

Session Presentations 1/March3, 2020

Venue: Hall

Chair: Masakazu Yoshimori			
SP1-R1	10:30-10:50	Emissions, transport, and removal of atmospheric black carbon particles: Synthetic analyses of observations from Asia to the Arctic Ocean	*Y. Kanaya, F. Taketani, T. Miyakawa, C. Zhu, H. Kobayashi, Y.-W. Kim, P. Mordovskoi, T. Maximov, Y. Choi, K. Yamaji, K. Ikeda, H. Tanimoto, M. Takigawa, H. Matsui, Y. Kondo, Z. Klimont
SP1-R3	10:50-11:10	New Projections of the 21st Century Permafrost Degradation and Resulting Carbon Emissions	*T. Zhang, X. Peng, C. Mu
SP1-R4S5	11:10-11:30	Global sea-level contribution from Arctic land ice 1971 to 2017	*J. E. Box, W. T. Colgan, B. Wouters, D. O. Burgess, S. O'Neel, L. I. Thomson, S. H. Mernild
Chair: Natalia Loukacheva			
SP1-S8R8	11:30-11:50	Regulating the Arctic Commons. Bridging Interests in Arctic Ocean Use, Legal Frameworks and Institutions	*N. Sellheim
SP1-S9	11:50-12:10	Thinking about Forthcoming Russian Arctic Council Presidency: Problems and Prospects	*A. Sergunin
SP1-S12	12:10-12:30	Harmonizing Environmental Impact Assessments in the Arctic: Achieving Sustainability in Arctic	*R. Chuffart, J. Klein

Session Presentations 2/March4, 2020

Venue: Hall

Chair: Jun Inoue			
SP2-R2	10:30-10:50	On the variability of Pacific Water pathways in the Arctic Ocean	*M. Karcher, P. Dodd, L. DeSteur, J. Gwynn, T. Hattermann, X. Hou , F. Kauker, H. Sumata
SP2-S1	10:50-11:10	Arctic Cyclone Structure and Interactions with the Sea Ice	*O. Persson, A. Solomon, G. deBoer, M. Shupe, B. Brooks, M. Tjernström
SP2-S6R5-1	11:10-11:30	The Surface Moisture Budget of Terrestrial Ecosystems in Alaska: Variations and Drivers	*J. E. Walsh, S. M. Thunberg, E. S. Euskirchen, K. M. Redilla, G. Iwahana
SP2-S6R5-2	11:30-11:50	Summer rainfall structure in north-eastern Eurasia using satellite data and regional climate model	*Y. Iijima, K. Komatsu, H. Park, A. Kotani, T. Sato, T. Hiyama, D. Oyunbaatar
Chair: TBD			
SP2-S10	11:50-12:10	Global competition among great powers and international politics in the Arctic: An introductory note	*F. Ohnishi
SP2-S14	12:10-12:30	How can Japanese scientists contribute to socio-environmental problems arising from domestic waste disposal in the North American Arctic	*S Honda

Session Presentations 3/March5, 2020

Venue: Hall

Chair: Hiroyasu Hasumi			
SP3-R7	10:30-10:50	Decadal winter-to-spring climate impacts from Medium-Energy Electron Precipitation	*Y. Orsolini, S. Guttu, F. Stordal, V. Limpasuvan, D. Marsh
SP3-S15S16S17	10:50-11:10	Wave Climate and Wave-Ice Attenuation in the Arctic	*A. Babanin, Q. Liu, J. Voermans
SP3-S2	11:10-11:30	Remote influence of the tropical Pacific variability on Arctic climate	*Y. Kosaka, T. Takigawa, L. Svendsen, B. Taguchi
SP3-S4R6	11:30-11:50	Controlling factors of primary production in a warming Arctic Ocean	*A. Fujiwara, E. Devred, S. Nishino, T. Hirawake, T. Kikuchi
Chair: Shin Sugiyama			
SP3-S7	11:50-12:10	The Evenki's animism and fire management in the context of wildfires in Siberia.	*A. Sirina
SP3-R10S18	12:10-12:30	Arctic Today: Geopolitics, mediation and power	*M. Christensen

R1 Atmosphere

Breakout Session/March2, 2020

Venue: Chu3

Chair: Daisuke Goto			
R1-001	15:15-15:30	Warm Air Masses and Wind Conditions During Active Fire-periods in Boreal Forests	*H. Hayasaka
R1-002	15:30-15:45	Transport of black carbon from Asia to the Arctic: Siberian and Pacific pathways, and their meteorological controls	*K. Ikeda, H. Tanimoto, T. Sugita, H. Akiyoshi, Y. Kanaya, C. Zhu, F. Taketani
R1-003	15:45-16:00	Installation of the developed insulation box in Alaska for PM2.5 measurement in cold regions, and its PM2.5 and climatic characteristics there in the summer of 2019	*T. J. Yasunari, Y. Matsumi, S. Wakabayashi, K.-M. Kim, A. M. da Silva, S. Matoba
R1-004	16:00-16:15	Changes in concentrations and size distributions of black carbon in Northwest Greenland over the past 350 years	*K. Goto-Azuma, Y. Ogawa-Tsukagawa, Y. Kondo, R. Dallmayr, M. Hirabayashi, J. Ogata, K. Kitamura, K. Kawamura, H. Motoyama, S. Matoba, T. Aoki, N. Moteki, S. Ohata, T. Mori, M. Koike, Y. Komuro, A. Tsushima, N. Nagatsuka, W. Shigeyama, K. Fujita
R1-005	16:15-16:30	Estimates of methane emissions in Siberia using regional tower network observations	*S. Maksyutov, M. Sasakawa, F. Wang, A. Tsuruta, R. Janardan, A. Ito, M. Arshinov, E. Dlugokencky, T. Matsunaga, T. Machida
R1-006	16:30-16:45	Validation of CH4 emissions from the East Siberian Arctic shelf based on atmospheric observation onboard R/V Mirai	*Y. Tohjima, J. Zeng, Y. Niwa, T. Shirai, S. Ishidoya, S. Morimoto
	16:45-17:00	Break	
Chair: Masakazu Yoshimori			
R1-007	17:00-17:15	Cloud-driven modulations of Greenland ice sheet surface melt	*M. Niwano, A. Hashimoto, T. Aoki
R1-008	17:15-17:30	Thawing permafrost: an overlooked source of seeds for Arctic cloud formation	*J. Creamean, T. Hill, P. DeMott, J. Uetake, T. Douglas
R1-009	17:30-17:45	A spatial model for warm temperature extremes in the high Arctic	*G. Messori, R. Wada, C. Woods
R1-010	17:45-18:00	Atmospheric circulation in the Northern Hemisphere Extratropics during ETCW period in different 20th century reanalyses	*D.D. Bokuchava, V.A. Semenov
R1-011	18:00-18:15	Impact Of Leads In Ice On Arctic Surface Climate In The Norwegian Earth System Model	*R. Davy, L. Suo, Y. Gao
R1-012	18:15-18:30	The changing nature of air-sea interaction over the Nordic Seas and its impact on the headwaters of the Atlantic Meridional Overturning Circulation	*G.W.K. Moore, K. Våge, I.A. Renfrew, R.S. Pickart

R2 Ocean and Sea Ice

Breakout Session/March4, 2020

Venue: Chu3

Chair: Eiji Watanabe			
R2-001	13:30-13:45	Beaufort Gyre freshwater content in 2003-2018	*A. Proshutinsky, R. Krishfield, J. Toole, M.-L. Timmermans, W. Williams, S. Zimmerman, M. Yamamoto-Kawai, T. W. K. Armitage, D. Dukhovskoy, E. Golubeva, G. G. Manucharyan, G. Platov, E. Watanabe, T. Kikuchi, S. Nishino, M. Itoh, S.-H. Kang, K.-H. Cho, K. Tateyama, J. Zhao
R2-002	13:45-14:00	An assessment of 2019 sub-seasonal to intra-annual sea ice forecast skill in the Regional Arctic System Model	*Y. Lee, W. Maslowski, A. Craig, M. Seefeldt, J. Cassano, J. Clement Kinney, B. Nijssen, R. Osinski, X. Wu
R2-003	14:00-14:15	A new way to derive the sea ice thickness from satellite observation data	*N. Kimura, H. Hasumi
R2-004	14:15-14:30	Using in-situ to validate Arctic sea level change seen with remote sensing	*C. A. Ludwigen, O B. Andersen, S. Abbas Khan
R2-005	14:30-14:45	Driftwood as indicators of past Arctic climate change	*H. W. Linderholm, B.E. Gunnarson, U. Buntgen, P.J. Krusic
R2-006	14:45-15:00	A new era of abrupt climate change - perspectives from the last glacial	*K.H. Nisancioglu, E. Jansen, T. Dokken, B. Vinther, J.H. Christensen
	15:00-15:15	Break	
Chair: Hajo Eicken			
R2-007	15:15-15:30	Generating sea ice DEM using UAV images for sea ice thickness estimation	*T. Watanabe, K. Tateyama
R2-008	15:30-15:45	The observation of underwater ice-sediment interaction in a polynya in the Chukchi Sea	*M. Ito, K. I. Ohshima, Y. Fukamachi, D. Hirano, A. R. Mahoney, J. Jones, T. Takatsuka, H. Eicken
R2-009	15:45-16:00	Bottom sediments reveal inter-annual variability of interaction between the Ob and Yenisei plumes in the Kara Sea	*A. Osadchiev, E. Asadulin, A. Miroshnikov
R2-010	16:00-16:15	Cold water upwelling and entrainment near the Anadyr Strait: Implications to the North Pacific-Arctic interaction	*Y. Kawaguchi, J. Nishioka, S. Nishino, S. Fujio, A. Fujiwara, D. Yanagimoto, I. Yasuda
R2-011	16:15-16:30	Changes in mixing layer depth and its biogeochemical consequences	*S. Kumakawa, M. Yamamoto-Kawai
R2-012	16:30-16:45	Sea ice-derived organic carbon: A dominant food source for deep sea benthic consumers in spring, Baffin Bay, Canadian Arctic	*G. Yunda-Guarin, T. Brown, C. Nozais, P. Archambault
	16:45-17:00	Break	
Chair: Yasushi Fukamachi			
R2-013	17:00-17:15	Input of Pacific-origin water and settling particle fluxes in the southwestern Canada Basin, 2015-2019	*J. Onodera, E. Watanabe, K. Mizobata, Y. Tanaka, N. Harada
R2-014	17:15-17:30	Dissolved methane distribution and its controlling factors in the Arctic Ocean in 2016 summer	*O. T-N. Bui, S. KAMEYAMA, U. TSUNOGAI, J. JUNG, E. J. Yang, S. H. Kang
R2-015	17:30-17:45	Methane in Arctic first and second year sea ice: Results from the N-ICE2015 expedition	*A. Silyakova, M. Kotovich, D. Nomura, M. A. Granskog, E. Damm, A. Fransson, M. Chierici, B. Delille
R2-016	17:45-18:00	Variations of sea ice band observed in the Northern Chukchi Sea in summer associated with sea ice rafting	*K. Shimada, J. Yamamoto
R2-017	18:00-18:15	Convection in the Arctic Ocean surface layer simulated using a box model implemented with a PDF	*M. Ikeda

R3 Rivers, Lakes, Permafrost and Snow Cover

Breakout Session/March2, 2020

Venue: Hall

Chair: Kazuyuki Saito			
R3-001	17:00-17:15	Assessment of hydrological hazards risks in the Russian Arctic based on hydrological modelling	*O. Makarieva, N. Nesterova, D. Post
R3-002	17:15-17:30	Vulnerability of permafrost groundwater in northern Mongolia	*T. Hiyama, A. Dashtseren, K. Asai, H. Kanamori, Y. Iijima, M. Ishikawa
R3-003	17:30-17:45	Rain impacts winter streamflow in the North-East of Russia	*N. Nesterova, O. Makarieva, D. A. Post
R3-004	17:45-18:00	Water temperature regime of Russian Arctic rivers	*A. Vasilenko, D. Magritskiy, N. Frolova
R3-005	18:00-18:15	Monitoring surface temperatures of the Arctic rivers from space with GCOM-C/SGLI thermal infrared images	*M. Hori
R3-006	18:15-18:30	Biotesting as a part of Integrated Ecological Monitoring of Arctic Freshwater Water Systems	E. Pribytkova, *K. Terentyev, N. Klimovskiy, G. Shanina

Breakout Session/March3, 2020

Venue: Hall

Chair: Masahiro Hori and Kazuyuki Saito			
R3-007	15:15-15:30	Decadal dynamics of permafrost landforms in Svalbard	*N. Matsuoka, T. Watanabe, H. H. Christiansen
R3-008	15:30-15:45	Decaying Mongolian permafrost: edge of the Siberian continuous permafrost	*A. Dashtseren, T. Hiyama, Y. Iijima, M. Ishikawa, Y. Jambaljav
R3-009	15:45-16:00	Changes in Thermokarst Lakes along the Inuvik-Tuktoyaktuk Highway (ITH) Corridor in NWT, Canada (1950 - Present)	*D. Kariyawasam, P. Marsh, E. Wilcox, B. Walker
R3-010	16:00-16:15	Thermokarst settlement in Central Yakutia detected by ALOS/ALOS-2 L-band SAR Interferometry	*T. Abe, G. Iwahana, T. Tadono
R3-011	16:15-16:30	Permafrost degradation after the Anaktuvuk River Fire (ARF) measured by field surveys and L-band SAR interferometry	*G. Iwahana, H. Ohno, R. Busey, M. Uchida, R. R. Muskett, T. Yokohata, K. Saito
R3-012	16:30-16:45	Assessing and Projecting Greenhouse Gas Release from Large-scale Permafrost Degradation	*K. Saito, H. Ohno, T. Yokohata, H. Machiya, G. Iwahana
	16:45-17:00	Break	
R3-013	17:00-17:15	Sources, distribution and preservation of organic matter in the subsea permafrost and bottom sediments from Buor-Khaya Bay (Laptev Sea)	*A. Ulyantsev, S. Bratskaya, N. Prokuda
R3-014	17:15-17:30	Carbon flow and climate feedbacks in the Arctic landscape: where is carbon stored and where released?	*A. Korhola, M. Aurela, N. Shurpali, M. Väiliranta, S. Juutinen, M. Heikkilä, J. Weckström, T. Virtanen, S. Piilo, A. Räsänen, L. Heiskanen, J-P. Tuovinen, A. Lohila, C. Treat, C. Biasi
R3-015	17:30-17:45	Modeling of catastrophic floods in the Magadan region using WRF climate model	*V. A. Kurovskaia
R3-016	17:45-18:00	A physically-based modelling framework for operational forecasting of river ice breakup	*P. Rokaya, L. M-Marin, K-E. Lindenschmidt

R4-S5**Ice Sheets, Glaciers and Ice Cores, Glacier-ocean Interaction and Their Impact on Arctic Marine Ecosystem****Breakout Session/March2, 2020**

Venue: Chu4

Chair: Masashi Niwano			
R4-S5-001	17:00-17:25	How has understanding of the basal thermodynamics of the Greenland Ice Sheet changed over the last decade?	*W. Colgan, J A. MacGregor, Y. M. Martos, N. B. Karlsson
R4-S5-002	17:25-17:40	Surface elevation changes of glaciers along the coast of Prudhoe Land, northwestern Greenland from 1985 to 2016	*Y. Wang, D. Sakakibara, S. Sugiyama, A. A. Bjørk
R4-S5-003	17:40-17:55	ISMIP6 future projections for the Greenland ice sheet with the models SICOPOLIS and ISSM	*M. Rückamp, R. Greve, C. Chambers, R. Calov, A. Humbert
R4-S5-004	17:55-18:10	On the Possibility of a Long Subglacial River Under the North Greenland Ice Sheet	*C. Chambers, R. Greve, B. Altena, P.-M. Lefevre
R4-S5-005	18:10-18:25	Snow modification evaluated by specific surface area (SSA) of ice/firn cores from Greenland.	*T. Ando, M. Shibata, S. Matoba, S. Sugiyama, K. Fujita, S. Fujita, T. Aoki, S. Yamaguchi, S. Adachi, A. Hachikubo, A. Hori, M. Niwano, Y. Iizuka
R4-S5-006	18:25-18:40	Physical properties of internal layers in Greenland ice sheet: measurements and modelling data analysis	*S. Mojtavavi, F. Wilhelms, S. O. Rasmussen, O. Eisen, S. Franke, D. Jansen, E. Cook, S. Davies, G. Sinnl, M. S. Jensen, D. Steinhage, S. Kipfstuhl, D. Dahl-Jensen

Breakout Session/March3, 2020

Venue: Chu4

Chair: Masashi Niwano and Jon Ove Hagen			
R4-S5-007	15:15-15:30	Snow grain growth and NIR albedo reduction due to temperature increase at SIGMA-A, Greenland Ice Sheet	*T. Aoki, M. Niwano, T. Tanikawa, S. Matoba, Y. Iizuka, S. Yamaguchi, K. Fujita, M. Hori, R. Shimada, H. Ishimoto, T. Yamasaki
R4-S5-008	15:30-15:45	Deformation Features and Disturbances in the Stratigraphy of the EastGRIP Ice Core	*J. Westhoff, I. Weikusat, A. Svensson, D. Jansen, S. Kipfstuhl, D. Dahl-Jensen
R4-S5-009	15:45-16:00	Stratigraphic variation of chemical substances in a coastal ice core from northwestern Greenland Ice Sheet	*Y. Kurosaki, S. Matoba, Y. Iizuka, M. Niwano, T. Tanikawa, T. Ando, T. Aoki
R4-S5-010	16:00-16:15	Effects of impurity drag in NEEM (North Greenland Eemian ice Drilling) ice core being applied phase transition	*T. Homma, T. Saruya, M. Takata, N. Azuma, K. Goto-Azuma
R4-S5-011	16:15-16:30	Spatial variations of cryoconite granules on Greenland Ice Sheet	*N. Takeuchi, K. Ishiwatari, A. Watanabe, N. Nagatsuka
	16:30-16:45	Break	
R4-S5-012	16:45-17:00	Iron supply from a marine-terminating glacier into Bowdoin Fjord, northwestern Greenland	*N. Kanna, S. Sugiyama, Y. Fukamachi, D. Nomura, J. Nishioka
R4-S5-013	17:00-17:15	Seasonal variability in oceanic temperature, salinity and current near Bowdoin Glacier, a marine-terminating glacier in northwestern Greenland	*Y. Fujishi, Y. Fukamachi, N. Kanna, S. Sugiyama
R4-S5-014	17:15-17:30	Englacial warming indicates deep crevassing in Bowdoin Glacier, Greenland	*J. Seguinot, M. Funk, A. Bauder, T. Wyder, C. Senn, S. Sugiyama
R4-S5-015	17:30-17:45	Tardigrades living on a sub-arctic glacier in Alaska	*M. Ono, N. Takeuchi, K. Zawierucha, J. Buda
R4-S5-016	17:45-18:00	Mass concentration and origin of black carbon in spring snow on Alaskan glaciers	*K. Konya, T. Miyakawa, M. Takigawa, M. Yamaguchi, S. O'Neel, M. Truffer
R4-S5-017	18:00-18:15	Big-Data Modelling of Trends in Glacier Surface Elevation Change from Repeat Digital Elevation Models	R. Storrar, *K. S. Mwitondi

R7 Geospace

Breakout Session/March5, 2020

Venue: Chu3

Chair: Ryuho Kataoka and Yasunobu Ogawa			
R7-001	15:15-15:33	Fan-shaped aurora as extreme space weather	*R. Kataoka
R7-002	15:33-15:51	Flickering aurora: Zenith view and side view	*K. Murase, R. Kataoka, H. A. Uchida, A. Kadokura
R7-003	15:51-16:09	Current status of Iceland - Syowa conjugate observation for upper atmosphere physics studies in 2019	*A. Kadokura, Y. Tanaka, R. Kataoka, U. H. Akihito, K. Murase, M. Okada, Y. Ogawa, M. Taguchi, M. Ozaki, K. Shiokawa, Y. Sato, M. Kamogawa, Y. Minamoto, T. Motoba, H. Sakurai, H. Yamagishi, N. Sato, G. Bjornsson
R7-004	16:09-16:27	Study on auroral 3D structure in the northern Europe	*Y. Tanaka, Y. Ogawa, A. Kadokura, T. Nishiyama, A. Yoshikawa, B. Gustavsson, K. Kauristie, C-F. Enell, U. Brändström, T. Sergienko, A. Kozlovsky, T. Raita, H. Vanhamäki
R7-005	16:27-16:45	Ground-based optical observations for short-wavelength infrared aurora and airglow emissions in Northern Europe	*T. Nishiyama, M. Kagitani, Y. Ogawa, P. Dalin, U. Brändström, M. Taguchi, T. Sakanoi
	16:45-17:00	Break	
R7-006	17:00-17:18	Space weather modeling of the polar thermosphere and ionosphere with EISCAT observations and GCM simulations	*H. Fujiwara, Y. Miyoshi, S. Nozawa, Y. Ogawa, H. Jin, C. Tao, H. Shinagawa
R7-007	17:18-17:36	Ion temperature and velocity variations in the D- and E-region polar ionosphere during stratospheric sudden warming	*Y. Ogawa, S. Nozawa, M. Tsutsumi, Y. Tomikawa, C. Hall, I. Häggström
R7-008	17:36-17:54	Effects of solar proton events on ozone and temperature in the satellite and reanalysis data	*Y. Tomikawa
R7-009	17:54-18:12	An event analysis on pulsating aurora observed by an optical spectrograph at Tromsø, Norway	C. Li, *T. T. Tsuda, K. Hosokawa, S. Nozawa, T. Kawabata, A. Mizuno, Oyama, J. Kurihara
	18:12-18:30	Discussion time	

R9 Language, Culture and Health

Breakout Session/March4, 2020

Venue: Toku-1

Chair: TBD			
R9-001	13:30-13:45	Iultin Road in the Life of Contemporary Chukchi Reindeer Herders: Transformation of the Food Autonomy Regime	*V. Davydov, E. Davydova
R9-002	13:45-14:00	Indigenous Food and Cultural Sovereignty among the Inupiat in Utqiagvik, Alaska, USA	*N. Kishigami
R9-003	14:00-14:15	Unearthing Nanvarpak Cultural Landscape: Place Names, Languages, Local Histories, and Oral Traditions	*Y. Kugo
R9-004	14:15-14:30	Language Revitalization and Education in Nunavut, Canada -A Case Study at Iqaluit-	*M. Hasegawa
R9-005	14:30-14:45	Polar Year - Cultural Immersion in Tiniteqilaaq	*K. Oliver
	14:45-15:00	Discussion/Q&R	
	15:00-15:15	Break	
R9-006	15:15-15:30	The Health of Inuit Living in Southern Quebec : Early Results from the Qualitative Phase of the Qanuikkat Siqinirmiut Project and Comparison with Previous Studies	*C. Fletcher, M. Riva, M-C. Lyonnais, L. Shipaluk, N. Boucher, M. Lapointe, T. Pisuktie
R9-007	15:30-15:45	Rethinking Research as a Future Forming Practice through the ITK National Inuit Research Strategy	*M. K. Watson
R9-008	15:45-16:00	Ainu Collections Collected by Polish Researchers in Russia	*V. B. Sachuk
	16:00-16:15	Discussion/Q&R	
R9-009	16:15-16:30	Science Diplomacy for Sustainable Arctic: the Role of University Partnerships and Joint Projects	*M. Kalinina
R9-010	16:30-16:45	Reproduction of Warm and Electricity in the Russian Arctic: Utility People, Their Social Organization and Culture	*N. Goncharov
R9-011	16:45-17:00	Influence of Indoor Temperature Distribution on Health of Elderly People in Cold Climate	*T. Mori, Y. Oonuma, S. Ukawa, A. Tamakoshi
	17:00-17:15	Discussion/Q&R	

R10-S18**Engineering for Sustainable Development, Transdisciplinary Research and Education for a Sustainable Arctic****Breakout Session/March5, 2020**

Venue: Toku-3

Chair: Hajime Yamaguchi and Magnus Bruman			
R10-S18-001	15:15-15:30	Human dimension in polar navigations	*H. Kitagawa, E. Sakai
R10-S18-002	15:30-15:45	Arctic regional economic development: regression assessment of industry investment ripple effects	*O. Noshchenko
R10-S18-003	15:45-16:00	Arctic Justice	*D. Mishina
R10-S18-004	16:00-16:15	Healthy aging strategies in the Russian Arctic as a realization sustainable development goals	*E. Golubeva, A. Soloviev
R10-S18-005	16:15-16:30	Mobility matters: Building transdisciplinary research networks through Arctic research and education programs	*C. Jung, *J. Jeong, S. Kim, H. Shin

S1

Challenges for the Fast Transitions of Atmosphere, Sea Ice and Ocean in the Arctic Systems

Breakout Session/March4, 2020

Venue: Chu4

Chair: Jun Inoue			
S1-001	13:30-13:45	A First Look at Clouds and the Surface Energy Budget at MOSAiC	*M. Shupe, D. Costa, C. Cox, M. Gallagher, S. Morris, J. Osborn, O. Persson, T. Uttal
S1-002	13:45-14:00	Application of Polar WRF to investigate the recent changes in winter Arctic clouds	*H. Cho, S-Y. Jun, C-H. Ho, G. McFarquhar, J-H Kim, D. Lee
S1-003	14:00-14:15	Use of unmanned aerial systems during the Year of Polar Prediction and the MOSAiC Expedition	*G. de Boer, D. Lawrence, J. Cassano, B. Argrow, J. Hamilton, S. Borenstein, J. Intriери, J. Osborn, R. Calmer, G. Jozef, C. Cahill, G. Foscue, D.J. Creamean
S1-004	14:15-14:30	Near tropopause discrepancy in air temperature during the YOPP special observing period	*M. Hori, J. Inoue, A. Makshtas, V. Kustov
S1-005	14:30-14:45	Predictability of an Intense Arctic Cyclone in August 2016 within the KPOPS-Weather System	*Y. Choi, J.-H. Kim, S.-W. Kim
S1-006	14:45-15:00	Key indicators of Arctic climate change 1971 to 2017	*J. E. Box
	15:00-15:15	Break	
Chair: Yusuke Kawaguchi			
S1-007	15:15-15:30	A new coupled modeling system developed for Arctic sea ice and climate prediction	*J. Liu, C-Y. Yang, S. Xu
S1-008	15:30-15:45	Optimization of dynamic parameters of sea ice models based on satellite-derived sea ice velocity field	*T. Toyoda, N. Kimura, S. Urakawa, H. Tsujino, H. Nakano, K. Sakamoto, G. Yamanaka
S1-009	15:45-16:00	Sea-ice edge forecast using damped persistence of probability anomaly	*B. Niraula, H. Goessling
S1-010	16:00-16:15	Medium range sea ice prediction in support of Japanese research vessel MIRAI's expedition cruises in 2018 and 2019	*L.W.A. De Silva, J. Inoue, H. Yamaguchi, T. Terui
S1-011	16:15-16:30	Delayed Sea Ice Advance by the Anomalous Warm Chukchi Sea in November 2018	*T. Kodaira, T. Nose, T. Waseda, J. Inoue
S1-012	16:30-16:45	Ice-ridge internal waves and turbulent heat flux in ice-ocean boundary layer: Observations	*Y. Kawaguchi, Y. Matsumura, M. Granskog, A. Sunfdjford, D. Nomura, Y. Fang, D. Divine, I. Kuznetsov, B. Rabe, J. Inoue
	16:45-17:00	Break	
Chair: Daiki Nomura			
S1-013	17:00-17:15	Recent behavior of the Nares Strait ice arches: anomalous collapses and enhanced export of multi-year ice from the Arctic Ocean	*G.W.K. Moore, S.E.L. Howell, M. Brady, X. Xu, K. McNeil
S1-014	17:15-17:30	On the possibility of detecting deformed sea ice area in the seasonal ice zone with ALOS-2/PALSAR-2 system	*T. Toyota, J. Ishiyama, N. Kimura
S1-015	17:30-17:45	Ensemble forecast experiments of summertime sea ice in the Arctic Ocean using TOPAZ4 ice-ocean data assimilation	*T. Nakanowatari, J. Xie, L. Bertino, M. Matsueda, A. Yamagami, J. Inoue
S1-016	17:45-18:00	The changing under-ice light field of the Arctic Ocean	*G. Veyssiere, J.P. Wilkinson, J. Stroeve, M. Vancoppenolle, G. Castellani, M.J. Karcher, M. Lebrun, A. Hayward, F. Kauker, H. Flores, L. Valcic, M. Nicolaus, J-H. Kim, E-J. Yang, C. Katlein, M. Barbin, J. Landy, G. Liston
S1-017	18:00-18:15	Net community production and carbon exchange from winter to summer in the Atlantic water inflow to the Arctic Ocean	*M. Chierici, M. Vernet, A. Fransson, K.Y. Børsheim
S1-018	18:15-18:30	Year-round surveys for air-sea ice gas flux in the central Arctic Ocean	*D. Nomura, B. Delille, E. Damm, B. Loose, K. Abrahamsson, L. Zhan, J. Inoue

S2

Weather and Climate in the Arctic Region: Its Predictability and Remote Connection

Breakout Session/March5, 2020

Venue: Chu4

Chair: Akio Yamagami			
S2-001	15:15-15:30	Enhanced likelihood of summer extreme weathers over Eurasia triggered by snow anomalies	*T. Sato, T. Nakamura
S2-002	15:30-15:45	Importance of a vertically tilting structure for energizing the North Atlantic Oscillation	*P. Martineau, H. Nakamura, Y. Kosaka, A. Yamamoto
S2-003	15:45-16:00	The role of Eurasian land processes as a climate memory in Arctic-mid-latitude climate linkage	*T. Nakamura, K. Yamazaki, T. Sato, J. Ukita
S2-004	16:00-16:15	Warm hole in Pacific Arctic sea ice cover forces mid-latitude Northern Hemisphere cooling during winter	*Y. Tachibana, K. K. Komatsu, V. A. Alexeev, L. Cai, Y. Ando
S2-005	16:15-16:30	A reconciled estimate of the influence of Arctic sea-ice loss on recent Eurasian cooling	*M. Mori, Y. Kosaka, M. Watanabe, H. Nakamura, M. Kimoto, B. Taguchi
S2-006	16:30-16:45	An Internal Atmospheric Process Determining Summertime Arctic Sea Ice Melting in the Next Three Decades: Lessons Learnt from 5 Large Ensembles and CMIP5 Simulations	*D. Topal, Q. Ding, J. Mitchell, I. Baxter, M. Herein, T. Haszpra, R. Luo, Q. Li
	16:45-17:00	Break	
S2-007	17:00-17:15	Sea Ice Changes during the Early 20th Century Arctic Warming in an Earth System Model	*T. Aizawa, M. Ishii, S. Yukimoto, H. Hasumi
S2-008	17:15-17:30	A tropospheric pathway of the stratospheric quasi-biennial oscillation (QBO) impact on the boreal winter polar vortex	*K. Yamazaki, T. Nakamura, J. Ukita, K. Hoshi
S2-009	17:30-17:45	Sub-seasonal Predictability over the Northern Hemisphere in Operational Ensemble Forecasts	*A. Yamagami, M. Matsueda
S2-010	17:45-18:00	Role of Arctic cyclones in large sea ice decrease during August 2012	*H. Kubokawa, T. Kawasaki, N. Kimura, M. Satoh, H. Hasumi
S2-011	18:00-18:15	Assessment of Forecast Skills for Arctic Cyclone in July 2018 using Operational NWP Models	*T. Matsunobu, H. L. Tanaka, A. Yamagami, M. Matsueda
S2-012	18:15-18:30	Regional Modeling and Prediction of the Arctic Climate System	W. Maslowski, Y. Lee, R. Osinski, J. Cassano, J. C. Kinney, *A. Craig, B. Nijssen, M. Seefeldt

S3**Synoptic Arctic Survey – An Ocean Research Program for the Future****Breakout Session/March3, 2020**

Venue: Toku-1

Chair: Shigeto Nishino			
S3-001	15:15-15:33	The Swedish contribution to SAS – a voyage to a little known sector of Central Arctic Ocean	*S -Å. Wängberg
S3-002	15:33-15:51	Taking the Pulse of the Arctic Ocean System, from the Shelves to the Pole – A US Contribution to the International Synoptic Arctic Survey	*J. Grebmeier, C. Ashjian, N. Bates, R. Campbell, L. Cooper, S. Danieslon, L. Juranek, C. Pilskaln, M -L. Timmermans
S3-003	15:51-16:09	SAS-Mirai 2020 cruise in the western Arctic Ocean	*S. Nishino, T. Kikuchi, W. Williams, K. Azetsu-Scott, S- H. Kang, E. J. Yang, K-H. Cho, J. Jung, J. He
S3-004	16:09-16:27	Synoptic Arctic Survey to better serve the cause of the Central Arctic Ocean Fisheries Agreement: Lessens from the Antarctic Ocean	*H. C. Shin, S. Ho. Kang, E. J. Yang
S3-005	16:27-16:45	Changes in freshwater content in the Canada Basin from 2003 to 2017 and its biogeochemical consequences	*M. Yamamoto-Kawai, S. Kumakawa, Y. Zhang, W. Williams
	16:45-17:00	Break	
Chair: Øyvind Paasche			
S3-006	17:00-17:18	Long term variability of Barrow Canyon fluxes and its impact on subsurface warming in the western Arctic Ocean	*M. Itoh, T. Kikuchi, S. Nishino
S3-007	17:18-17:36	Arctic Anthropogenic Carbon	*A. Olsen, B. Rajasakaren, E. Jeansson, T. Tanhua, T. Johannessen, W. M. S. Jr
S3-008	17:36-17:54	Arctic Ocean CO2 uptake	*S. Yasunaka, A. Olsen, M. Manizza, D. Carroll, P. Landschützer
S3-009	17:54-18:12	Functional state of phytoplankton in the slope areas of the Russian Arctic seas	*V. Sergeeva, A. Polukhin, I. Sukhanova, A. Fedorov, V. Kremenetskiy
S3-010	18:12-18:30	Current state and predicting change on zooplankton community in the pacific sector of Arctic Ocean	*K. Matsuno, A. Fujiwara

S4-R6**Integration of Oceanographic and Marine Ecological Research in the Pacific Arctic Region and the Northern Bering Sea****Breakout Session/March5, 2020**

Venue: Hall

Chair: Amane Fujiwara			
S4-R6-001	15:15-15:33	Factors Regulating Nitrification in the Arctic Ocean: Potential Impact of Sea Ice Reduction and Ocean Acidification	*T. Shiozaki, M. Ijichi, A. Fujiwara, A. Makabe, S. Nishino, C. Yoshikawa, N. Harada
S4-R6-002	15:33-15:51	Effects of nitrate availability on phytoplankton photophysiology in the Arctic Ocean in summer	*E. Ko, J. Park, M. Y. Gorbunov, J. Jung, Y. Lee, E. Jin Yang, S-Ho. Kang
S4-R6-003	15:51-16:09	Impacts of temperature and CO2 on the coupling between phytoplankton growth and microzooplankton grazing in the western Arctic Ocean	*K. Sugie
S4-R6-004	16:09-16:27	Ice nucleating particles carried from below a phytoplankton bloom to the Arctic atmosphere	*J. Creamean, J. Cross, R. Pickart, L. McRaven, P. Lin, A. Pacini, R. Hanlon, D. Schmale, J. Cenicerros, T. Aydell, N. Colombi, E. Bolger, P. DeMott
S4-R6-005	16:27-16:45	Northward migration of Pacific copepods follows the temperature of Bering Summer Water (BSW) in the Chukchi Sea	*J.-H. Kim, K.-H. Cho, H. S. La, E. J. Choy, K. Matsuno, S.-H. Kang, K. H. Lee, E. J. Yang, W. Kim
	16:45-17:00	Break	
Chair: Takafumi Hirata			
S4-R6-006	17:00-17:18	Projected redistribution of marine biodiversity in the Pacific Arctic	*I. D. Alabia, J. G. Molinos, S. I. Saitoh, T. Hirata, T. Hirawake, F. J. Mueter
S4-R6-007	17:18-17:36	Spatial and temporal distribution of cold water pool on the Bering Sea shelf suggested by satellite altimeter	*K. Mizobata
S4-R6-008	17:36-17:54	Chlorophyll a and sea ice distributions in the northern Bering Sea in 2017 and 2018	*T. Hirawake, A. Ooki, H. Abe, H. Ueno, J. Nishioka
S4-R6-009	17:54-18:12	Responses of breeding seabirds to recent changes in sea ice conditions in the Northern Bering Sea	*A. Takahashi, A. Will, J. B. Thiebot, S. Tsukamoto, A. Kitaysky

S6-R5 Terrestrial Ecosystems, Hydrology, and Biogeochemistry

Breakout Session/March4, 2020

Venue: Hall

Chair: Hideki Kobayashi and Daqing Yang			
S6-R5-001	13:30-13:45	Fine root production rates in black spruce stands with different depths of active layer in interior Alaska	*K. Noguchi, Y. Matsuura, T. Morishita, J. Toriyama, Y. Kim
S6-R5-002	13:45-14:00	COMPARISON OF MORPHOMETRICAL AUFEIS PARAMETERS ESTIMATION METHODS	*L. Gagarin, A. Melnikov, N. Volgusheva, N. Tananaev
S6-R5-003	14:00-14:15	Long-term reconstruction of aboveground biomass development of Larix gmelinii forest in Central Siberia and in Russian Far East	*M. Kamara, A. Osawa, Y. Matsuura, B. Semyon
S6-R5-004	14:15-14:30	Current tendency of the permafrost landscape evolution in Yakutia, Eastern Siberia	*A. N. Fedorov, P.Y. Konstantinov, N. F. Vasylyev, Y. I. Torgovkin, Y. Iijima, H. Park, T. Hiyama
S6-R5-005	14:30-14:45	Ecophysiological and Biochemical Features of Photosynthesis Process of Woody Plants in Eastern Siberia	*T. Maximov, A. Maksimov, M. Terentyeva
	14:45-15:15	Break	
Chair: Tetsuya Hiyama and Hoteak Park			
S6-R5-006	15:15-15:30	Heterogeneous snow-cover derived uncertainties in permafrost temperature and greenhouse gas simulations	*H. Park, D. Yang
S6-R5-007	15:30-15:45	Environment changes in the Eurasian Arctic	*P. Groisman, S. Gulev, D. Streletskiy, G. Peng, N. Speranskaya, N. Tchebakova
S6-R5-008	15:45-16:00	Role of soil water in dissimilar freeze/thaw of permafrost active layer at larch forests in eastern Siberia	*A. Kotani, T. Hiyama, T. Nakai, T. Maximov
S6-R5-009	16:00-16:15	Surface and subsurface hydrology in continuous permafrost at the small research basin near Yakutsk, Eastern Siberia	*L. Lebedeva, V. Shamov, V. Efremov, K. Bazhin, I. Khristoforov
S6-R5-010	16:15-16:30	Effects of the extreme wet event on nitrogen availability and NDVI in larch forest of Eastern Siberia	*A. Nogovitsyn, A. Sugimoto, R. Shakhmatov, T. Morozumi, S. Tei, Y. Miyamoto, S. Nagai, T. Maximov
	16:45-17:00	Break	
Chair: Yongwon Kim and Hoteak Park			
S6-R5-011	17:00-17:15	Reconstructing organic carbon accumulation in drunken forest on permafrost-affected soils	*K. Fujii, K. Yasue, Y. Matsuura
S6-R5-012	17:15-17:30	Soil organic carbon in Gronfjord, Svalbard: stocks and molecular composition	*I. Alekseev, E. Abakumov
S6-R5-013	17:30-17:45	Methane emission from tree stems in interior Alaska	*T. Morishita, Y. Kim, K. Noguchi, Y. Matsuura, K. Terazawa
S6-R5-014	17:45-18:00	Greenhouse Gases Emissions from Mongolian Permafrost Region (2009-2018)	*A. Saruulzaya, D. Sainbuyan

S7**Impact of Changing Arctic Natural Environment on Human Societies****Breakout Session/March5, 2020**

Venue: Toku-1

Chair: Shin Sugiyama			
S7-001	15:15-15:30	Indigenous Knowledge of Biodiversity Change in Arctic Yakutia	*S. Ksenofontov, N. Backhaus, G. Schaepman-Strub
S7-002	15:30-15:45	Natural low temperatures in the life support system of rural communities of Yakutia (traditional practices, modern challenges and adaptation strategies)	*S. Grigorev, A. Suleymanov, V. Lytkin, L. Vinokurova
S7-003	15:45-16:00	Differences in Local Perceptions about Environmental Changes in and between Communities in Eastern Siberia	*Y. Fujioka, V. Ignatyeva, S. Grigoriev, S. Boyakova, N. Vinokurova, T. Tanaka, H. Takakura
S7-004	16:00-16:15	Environmental Change and the Impacts on Hunting and Fur Farming	*Y. Oishi
S7-005	16:15-16:30	Icy heart of the Urals: glaciers and permafrost in the life support system of the indigenous population of the Nether-Polar Urals	*L. Porshunova N. Liskevich
S7-006	16:30-16:45	Arctic tragedy of the commons, reconciliation between different livelihoods	*T. Joona
	16:45-17:00	Break	
Chair: Hiroki Takakura			
S7-007	17:00-17:15	Oil and Gas Development in the Arctic and Its Impact on the Russian Economy	*S. Tabata, M. Motomura
S7-008	17:15-17:30	Spitsbergen Arctic landscapes, coal mining impact, and history of research: from pollution to awareness	*A. Abramova, D. C. Baci
S7-009	17:30-17:45	Cost assessment of permafrost thaw risk for buildings and structures in Russian Arctic	*S. Badina
S7-010	17:45-18:00	Scaling Potential Macroeconomic Impacts of Climate Effects of Siberian Wildfires: Insights from MIROC-SPRINTARS AOGCM Experiments	*D. Narita, T.J. Yasunari, T. Takemura
S7-011	18:00-18:15	Changing natural environment and its impact on human society in Qaanaaq, northwestern Greenland	*S. Sugiyama, ArCS Greenland Project members
S7-012	18:15-18:30	Glacial runoff and flooding under the warming climate - field observation and numerical study on the outlet stream of Qaanaaq Glacier, northwestern Greenland -	*K. Kondo, D. Sakakibara, S. Fukumoto, S. Sugiyama

S8-R8**Regulating the Arctic Commons. Bridging Interests in Arctic Ocean Use, Legal Frameworks and Institutions****Breakout Session/March2, 2020**

Venue: Toku-1

Chair: TBD			
S8-R8-001	15:15-15:30	Polar Regions: Governance of Special Regimes under International Law?	*K. Hossain
S8-R8-002	15:30-15:45	Subsidizing the Consumption of Heat Energy and Electricity in the Republic of Sakha (Yakutia)	T. Gavrilyeva, *R. Bochoeva
S8-R8-003	15:45-16:00	Governing the Blue Arctic Economy	*A. Raspotnik
S8-R8-004	16:00-16:15	Arctic 5 + 5: negotiating the Central Arctic Ocean Fisheries Agreement	*A. A. Espiritu
S8-R8-005	16:15-16:30	The Implications of the BBNJ Agreement for the Governance of the Arctic Ocean	*K. Nishimoto
S8-R8-006	16:30-16:45	New Paradigms at the IWC? Blue Economy, Climate Change and Conservation of Whales	*N. Sellheim

S9 The Arctic Council: Past, Present and Future

Breakout Session/March3, 2020

Venue: K

Chair: Osamu Inagaki			
S9-001	15:15-15:30	Thinking about Forthcoming Russian Arctic Council Presidency: Problems and Prospects	*A. Sergunin
S9-002	15:30-15:45	The Arctic Council - From Rovaniemi Into The Future	*M. Gosia Smieszek
S9-003	15:45-16:00	The Evolving Functions of the Arctic Council	*S. Hataya
S9-004	16:00-16:15	Arctic Council Task Forces as Arctic Treaty-making Forums: An insider's story from SCTF	*A. Shibata
	16:15-16:45	Q&A Session 1	
	16:45-17:00	Break	
S9-005	17:00-17:15	The Arctic Council and Sustainable Development Goals of the United Nations.	*N. Loukacheva
S9-006	17:15-17:30	A Comparative Case Study of Knowledge Producers on the Arctic in Japan and South Korea: From a Critical Theoretical Perspective	*K. Sa Ri
S9-007	17:30-17:45	The Development of the Ecosystem Approach by the Arctic Council: An Assessment	*O. Inagaki
	17:45-18:15	Q&A Session 2	

S10**Global Competition among Great Powers and International Politics in the Arctic****Breakout Session/March2, 2020**

Venue: Toku-2

Chair: Aki Tonami			
S10-001	15:15-15:35	The Arctic at Stake: Strategic Implication and Prioritisation of the Arctic in U.S., Russian and Chinese Foreign and Security Policies	*K. Ng
S10-002	15:35-15:55	The Emerging China-U.S. Arctic Competition and its Impacts on the Geopolitical Dynamics in the Arctic	*B. Deng
S10-003	15:55-16:15	China's Polar Silk Road Policy and Its Implications	*T. Takeuchi
S10-004	16:15-16:35	Geopolitical Consequences of Variant Paths to Greenlandic Independence	*B. S. Zellen

S12**Arctic Communities and Indigenous Peoples in an Era of Change: Law, Social, Economic and Environmental Perspectives****Breakout Session/March2, 2020**

Venue: Toku-3

Chair: Natalia Loukacheva and Romain Chuffart			
S12-001	15:15-15:30	Mammoth tusks mining: impact on local community of the North Asia	*O. Vasileva
S12-002	15:30-15:45	The role of natural resources in ensuring standards of living in the Arctic zone of the Sakha Republic (Yakutia)	*M. Ivanova, T. Gavrilova
S12-003	15:45-16:00	Infrastructure Legacy, Fossil Fuel Boom and Re-Industrialization in Northern Remote Communities: Case-Studies in Eastern Siberia	*V. Kuklina, A. N Petrov , N. Krasnoshtanova, V. Bogdanov

S13**Building an Autonomous Arctic Community in the Anthropocene: Redefining the Human-environmental Ties****Breakout Session/March3, 2020**

Venue: Toku-2

Chair: Naotaka Hayashi			
S13-001	15:15-15:25	Never-ending community building in the ever-shifting environment in Greenland	*N. Hayashi
S13-002	15:25-15:35	A philosophical consideration on the worldly setting in the Anthropocene	*M. Shinohara
S13-003	15:35-15:45	In the Shadow of the Mountain	*A. M. Hansen, R. L. Johnstone
S13-004	15:45-15:55	Relationships between Extractive Industries and Indigenous Societies along the Kuskokwim River	*S. Kondo
S13-005	15:55-16:05	New Era of the Coastal Whaling in Norway and Japan	*J. Akamine
S13-006	16:05-16:15	International Relations and the Anthropocene	*M. Takahashi

S14-S11

**Coping with Waste Disposal in Arctic and Sub-Arctic North America: The Role of Japanese Scientists,
Global Relevance of Arctic Policies & Strategies, and Observation & Modelling in the Arctic-Boreal Domain – discussion, assessment, analysis and brainstorming**

Breakout Session/March3, 2020

Venue: Toku-3

Chair: Shunwa Honda			
S14-S11-001	15:15-15:35	Methodology for Improving Waste Management in the Arctic Circle	*K. Ishii, Y. Tojo
S14-S11-002	15:35-15:55	Introduction of survey methods for hazardous substances at dump sites - case study at Dandora dumpsite in Kenya -	*Y. Tojo, K. Ishii
S14-S11-003	15:55-16:15	Co-Creating Sanitation Systems: Trans-Disciplinary Approach and Community-Based Participatory Research	*T. Yamauchi
Chair: Fujio Ohnishi			
S14-S11-005	16:35-16:50	The Study of the Policy Priorities on the Arctic Challenges in Korea	*H. K. Seo
S14-S11-006	16:50-17:05	The Far-Eastern Hectare Law and Land in the Sakha Republic (Russia)	*G. Belolyubskaya

S15-S16-S17**Environmental Characterization of the NSR, Loads, Ship Response, and Design of the NSR, Assessment/Economics/Feasibility and Risk of the NSR****Breakout Session/March4, 2020**

Venue: Toku-3

Chair: Takuji Waseda			
S15-S16-S17-001	13:30-13:45	Wave-ice interactions in the Arctic and Antarctic marginal ice zones	*A. Alberello, L. Bennets, M. Vichi, A. Benetazzo, T. Waseda, A. Toffoli
S15-S16-S17-002	13:45-14:00	Wave predictability uncertainty in and near marginal ice zones	*T. Nose, T. Waseda, T. Kodaira, J. Inoue
S15-S16-S17-003	14:00-14:15	Trends and uncertainties of ocean waves in the Northern Sea Routes	*T. Waseda, T. Kodaira, T. Nose, K. Nakano, K. Sasmal, K. Sato, J. Inoue
S15-S16-S17-004	14:15-14:30	Sea ice conditions of winter navigation in the southwestern Kara Sea	*T. Alekseeva, S. Frolov, V. Fedyakov, C. Petrich, Y. Meronov, J. Sokolova
S15-S16-S17-005	14:30-14:45	Influence of recent climate changes on the distribution of icebergs in the Kara Sea	E. Mironov, *E. Pavlova
S15-S16-S17-006	14:45-15:00	Model Test using Synthetic Ice of Ship Advancing into Small Ice Floes and Regular Wave	*J. Sawamura, T. Iida, H. Senge
	15:00-15:15	Break	
Chair: Junji Sawamura			
S15-S16-S17-007	15:15-15:30	Numerical Modeling of Ship-ice Interactions for Ice Force Estimation	*J. Sawamura, E. Pedersen
S15-S16-S17-008	15:30-15:45	A numerical model for towing operations of Arctic drilling platforms in polygonal broken ice	*Y. Han, L. Zhou
S15-S16-S17-009	15:45-16:00	Research on evaluation method of self-propulsion factor under interaction between hull and propeller for ice-going ship	*J. Shaopeng, T. Yukui
S15-S16-S17-010	16:00-16:15	KISIS - ice structure interaction simulator	*A. Konno
	16:15-16:30	Break	
Chair: Akihisa Konno			
S15-S16-S17-011	16:30-16:45	Development of algorithm for the estimation of sea ice thickness in the Arctic Ocean using AMSR2 data	K. Tateyama, K. Izumiyama, Y. Watanabe, *K. Sato
S15-S16-S17-012	17:00-17:15	Information Retrieval for the NSR Navigation: A Statistical Approach	*T. Koyama
S15-S16-S17-013	17:15-17:30	Estimation of sailing speed through ice covered waters along the NSR based on the ASMR2 data	K. Tateyama, N. Otsuka, *H. Okuda
S15-S16-S17-014	17:30-17:45	Estimation of emission by shipping activity of Northern Sea Route	*N. Otsuka, A. Moriki, X. Li
S15-S16-S17-015	17:45-18:00	Overview and prospect of recent shipping activities along the Northern Sea Route	*X. Li, N. Otsuka
S15-S16-S17-016	18:00-18:15	Potential of container transport of Northern Sea Route from trial shipping between Helsinki and Tomakomai	*A. Moriki, H. Sasaki, E. Nakamura, T. Kakizaki, N. Otsuka

S19**Development and Implementation of a Sustainable Arctic Observing Network: Accomplishments and Challenges****Breakout Session/March 2, 2020**

Venue: Chu4

Chair: Michael Karcher			
S19-001	15:15-15:30	The Arctic Observing Summit: Accomplishments from 2013-2018, Goals for 2020, and Ongoing Challenges	*M. Murray, R. Sankar, P. Schlosser, H. Eicken, L. Hinzman, J. R. Larsen, E. Kruemmel, A. Pope, V. Rachold, P. Pulsifer
S19-002	15:30-15:45	Development of integrated Arctic observing systems: the H2020 INTAROS project	*S. Sandven, H. Sagen, R. Pirazzini, A. Beszczynska-Möller, P. Voss, F. Danielsen, L. Iversen, P. Goncalves, T. Hamre, G. Ottersen, M. Sejv, D. Gustavson, R. Higgins
S19-003	15:45-16:00	Establishing an Observing System for Earth System Science: the SIOS Experience	K. Holmén, *C. Hübner, I. Jennings, H. Lihavainen, D. Ignatiuk, S. Jawak, Ø. Godøy, B. Andersen
S19-004	16:00-16:15	A decade of scientific contribution to the Greenland Ice Sheet Monitoring Network (GLISN)	*M. Kanao, G. Toyokuni, S. Tsuboi
S19-005	16:15-16:30	Atmosphere-Ice-Ocean Interaction in the Changing Arctic: An Overview of Office of Naval Research Efforts in the Central Beaufort Sea	*C. Lee
S19-006	16:30-16:45	Predictive data science in support of quantitative Arctic observing network design	*P. Heimbach, N. Loose, A. T. Nguyen, H. Pillar, A. Bigdeli

S20

Scientific Contributions to the Third Arctic Science Ministerial (ASM3)

Breakout Session/March3, 2020

Venue: Chu3

Chair: Jeremy Wilkinson			
S20-001	15:15-15:35	The Arctic Observing Summit 2020 and the 3rd Arctic Science Ministerial: Observing for Action and Action for Observing	*H. Eicken, P. Schlosser, T. Gunnarsson, M. Murray
S20-002	15:35-15:45	Data Management in Japanese Arctic Project and Open Science	*H. Yabuki, T. Sugimura, T. Terui
S20-003	15:45-15:55	Synergies at Infrastructure and Service level between EU Space Programmes for the Arctic	J. F. Guasch, K. Boniface, *T. Diehl, S. Dobricic, C. Gioia, H. Greidanus, T. Kliment, J. Kucera, G. Maenhout, L. Pozzoli, P. Soille, P. Strobl, J. Wilson, O. Nordbeck, T. Zegers
S20-004	15:55-16:05	SIOS - an international partnership to develop a sustained regional observing system for Arctic Earth System Science	C. Hübner, H. Lihavainen, *I. Jennings, D. Ignatiuk, S. Jawak, B. Andersen, Ø. Godøy
S20-005	16:05-16:15	Global Cryosphere Watch CryoNet stations delivering standardized data from the Arctic	*C. Fierz, T. Aoki, M. Bavay, M. Citterio, J. Fiddes, Ø. Godøy, T. Ohata, R. Nitu, M. Schneebeli, W. Schöner, H. Yabuki
S20-006	16:15-16:25	A Roadmap for Arctic Observing and Data Systems	S. Starkweather, *J. R. Larsen
S20-007	16:25-16:35	Overview of Overseas Dispatching Program by Young Researchers through the ArCS Project	*S.-I. Saitoh, M. Yoshimura, M. Ogi, S. Tanaka
	16:35-16:45	Discussion	
	16:45-17:00	Break	
Chair: Nicole Biebow			
S20-008	17:00-17:20	Advanced prediction in the Arctic and beyond: Key outcomes after three years of the APPLICATE project and contribution to the Third Arctic Science Ministerial	*L. Christini
S20-009	17:20-17:30	Societal benefits of observing systems and synergies between EU Space programmes for the Arctic	*S. Dobricic, F. M. Ferrario, L. Pozzoli, J. Wilson, A. Gambardella, A. Tilche
S20-010	17:30-17:40	Black carbon emissions from Asia: Scientific highlights and implications for the Arctic climate policy	*H. Tanimoto, K. Ikeda, Y. Kanaya, Y. Choi, D. Narita, D. Yamada, T. Nagashima, S. Inomata
S20-011	17:40-17:50	Science diplomacy in the Arctic	*M. Gutenev
S20-012	17:50-18:00	Development of the Potential Vulnerability Index for the Arctic Marine Ecosystems	*T. Hirata, Y. Masuda, J. G. Molinos, I. Alabia, T. Hirawake, S. Saitoh
S20-013	18:00-18:10	Attempts on planning field research in the Arctic for mutual benefits between a science project and local community	*T. Sueyoshi, M. Fukasawa, H. Enomoto, T. Kikuchi, S. Saito, S. Sugiyama, H. Takakura, S. Tabata
S20-014	18:10-18:20	IASC - Report on the State of Arctic Science	L. D. Hinzman, G. Aðalgeirsdóttir, S. Arnold, L. W. Cooper, J. Elster, A. Petrov, *A. Pope
	18:20-18:30	Discussion	

S20**Scientific Contributions to the Third Arctic Science Ministerial (ASM3)****ASM3 Session/March6, 2020**

Venue: Hall

Chair: Volker Rachold			
	10:30-10:40	Introduction	
S20-O15	10:40-10:50	Plans for ASM3	H. Enomoto
S20-O16	10:50-11:00	Plans for ASM3	A. Pope
S20-O17	11:00-11:10	Summary Breakout Session S20-1	J. Wilkinson
S20-O18	11:10-11:20	Summary Breakout Session S20-2	N. Biebow
S20-O19	11:20-11:35	The Added Value (if any) of the Arctic Science Ministerial: From Washington DC to Berlin, and now to Tokyo	A. Shibata
	11:35-12:00	Discussion	

Poster Session-1/March3, 2020

Core Time: 13:30-15:00

R1-P01	Black Carbon and Inorganic Aerosols in Arctic Snowpack	*T. Mori, K. Goto-Azuma, Y. Kondo, Y. Ogawa-Tsukagawa, K. Miura, M. Hirabayashi, N. Oshima, M. Koike, K. Kupiainen, N. Moteki, S. Ohata, P. R. Sinha, K. Sugiura, T. Aoki, M. Schneebeli, K. Steffen, A. Sato, A. Tsushima, V. Makarov, S. Omiya, A. Sugimoto, S. Takano, N. Nagatsuka
R1-P02	Evaluating the wet removal processes of BC over the Arctic sea and East Asia	*M. Takigawa, T. Miyakawa, F. Taketani, Y. Kanaya, M. Yamaguchi, K. Sugiura
R1-P03	Seasonal variation of lower stratospheric aerosols observed by lidar above Svalbard, Norway from 2014 to 2019	*K. Shiraishi, T. Shibata, M. Shiobara
R1-P04	Non-linear impacts of future anthropogenic aerosol emissions on Arctic warming	*S. Dobricic, L. Pozzoli, E. Vignati, J. Wilson, S. Russo, Z. Klimont
R1-P05	Observation of carbon and hydrogen isotope ratios of atmospheric methane in the Arctic region : the dominant contribution of biogenic sources in the summer	*R. Fujita, S. Morimoto, S. Ishidoaya, Y. Tohjima, K. Ishijima, S. Aoki, T. Nakazawa
R1-P06	Air mass transport and trace gas distribution in the Siberian upper troposphere and lower stratosphere	*Y. Inai, R. Fujita, T. Machida, H. Matsueda, Y. Sawa, K. Tsuboi, K. Katsumata, S. Morimoto, S. Aoki, T. Nakazawa
R1-P07	Source attribution of atmospheric pollutants observed by R/V MIRAI over the Bering Sea and Arctic ocean	*K. Yamaji, M. Tabuchi, F. Taketani, Y. Kanaya, M. Takigawa, S. Chatani
R1-P08	Increasing occurrence of heat waves in the Arctic	*S. Dobricic, S. Russo, L. Pozzoli, J. Wilson, E. Vignati
R1-P09	Possible linkages between Arctic Sea Ice Extent and the tropics in the North Atlantic sector using NCEP Reanalysis	*E. d. Souza Jr, J. Lukovich, J. Simoes, E. Mayer, J. Hanesiak
R3-P01	Peculiarities of using optically stimulated luminescence method for dating cryolithozone deposits	*M.O. Iakovleva, V.V. Rogov, R.N. Kurbanov, A.S. Murray, A.N. Kurchatova
R3-P02	Future projection of climate change due to greenhouse emission by permafrost degradation	*T. Yokohata, K. Saito, G. Iwahana, H. Ohno, T. Sueyoshi, A. Ito, K. Tanaka
R3-P03	Mining noisy data for monitoring Arctic permafrost by using GNSS Interferometric Reflectometry	*J. Zhang, L. Liu
R3-P04	Post-wildfire surface deformation at Batagay, Eastern Siberia, detected by L-band and C-band InSAR	*K. Yanagiya, M. Furuya
R3-P07	Accelerated continental-scale snowmelt and ecohydrological impacts in the four largest Siberian river basins in response to spring warming	*K. Suzuki, T. Hiyama, K. Matsuo, K. Ichii, Y. Iijima, D. Yamazaki
R3-P08	Climate and hydrological changes in the Ob River Basin during 1936-2017	*M. Xu, S. Kang, X. Wang, H. Wu, D. Hu, D. Yang
R3-P09	Species diversity and quantitative indicators of biota (zooplankton, zoobenthos, fish) of Severnaya Dvina River (Arkhangelsk, Russia)	A. Novoselov, E. Imant, S. Artemyev, V. Lukina, N. Matveev, E. Pribytkova [*K. Terentyev, on behalf of E. Pribytkova]
R3-P10	A First Look at Relationships Between Microbial Communities and Submerged Aquatic Vegetation in Stordalen Lakes, Sweden	*T. Marcus, P. Evans, V. Rich, J. Ernakovich, G. Tyson, R. Varner
R3-P11	Lead In Sediments of Lakes of Arctic Urban Area (Murmansk Region, Russia)	*Z.I. Slukovskii, A.V. Guzeva, V.A. Dauvalter, D.B. Denisov, A.A. Cherepanov
R3-P12	Deuterium excess variations in seasonal snowpack during four consecutive winter seasons (2016-2019) in Alaska	*K. Sugiura, S. Nagai, H. Kobayashi, M. Takigawa
R3-P13	Effects of snow grain shape and mixing state of snow impurity on retrieval of snow physical parameters from ground-based spectral radiometer	*T. Tanikawa, K. Kuchiki, T. Aoki, H. Ishimoto, M. Niwano, M. Hosaka, S. Matoba, Y. Kodama, Y. Iwata, K. Starnes
R3-P14	Microwave observation of melting of the snow-covered area and Rain-on-Snow in Polar Regions	N. Alimasi, *H. Enomoto
R3-P15	Remote sensing monitoring of snow and snow avalanche in Longyearbyen, Svalbard, Arctic	*N. Yanakieva, T. Spasova
R4-S5-P01	Variations in mineralogy of dust in snow and ice core obtained from Greenland Ice Sheet over the past 100 years	*N. Nagatsuka, K. Goto-Azuma, A. Tsushima, H. Motoyama, S. Matoba, K. Fujita, T. Yamasaki, Y. Onuma, Y. Komuro, M. Minowa, T. Aoki, M. Hirabayashi, F. Nakazawa, D. Dahl-Jensen
R4-S5-P02	Two years comparison of dark ice extent on the Greenland Ice Sheet derived from GCOM-C/SGLI in 2018 and 2019	*R. Shimada, M. Hori, N. Takeuchi, T. Aoki
R4-S5-P03	Spatial variations of dark ice on the Isunnguata Sermia Glacier, southwestern Greenland	*T. Suzuki, N. Nagatsuka, R. Shimada, A. Kizawa, T. Aoki, N. Takeuchi
R4-S5-P04	Sentinel-1 TOPS Interferometry on the North-East Greenland Ice Stream	*J. K. Andersen, A. Kusk, J. P. Merryman Boncori
R4-S5-P05	Estimation of Greenland surface mass balance using positive degree-days method and energy balance model	*R. O'ishi, F. Saito, T. Obase, A. Abe-Ouchi
R4-S5-P06	Mass balance of Greenlands high-elevation firn plateau (2000-2018)	*W. Colgan, A. M. Solgaard, M. Niwano, N. Karlsson, S. B. Simonsen, B. Vandecrux, J. Box, R. S. Fausto, the PROMICE Team
R4-S5-P07	Influence of ocean bed geometry on the front variations of calving glaciers, northwestern Greenland	*I. Asaji, D. Sakakibara, T. Ando, S. Sugiyama
R4-S5-P08	Greenland ice sheet surface elevation change from 25+ years of satellite altimetry.	*L. S. Sørensen, S. B. Simonsen, R. Forsberg, N. H. Andersen
R4-S5-P09	Inclusions in ice layers of SIGMA-A ice core, northwestern Greenland	*K. Kawakami, Y. Iizuka, S. Matoba, T. Aoki, S. Sugiyama, T. Ando

R4-S5-P10	Ice core project in a high-accumulation dome, southeast Greenland	*Y. Iizuka, S. Matoba, O. Seki, R. Uemura, K. Fujita, H. Matsui, S. Hattori, A. Hori, H. Ohno, N. Oshima, A. Hashimoto, M. Niwano, T. Aoki, S. Fujita, S. Ishino, K. Horiuchi, H. Matsuzaki, A.T. Bautista VII, S. Adachi, T. Suzuki, T. Ando, F. Parvin, K. Kawakami
R4-S5-P11	Recent variations of surface mass balance and dust deposition at EGRIP, Greenland	*Y. Komuro, F. Nakazawa, N. Nagatsuka, M. Hirabayashi, W. Shigeyama, T. Homma, K. Goto-Azuma
R4-S5-P12	Seasonality of snow chemistry at the East Greenland Ice Core Project (EGRIP) camp, Greenland	F. Nakazawa, N. Nagatsuka, M. Hirabayashi, *K. Goto-Azuma
R4-S5-P13	Changes of Kaffioyra region glaciers, Svalbard - over 20 years of research	*I. Sobota
R4-S5-P14	Thermal structure of glaciers in Iceland and Svalbard from ground penetrating radar data	*K. Lamsters, J. Karušs, M. Krievāns, J. Ješkins
R4-S5-P15	Light sensitivity of photosynthetic microbes in different size of cryoconite granules on Gulkana Glacier, Alaska Range	*A. Kizawa, T. Takahashi, M. Ono, S. Ohkubo, M. Kuroiwa, M. Kosugi, J. Uetake, H. Koike, N. Takeuchi
R4-S5-P16	Influence of glacial water on carbonate chemistry and biogeochemical processes in Svalbard fjords with different characteristics	*A. Fransson, M. Chierici, Y. Ericsson, E. Falck, S. Kristiansen
R4-S5-P17	A large-eddy simulation of meltwater plume at a marine-terminating glacier front	*Y. Matsumura, N. Kanna, Y. Ohashi, S. Aoki, S. Sugiyama
S3-P01	Spatial distributions of surface seawater CO ₂ and CH ₄ in the western Arctic Ocean in late autumn	*A. Murata, S. Kameyama, M. Ishii
S3-P02	Effects of storms and sea-ice biogeochemical processes on under-ice water fCO ₂ from winter to spring in the high Arctic Ocean: Implications for sea-air CO ₂ fluxes	*A. Fransson, M. Chierici, I. Skjelvan, A. Olsen, P. Assmy, A. K. Peterson, G. Spreen, B. Ward
S3-P03	Picophytoplankton of the Arctic Bay, Archipelago Novaya Zemlya, the Kara Sea	*T. Belevich, L. Ilyash, I. Milyutina, A. Troitsky, A. Demidov
S8-R8-P01	Conservation and Development Priorities and Conflicts in the Arctic	*B. A. Kaiser
S8-R8-P02	Convergence in legal regulation of the subarctic states: present and possible future.	*Y. Brazovskaya
S8-R8-P03	New institutions to bridge the Arctic and to manage its commons: cases from recent two agreements	*H. C. Shin, J. Jeong, W. S. Seo
S10-P01	Return to a Geopolitical Arctic?: Reading the Changes in Focus and Priority from Recent Arctic Policy Documents	*J. Jeong, C. Jung, S. Kim, H. Shin
S19-P01	Arctic Sea level changes over the recent 25 years and freshwater fluxes from radar altimetry	*O. B. Andersen, S. K. Rose, L. S. Sørensen, K. Nielsen, C. A. Ludwigsen, H. Skourup
S19-P02	Greenland GPS Network to monitor ice mass changes under the INTAROS project	S. A. Khan, P. Knudsen, O. B. Anders, *C. Ludwigsen
S19-P03	Implementation of online visualization tool (VISION) on Arctic Data-archive System (ADS)	*T. Sugimura, T. Terui, H. Yabuki
S19-P04	Coastal Monitoring in the Arctic using Ocean Observation Camera (OOC) onboard Micro Satellite RISESAT	*S.-I. Saitoh, T. Hirata, I. Alabia, T. Hirawake, J.-I. Kurihara, Y. Takahashi, Y. Sakamoto, T. Kuwahara, S. Fujita, H. Kosuke, Y. Murata, M. Sakai, H. Tomio, Y. Sato, M.-A. Lee, K. Mochizuki, F. Takahashi, H. Murakami
S19-P05	P-wave tomography beneath Greenland	*G. Toyokuni, T. Matsuno, D. Zhao
S20-P01	Capacity-building in Arctic standardisation development	*S. Sandven, H. Sagen, P. Pulsifer, U. Jacobsen, P. L. Buttigieg, F. Danielsen, N. Johnson, J. Pearlman, R. May, M. Reinhardt Nielsen, L. Bobilev, S. I. Saitoh
S20-P02	Collaborative Natural Resource Management and Community-based Monitoring in the Arctic	F. Danielsen, *H. Enomoto, M. Enghoff, L.K. Holm, O. Lee, M. Nuttall, N. Otsuka

Poster Session-2/March5, 2020

Core Time: 13:30-15:00

R2-P01	The impacts of two different sea ice components in BCC_CSM on the simulation of Arctic climate	*M. Chu, L. J. Zhang
R2-P02	Impacts of the Atlantic and Pacific Oceans on the Arctic ice and ocean changes in the present and future climates	*J. Ono, Y. Komuro, H. Tatebe
R2-P03	Variability of sea ice retreat dates in the Pacific sector of the Arctic in 1979-2018	*K. Kivva, J. Selivanova, A. Sumkina
R2-P04	Correlation between river discharge and sea ice growing in Laptev Sea	*C. Gabarró, J. Martínez, V. Gonzalez-Gambau, C. González-Haro, E. Olmedo, J. Ballabrera-Poy, A. Turiel, L. Bertino, J. Xie, R. P. Raj, R. Catany, M. Arias, R. Sabia
R2-P05	The ESA CryoVEx airborne sea ice freeboard campaigns	*A. Di Bella, H. Skourup, R. Forsberg, S. Hvidegaard, T. Casal
R2-P06	Modelling, numerical simulation and prediction of oil spilled behavior under ice-covered area in the Laptev Sea	*Y. Hong, H. Yamaguchi
R2-P07	The warming of the Chukchi slope through the Barrow Canyon outflow in the 2016-2017 winter	*S. Kimura, J. Onodera, M. Itoh, T. Kikuchi, S. Nishino, Y. Kawaguchi, E. Watanabe, N. Harada
R2-P08	Pacific water in the northeastern Chukchi Sea	*M. Muramatsu, H. Ueno, M. Itoh, E. Watanabe, J. Onodera
R2-P09	Modeling study on resuspended particle transport in the western Arctic Ocean	*E. Watanabe, J. Onodera
R2-P10	Arctic and subarctic ocean biological production declined after the early 2010s	*E. Siswanto
R7-P01	PMC detection in Himawari-8 full disk image	K. Kawaura, *T. T. Tsuda, Y. Hozumi, Y. Ando, K. Hosokawa, H. Suzuki, T. Nakamura, K. T. Murata
R7-P02	Spatial-temporal distribution of anomalous enhancement of ambipolar diffusion coefficient	*T. Takahashi, M. Tsutsumi, Y. Ogawa, S. Nozawa, J. Moen, C. Hall, H. Miyaoka
R9-P01	The Interaction of Human with Bears in the Arctic Areas	S. Kondo, *T. Matsumoto
R9-P02	The Projected Population Exposed to Future Hot Weather Events Considering Korean Society with Rapid Aging: For Supporting Climate Change Policy	*C. Shim, O. Kim, J. Han, S. Song
R9-P03	Geopolitics and Transformation of Geological Ideas about the Tectonics of the Eastern Arctic	*C. M. Aleksandrovna, T. O. Dmitrievich
R9-P04	Pendants in the Shape of Birds in the Culture of the Medieval Population Tyumen Arctic	*K. G. Gyurdzhoyan
R9-P05	The Medieval Sanctuary 1-2 AD in the Tyumen Arctic	*A. A. Tkachev
R9-P06	The Funeral Rite of the Pre-Samodian People of the Tyumen Arctic	*A. A. Tkachev
R10-S18-P01	Estimation of global ice load exerted on offshore structure used for Arctic resource development	*K. Hasegawa, S. Uto, H. Shimoda, D. Wako, T. Matsuzawa
R10-S18-P02	Data delivery and visualization service for climate forecast data in the Arctic Ocean	*T. Terui, T. Sugimura, L. W-A. D. Silva, S. Sueyoshi, J. Inoue
R10-S18-P03	Sea ice leads monitoring in the Greenland Sea using Google Earth Engine	*M. Vomero, H. Yamaguchi, N. Kimura, V. Barabash
R10-S18-P04	Useful Arctic Knowledge (UAK): Partnership for research and education between Norway, USA and Canada	*S. Sandven, H. Sagen, P. Pulsifer, M. Sørensen, M. Murray, K. Eivind Frøysa, S. Rysgaard, R. Galley, Ø Godøy, T. Hamre, L. Iversen
R10-S18-P05	Education course by UArctic at Nuuk, Greenland - Short course: management of natural resources -	*S. Takahashi
R10-S18-P06	Arctic militarisation and the effect on sustainability and local development	*J. Jenkins
S1-P01	Joint Arctic research on New and Unusual States (JANUS): The Japanese contribution to the MOSAiC	*J. Inoue, Y. Kawaguchi, D. Nomura
S1-P02	Model intercomparison using RV Mirai data as a part of Arctic CORDEX	K. Sato, *J. Inoue, A. Rinke
S1-P03	Observational study of internal-wave-induced interior mixing in the Canada Basin, Arctic Ocean	*E. Y. Son, Y. Kawaguchi
S1-P04	Ice-ridge internal waves and turbulent heat flux in ice-ocean boundary layer: Modeling	*Y. Matsumura, Y. Kawaguchi
S1-P05	Saroma-ko Lagoon Observations for sea ice Physico-chemistry and Ecosystems 2019 (SLOPE2019)	*D. Nomura, P. Wongpan, T. Toyota, T. Tanikawa, Y. Kawaguchi, T. Ono, T. Ishino, M. Tozawa, T. P. Tamura, I. S. Yabe, E. Y. Son, F. Vivier, A. Lourenco, M. Lebrun, Y. Nosaka, T. Hirawake, A. Ooki, S. Aoki, B. Else, F. Fripiat, J. Inoue, M. Vancoppenolle
S1-P06	Investigation of spatiotemporal variability of melt pond fraction and its relationship with sea ice extent during 2000-2017 using a new data	Y. Ding, X. Cheng, *J. Liu
S1-P07	Retrieval of Long-term Snow Depth over Arctic Sea Ice using a Deep Neural Network	*J. Liu, Y. Zhang, X. Cheng
S1-P08	The interplay between wind speed and polar sea ice	R. Alkama, A. Cescatti, *T. Diehl, J. Francis, E. Koffi, J. Stroeve, S. Vavrus
S1-P09	The Sea Ice Drift Forecast Experiment (SIDFEx): A MOSAiC mid-term review	H. F. Goessling, A. Schweiger, S. Reifenberg, *B. Niraula, SIDFEx Lead Team and Contributors
S1-P10	The impact of sea-ice form drag on Arctic sea-ice and atmosphere in coupled regional climate simulations	*X. Yu, A. Rinke, W. Dorn, G. Spreen, C. Lüpkes, H. Sumata, V. M. Gryanik
S1-P11	Arctic sea-ice biogeochemistry and air-ice-water CO ₂ exchange at different time scales in the coldest period in January to April	*A. Fransson, M. Chierici, D. Nomura, M. Granskog, E. Le, C. Hoppe, K. Abrahamsson, S. Kristiansen
S2-P01	The S2S Museum - a website of S2S ensemble forecast products -	*M. Matsueda, A. Yamagami

S2-P02	Subseasonal-to-seasonal Winter Forecasts with the Norwegian Climate Prediction Model: Role of Snow-Atmosphere Coupling at High Latitudes	*Y. Orsolini, F. Li, N. Keenlyside, M.-L. Shen, F. Counillon, Y. G. Wang
S2-P03	Storm-mediated ocean-atmosphere heat exchange over the Arctic Ocean: A case study of a Nordic Sea cyclone observed in January 2011	*A. Manda, T. Mitsui, J. Inoue, M. E. Hori, K. Kawamoto, K. K. Komatsu
S2-P04	Features of spatial pattern in trend of summer precipitation over Northern Eurasia after 1950 in ensemble members of MIROC6 historical simulation	*M. Abe, H. Kanamori, T. Hiyama, H. Fujinami, H. Tatebe
S2-P05	Long-term trend in summer precipitation associated with the global warming over Siberia in a large ensemble of GCM simulations	*H. Kanamori, T. Hiyama, M. Abe, H. Fujinami
S4-R6-P01	Temporal changes of zooplankton community and population structure in the northern Bering Sea from June to September in 2017	*F. Kimura, Y. Abe, K. Matsuno, R. R. Hopcroft, A. Yamaguchi
S4-R6-P02	The community composition of diatom resting stages in the northern Bering Sea in 2017 and 2018: the relationship to the interannual changes in the extent of the sea ice	*Y. Fukai, K. Matsuno, A. Fujiwara, A. Yamaguchi
S4-R6-P03	Shelled Pteropod Relative Shell Density and Ocean Acidification in the Arctic Ocean	*M. Seo, M. Yamamoto-Kawai, K. Kimoto
S4-R6-P04	Water mass distribution in the northern Bering and the southern Chukchi Seas using light absorption of chromophoric dissolved organic matter (CDOM).	*J. Oida, T. Hirawake, Y. Yamashita, H. Abe
S4-R6-P05	Distinct spring phytoplankton bloom in the Bering Strait in 2018: the year of historical minimum sea ice extent	*G. Kikuchi, H. Abe, M. Sampei, T. Hirawake
S4-R6-P06	Yearly comparison on abundance and vertical distribution of epipelagic ctenophores and scyphomedusae in the northern Bering Sea in summer of 2017 and 2018	M. Maekakuchi, Y. Abe, K. Matsuno, *A. Yamaguchi
S4-R6-P07	Yearly comparison on interactions between environmental parameters and various plankton stocks in the northern Bering Sea during the summer of 2017 and 2018	*A. Yamaguchi, F. Kimura, Y. Fukai, Y. Abe, K. Matsuno, A. Ooki, T. Hirawake
S4-R6-P08	Evident fall phytoplankton blooms in the Pacific Arctic	*H. Waga, T. Hirawake
S4-R6-P09	Seasonal development of key marine calcifiers in an area of intense methane seepage in the Barents Sea	S. Ofstad, J. Meiland, K. Zamelczyk, *M. Chierici, A. Fransson, F. Gründger, T. L. Rasmussen
S6-R5-P01	Mineralization of Fresh and Recalcitrant Organic Matter under Rising of Nitrogen Availability in the Arctic Tundra Soil	*M. N. Maslov, O. A. Maslova
S6-R5-P02	Effects of extreme drought and wet events for tree mortality: Insights from tree-ring width and carbon isotope ratio in a Siberian larch forest	*S. Tei, A. Sugimoto, A. Kotani, T. C. Maximov
S6-R5-P03	Spatial variation in thickness of organic layer and growth rate of Hylocomium splendens in a north-facing slope in Interior Alaska	*J. Toriyama, T. Morishita, Y. Matsuura, K. Noguchi
S6-R5-P04	Fungal diversity in a forest-tundra ecotone in Canadian Low Arctic	S. Matsuoka, H. Doi, S. Masumoto, R. Kitagawa, K. Nishizawa, K. Tanaka, M. Hasegawa, T. Osono, S. Hobaru, A. S. Mori, *M. Uchida
S6-R5-P05	Glacier retreating by the climate change may lead some fungi into the extinction	M. Tsuji, Y. Tanabe, W. F. Vincent, *M. Uchida
S6-R5-P06	Quantification of ecosystem structure of an open canopy black spruce forest in Interior Alaska	*H. Kobayashi, T. Nakai, H. Ikawa, Y. Kim, W. Yang, A. Hama, K. Noguchi, S. Matsumura, K. Ikeda, R. Suzuki
S6-R5-P07	Detection of ground surface change by permafrost thawing using Sentinel-1 data	*A. Hosoya, K. Ichii, H. Kobayashi
S6-R5-P08	Spatio-temporal variability of growing season in eastern Siberia	S. Nagai, *S. Tei, A. Kotani
S6-R5-P09	Modeling of soil temperature and ecohydrological processes of a larch forest in eastern Siberia	*T. Nakai, T. Hiyama, Y. Iijima, A. Kotani, T. C. Maximov
S6-R5-P10	Influencing factors of atmospheric poleward moisture transport into the Arctic	*K. Oshima, K. Yamazaki, M. E. Hori, H. Park
S6-R5-P11	Influence of springtime Okhotsk high on rapid discharge increase accompanied by river ice melt in eastern Siberia	*K. Oshima, H. Park, M. E. Hori, Y. Yoshikawa
S6-R5-P12	A variation in surface energy balance during the early vegetation succession stage after wildfire in interior Alaska	*H. Iwata, M. Ueyama, Y. Harazono
S6-R5-P13	Hydrology of the small tundra rivers in the Russian Arctic	*L. Lebedeva, A. Tarbeeva, V. Shamov
S6-R5-P15	Stem respiration of black spruce (Picea Mariana), interior Alaska	*Y. Kim, D.-J. Kwon, S.-D. Kim, B.-Y. Lee
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