

Seventh International Symposium on Arctic Research (ISAR-7)

<https://www.jcar.org/isar-7/>

ISAR-7

March 6-10, 2023

Tachikawa, Japan

Transdisciplinary studies on a rapidly changing
Arctic toward a sustainable society



S4: SAS session in ISAR-7 (Date: TBD)

Conveners:

Shigeto Nishino, Carin Ashjian, Kumiko Azetsu-Scott, Kyoung-Ho Cho, Jacqueline Grebmeier, Jianfeng He, Motoyo Itoh, Sung-Ho Kang, Are Olsen, Øyvind Paasche, William Williams, and Michiyo Yamamoto-Kawai

Synoptic Arctic *Survey*



Synoptic Arctic Survey (SAS) is a coordinated multi-ship, multi-nation, pan-Arctic, ship-based sampling campaign during 2020-2022 to study pan-Arctic ocean-circulation, biogeochemical cycles, and marine ecosystems. In this session, we discuss the results from SAS cruises and transdisciplinary scientific issues ultimately to assess risks and to develop policies that allow effective management.

S4 Synoptic Arctic Survey

Session Presentation (This is a kind of plenary talk selected from each session)

Number of presenter (15 min presentation and 5 min Q&A) allowed: 1

	Authors/Title
1	<u>Ashjian et al.</u> Taking the Pulse of the Arctic Ocean System, from the Shelves to the Pole – A US Contribution to the International Synoptic Arctic Survey Program

Draft Session program

Session1 (90 mins): This session is overviews from each countries' SAS cruise

Chairperson(s)

Jacqueline Grebmeier

On-site attendee who takes care of the session (If in case the chairperson participates by online.)

Shigeto Nishino

Orals	Authors/Title
1	<u>Fransson et al.</u> Into the deep Central Arctic Ocean – results from the Nansen Legacy Arctic Basin expedition 2021
2	<u>Azzaro et al.</u> AdvanCing knowledge on the present Arctic Ocean by chemical-phySical, biogeochemical and biological obServAtioNs to preDict the futuRe chANges (CASSANDRA)
3	<u>Itoh et al.</u> Overview of the R/V Mirai Arctic Ocean cruise in 2022
4	<u>Grebmeier et al.</u> Benthic Studies during the 2022 US Synoptic Arctic Survey

Draft Session program

Session2 (90mins): This session consists of results from the SAS cruises

Chairperson(s)

Michiyo Yamamoto-Kawai

On-site attendee who takes care of the session (If in case the chairperson participates by online.)

Shigeto Nishino

Orals	Authors/Title
1	<u>Ericson et al.</u> Seasonal and interannual variability in the surface fCO ₂ of the Barents Sea and adjacent high-latitude North Atlantic
2	<u>Ikenoue et al.</u> Surface microplastic concentrations and water-column microplastic inventories in the Chukchi Sea, western Arctic Ocean
3	<u>Nishino et al.</u> Shrink of an ocean gyre in the Pacific Arctic and Atlantification open a door of shadow zone
4	<u>Kumamoto et al.</u> Temporal changes in radiocesium in the Arctic Ocean and the northwestern North Pacific Ocean by 2020

Draft Session program

Posters	Authors/Title
1	<p><u>Murata and Nishino</u> Spatial and temporal variations of surface seawater carbonate properties in the western Arctic Ocean: Results from the R/V Mirai observations</p>
2	<p><u>Yamamoto-Kawai and Itoh</u> Seasonal variation in nutrient concentration of the Pacific-origin water from the Chukchi Sea to the Canada Basin</p>

Other Sessions

	Session Title	Conveners
R1	Atmosphere	Toshinobu Machida and Toru Nozawa
R2	Ocean and Sea Ice	Amane Fujiwara, Yasushi Fujiwara, and Satoshi Kimura
R6	Marine Ecosystems	Atsushi Yamaguchi, Jacqueline Grebmeier, Russell Hopcroft, Yoko Mitani, Franz Mueter, and Jean-Baptiste Thiebot
S12	International Governance of the Central Arctic Ocean: Science, Indigenous Knowledge, and the Rule of Law	Kentaro Nishimoto

Keynote Speakers



Rapid Arctic Warming
and its Impact on
Indigenous Peoples and
Other Communities
Dalee Sambo Dorough



Collaborating towards a
pan-Arctic Observing
System of System:
perspectives from the
Arctic PASSION project
Michael Karcher



Environmental (in-)
Security in the Arctic:
Expanding
Interdisciplinary
Approaches
Marc Lanteigne



Transdisciplinary
research on
environmental issues
Juichi Yamagiwa