hui" To conduct comprehensive surveys in the Prydz Bay, the Cosmonauts Sea, the Ross Sea, the Amundsen Sea and the coastal waters around the Antarctic Peninsula for in-depth study of the role Antarctica plays in the global climate change.



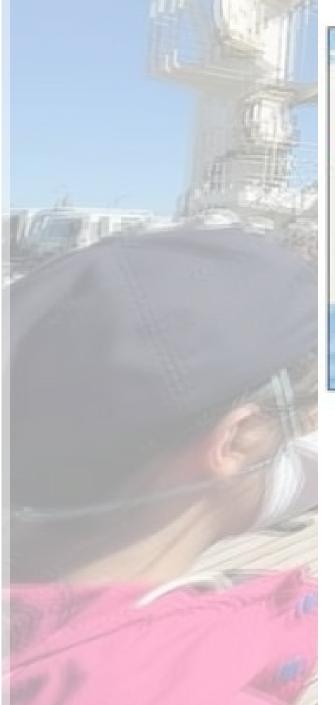
Ross Sea station (Third Permanent Antarctica Station)

The Ross Sea station will be the first Chinese Antarctic station in the Pacific sector



Research endevours in the Canadian Arctic









First Canadian Arctic Expedition was undertaken during 13 August – 08 September 2023



JAPAN

Phase X of the six-year Japanese Antarctic Research Project (2022-2028)

Japanese Antarctic Research Project **Phase X** that began with the 64th Japanese Antarctic Research Expedition (JARE 64) had launched in 2022.

Prioritized Research Project of Phase X focus on characterizing the <u>future global environment system</u> as inferred through investigating the <u>past and present</u> of the Antarctic.

Past 1···"Oldest Ice"drilling at Dome Fuji II

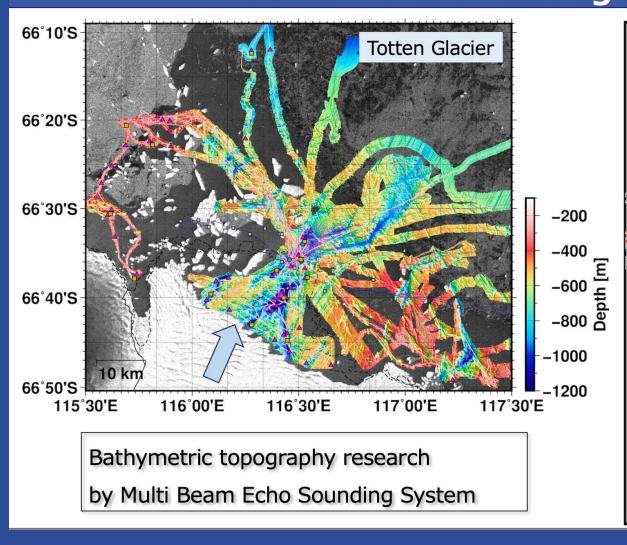
Past 2...Sediment Core Sampling

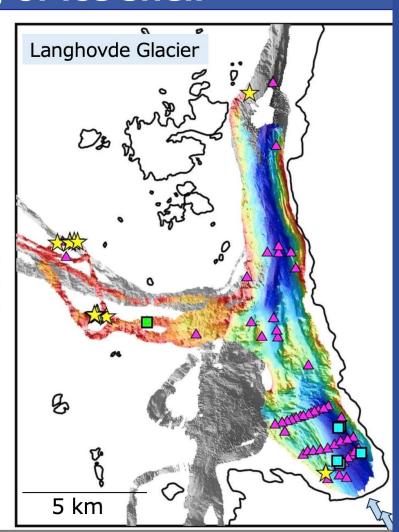
To Reconstruct 125,000 years sea level change



- ·Sediment from marine, lake, terrestrial
- Geomorphology
- Cosmogenic nuclide samples

Present···Basal melting of ice shelf





Greenland Field Research



Co-production with community





31th 2022

profiler https://www.nipr.ac.jp/arcs2/e/project-report/2022greenland-coast,

Automatic Weather Station Replacement at the SIGMA-B Site on the Qaanaaq Ice Cap https://www.nipr.ac.jp/arcs2/e/project-report/2022greenland-cryo/



Qaanaaq Observation Base



https://www.nipr.ac.jp/arcs2/projectreport/2022greenland-cryo/

R/V Mirai Arctic Cruise



2023 cruise invited International ECSs

https://www.nipr.ac.jp/arcs2/message/2023-08-29-1/



https://www.nipr.ac.jp/arcs2/mirai2022/

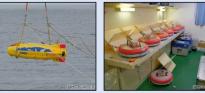
2023

https://www.nipr.ac.jp/arcs2/mirai2023/

2023

















Arctic Challenge for Sustainability II 2020-2025

Project Goal

Toward a sustainable Arctic, ArCS II will promote advanced observation of Arctic environmental change and its process, improve weather and climate prediction, assess environmental change in the Arctic and its impact on society, implement the research achievement in the society, and provide local and global stakeholders with scientific knowledge that is the basis of legal and policy responses for the formation of international rules in the Arctic.

To foster the realization of a sustainable society:

We will promote advanced and interdisciplinary research on the Arctic, aiming for the social implementation of the results.



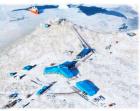
Research Priorities, Projects

KOREA

- Participation in/ Coordination of major projects
 - Antarctic: SOOS, IODP, ITGC, ANGWIN etc.
 - Arctic: MOSAiC, ArcticPASSION, INTAROS, PAG/DBO, SAS, SIOS, etc.
 - Bi-polar/ Climate Change: IPCC
 - Polar research priorities, sector/field specialization
 - Projects: In-house 16 / Government R&D 15
 - Three-year funding cycle: in-house projects are endorsed in 2023, and are subject to review/re-selection in 2025
 - Foci in 2023: Climate change in polar regions in a global context: observations and predictions, better understanding and responding to rapid Arctic changes and others.

- Antarctic King Sejong Station
- Antarctic Jang Bogo Station
- Arctic Dasan Station
- Research Icebreaker ARAON
- Next Generation Icebreaking Research Vessel (plans to be operational in 2027)









| Malaysia Scientific Expedition | | | |
|--|---|---|--|
| February – May 2023 Rothera Research Station, BAS | Universiti Sains Malaysia Universiti Putra Malaysia International Medical University British Antarctic Survey University of Chile | Phosphorus scavenging from plastics by Cyanobacterial and Algal Strains isolated from Rothera, Antarctica | |
| March 2023 – October 2023 First M'sian overwintering in Antarctica | Universiti Malaysia Sabah INACH | Tropospheric Ozone and Halocarbon varioations in the Antarctic Peninsula Under Extreme Weather Conditions | |
| December 2023 – January 2024 | Universiti Malaysia Terengganu Korea Polar Research Institute (KOPRI) | Mapping Benthic Communities in the West Antarctic Peninsular Using Habitat Suitability Modelling | |
| December 2023 – January 2024 | Universiti Putra Malaysia University of Magallanes, Chile | Second stage of bioreactor design for cold-adapted bioremediation of Antarctic soils contaminated with Diesel Hydrocarbons | |
| June 2024 – August 2024 | Universiti Malaysia Terengganu Second Institute of Oceanography (SIO, China) | Undersea seismic detection of the fine structure and genetic mechanism of ultra-slow spreading oceanic crust in the Arctic Ocean Gakkel Mid Ridge | |

Thailand Scientific Expedition

July – 27 September 2023

Thailand & Chinese Arctic Research Expedition



January 10-30, 2024

40th Chinese Antarctic Reseach Expedition

Research on Antarctic microbiomes and microplastics under the climate change; Investigating the spactial variability of Antarctic soil carbon flux

December 2023 – February 2024

Physical Sciences Laboratory,
University of Wisconsin-Madison
Drilling operations at the south
pole (2023-2027) to install digital
optical modules (DOMs) for PINGU
(Precision IceCube Next Generation
Upgrade) to detect low-energy
neutrinos at the GeV energy scale



Research Collaboration and Highlights

Scientific Research collaboration for atmospheric layer studies using SODAR - Universiti Malaya, Malaysia & KOPRI



Characteristics of lightning flashes over Antarctic Peninsula Universiti Teknikal Malaysia & KOPRI



YPASM -UMT Chair in Antarctic Science (Malaysia) (2023-2025) Prof. Martin Siegert





POLAR SCIENCE WEEK

30 July - 5 August 2023

Universiti Malaysia Terengganu
"Exploring Polar Science and
Climate Resilience"

PUBLIC EDUCATION

Public Awareness and Outreach

Several seminars/ workshops related to polar science were conducted

Night museum event related to polar animals was organized



















THAILAND

Connect with study aboard students



Polar Biodiversity Thematic Exhibition at PETROSAINS







PETROSAINS has invited YPASM to participate in their Week Special Thematic Exhibition in December under the Meet the Expert Talk & Booth Session from 16 to 24 December 2023

YPASM and some of the Malaysian Polar Researchers who has volunteered to contribute their expertise and biodiversiti samples for this exhibition will be at PETROSAINS for two weeks.







MALAYSIA

UM Research Gallery 1 - 30 June 2023

Universiti Malaya

"Climate Action & Planetary Health"























10[™] MALAYSIAN INTERNATIONAL SEMINAR **ON ANTARCTICA (MISA10)**

14th-15th May 2024

Bangi Resort Hotel

Bangi, Selangor, Malaysia

Polar Research for Sustainability & Planetary Health

Keynote Speaker



Prof. Martin Siegert Deputy Vice-Chancellor (Cornwall)

Important Dates

Abstract Submission Deadline: 31 January 2024 Notification of acceptance: 28 February 2024 Early Bird Payment Deadline: 15 March 2024 Normal Payment Deadline: 15 April 2024 Conference Day: 14-15 May 2024

Registration Fees

| CATEGORIES | Early Bird | Normal |
|---------------------------------------|------------|---------|
| Student (Presenter/Non-presenter) | RM 1000 | RM 1200 |
| Participant (Presenter/Non-presenter) | RM 1200 | RM 1400 |
| *International participant (Online) | RM 1200 | RM 1400 |
| International participant (Physical) | RM 1700 | RM 1900 |

Plenary Speakers



Session: Physical Sciences Prof. Seong-Joong Kim Director, Division of Atmospheric Sciences, Korea Polar Research Institute (KOPRI), South Korea.



Session: Biological Sciences Prof. Andrew McMinn Institute for Marine and Antarctic Studies, University of Tasmania (UTAS), Australia.



Session: Social Science and Humanities Assoc. Prof. Dr. Goh Hong Ching Faculty of Built Environment, University of Malaya, Malaysia.

Opportunity for publication in Polar Science - Special Issue

Selected papers will be published in Polar Science - Special Issue entitled "Polar Regions Matter in Our Climate Crisis".

Submission deadline: 31 December 2024

Scan To register



You are all invited













