January 16, 2018
Draft program as of Nov. 28, 2017

Hall
9:00-9:20 Opening
9:20-9:50 Keynote speech 1 Kay I. Ohara Effects of High Albedo and Brine Rejection of Sea Ice on the Arctic Ocean and its Recent Change
9:50-10:20 Keynote speech 2 Peter Wadhams A Farewell to Ice - Arctic climate feedbacks and their impact on global warming
10:20-10:40 Photo session
10:30-10:40 Break
10:40-12:40 Session presentation 1

SP1-G1 10:40-11:00 Surface Energy Budget Process Relationships for Evaluating Model Performance in Central Greenland: Matthew Shupe, M. Miller, C. Cox, O. Persson
SP1-G08 11:00-11:20 Distribution shifts of marine taxa in the Pacific Arctic under contemporary climate changes: Irene D. Alabia, J. García Molinos, S. I. Saitoh, T. Hirawake, T. Hirata, F. J. Mueter
SP1-S7 11:20-11:40 Navigable speed related to ice condition along the Northern Sea Route: Norutshiko Otsuka, K. Tateyama
SP1-S9 11:40-12:00 Towards a virtual research environment for geoscience: Oystein, Godoy, T. Thorbjornsen, L. Ferrighi, A. Vines, T. Hamre, B. Pfeil
SP1-S10 12:00-12:20 Benefits sharing as a tool for sustainable development of Arctic indigenous communities in Russia: Voxeta Gaway
SP1-S14 12:30-12:40 Local Knowledge and Perception of Permafrost Degradation in Eastern Siberia: Development of Teaching Materials for Environmental Education: Yuchiro Fujisaka, H. Takakura

12:40-13:30 Lunch
13:30 Breakout Session

Hall
G656 Changes in Sea Ice, Oceans and Ecosystems in the Arctic Ocean
Chair: Amame Fujikara
G656-O03 14:00-14:15 Observed and anticipated changes in the seasonal cycle of coastal sea ice and their impacts in the Alaskan Arctic: H. Eckland, O. A. Lee, M. A. J. Anderson, A. R. Maiterey, P. L. Puzof
G656-O05 14:30-14:45 Canada Basin freshwater changes in 2003-2016: A. Chursinskhi, R. Kneefelh, W. Willems, M. L. Timmermans
14:45-15:15 Break
Chair: Yoshiyuki Abe
G656-O06 15:15-15:30 Dissolution of CO2 in the present and glacial ocean: A comparison of the effects of different dissolution parametarizations: P. Perry, C. Wekker, G. Lohmann
G656-O07 15:30-15:45 Enhancing of Biological Pump in the Chukchi Sea Based on Seven Chinese Arctic Summer Cruises since 1999 and Sediment Core Records: J. Chen, H. J. Zhong, H. L. Yu, B. O. Zhu
G656-O08 15:45-16:00 The Composition and Origin of Suspended Particles from Water Column in the Shelves of Chukchi Sea and Northern Bering Sea: X. Yu, L. Ye, L. Liu, J. Lei, Y. Yao, J. Zhu, X. Ji, W. Zheng
G656-O09 16:00-16:15 Inferences on Biological Community Structure of the Distributed Biological Observatory (DBO) from Undersea Video Imagery: T. Cooper, J. Griesemer, A. Bayard, H. Bi
G656-O10 16:15-16:30 Changes in seafloor density relative to water mass around St. Lawrence Island, northern Bering Sea during summer: B. Nishizawa, H. Hasegawa, N. Yamada, H. Utetsu, N. Hirasawa, Y. Watanuki
G656-O11 16:30-16:45 A Step-Wise Progression to Fisheries Ecosystem Science in the Central Arctic Ocean: J. Goddemeier, P. H. Huntington

STSB Arctic Challenge for Ice Observation and Ice Navigation
Chair: Peter Wadhams
STSB-O02 13:45-14:05 The use of AVHRR’s (autonomous underwater vehicles) under sea ice - achievements so far: P. Wadhams, B. Knoph
STSB-O03 14:05-14:25 MAPPING SEA ICE FROM ABOVE AND BELOW: B. Knoph, P. Wadhams
STSB-O04 14:25-14:42 Estimation of sailing speed through ice covered waters on the northern sea route: K. Tateyama, H. Okuda, N. Otsuka
STSB-O05 14:45-15:00 Arctic Marine Accesses and Ice Navigation Seasons: L. H. Brigham
15:00-15:15 Break
Chair: Nastuhiko Otsuka
STSB-O06 15:15-15:33 Development of NIR Transmit Simulator “VESTA-ICE” : S. Uto, T. Matsuoka
STSB-O08 15:51-16:09 Field investigation of sea spray particles impinging on large vessels - Case study of the RV Mirai: T. Oekai, S. Toda, H. Yamaguchi
STSB-O10 16:27-16:45 Arctic research and educational collaboration plan between Japan-Norway: A. Yamakawa, S. Sundan, S. Saltzb, H. Emneto, Y. Kodama, N. Otsuka

Chair: Keichiro HARA
G1 Atmosphere
Chair: Mio Matsueda
G01-O01 13:30-13:45 Sensitivity of the Arctic climate forcing due to atmospheric physical parametrizations: J. H. Yoon
G01-O03 14:00-14:15 Quantification of influence of Arctic sea-ice reduction and natural variability to recent Eurasian cooling: M. Mori, Y. Kosaka, M. Watetane, H. Nakamura, M. Kimoto
G01-O04 14:15-14:30 A comparison of climate impacts of the Arctic sea ice loss based on multiple sea ice concentration datasets: T. Nakamura, K. Yamasaki, K. Hoshi, M. Hondo, J. Urrtle
G01-O05 14:30-14:45 Is the recent downturn of the summer North Atlantic Oscillation (NAO) related to Arctic Sea ice change?: W. H. Underdake, T. Oui, J.-H. Jeong, D. Chen, S.-A. Kim
G01-O06 14:45-15:00 Analysis of cloud formation processes for arctic cyclones in the non-hydrostatic isoscale grid model: T. Kurohama, H. Tanaka
15:00-15:15 Break
Chair: Keichiro HARA
G01-O07 15:15-15:30 Soil CO2 Measurements in Canada’s High Arctic Winter: R. Layden
G01-O08 15:30-15:45 Terrestrial Biogeochemical and Oceanic CO2 Uptake Estimated from Long-term Measurements of Atmospheric CO2 Mole Fraction, d13C and d(O2/N2) at Ny Åalesund, Svalbard: D. Goto, S. Morimoto, S. Ishiyoda, S. Aoki, N. Iwata
G01-O09 15:45-16:00 Relationships between wildfire occurrences and environmental factors over the Siberian region: T. J. Yasunari, K. A. Kim, A. M. da Silva
G01-O12 16:30-16:45 Moistening of the Antarctic upper troposphere observed by balloonborne water vapor measurements: Y. Tomikawa, M. Kofeha, M. Takada, K. Sato
12:35-13:30    Lunch

13:30    Breakout Session
### G7 Geospace

**Chair:** Yasunobu Ogawa

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<tbody>
<tr>
<td>13:50-14:10</td>
<td>Gravity Wave Propagation and Dissipation in the Arctic Region and Connection to Vertical Coupling</td>
<td><em>E. 1ghi</em></td>
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<tr>
<td>14:10-14:25</td>
<td>Impacts of thermospheric gravity wave on the Ionospheric variability in the Arctic region simulated by GAIA</td>
<td><em>Y. Miyahiti, H. Ju, H. Fujisawa, H. Shiraichi</em></td>
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<tr>
<td>14:25-14:45</td>
<td>Coupling Between Tidal and Planetary Wave Modes in the Mesosphere and Lower Thermosphere</td>
<td><em>Y. Eage, N. Sraw, R. Hites</em></td>
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<tr>
<td>14:45-15:00</td>
<td>Millimeter-wave spectrometer for monitoring minor constituents in the middle atmosphere at Tromsø</td>
<td><em>A. Misuno, T. Nakajima, S. Nozawa, T. Nagahama, T. Kawabata, K. Haratani, H. Iwata, K. Suzuki</em></td>
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#### Break: 15:00-15:15

**Chair:** Ryuho Kataoka

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<td>15:15-15:30</td>
<td>Temporal and spatial variations of the ionosphere and plasmasphere during geomagnetic storms as seen in global Total Electron Content (TEC) data</td>
<td><em>M. Tanabumi, Y. Ogawa, S. Nozawa, C. Hall</em></td>
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<td>15:30-15:50</td>
<td>Anomalous ambipolar diffusion observed using meteor radars in the Arctic</td>
<td><em>M. Tsuchimi, Y. Ogawa, S. Nozawa, C. Hall</em></td>
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<td>16:10-16:25</td>
<td>SuperDARN Hokkaido Pair of (HOP) radars: Powerful tools for monitoring the ionosphere and upper atmosphere in the arctic region</td>
<td><em>N. Nishitani</em></td>
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<tr>
<td>16:25-16:45</td>
<td>China-Iceland Joint Aurora Observatory (CIJAO) at Karholl</td>
<td><em>H. Hu, H. Yang, Z. Hu</em></td>
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### G8 Policies and Economy

**Chair:** Shinnichiro Tabata

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<td>International Science, Policy, and Fisheries in the Central Arctic Ocean</td>
<td><em>H. Huntington, F. Ohnishi</em></td>
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<td>14:00-14:10</td>
<td>Arctic security: A cooperative move for building human secure transnational society</td>
<td><em>H. Kamri</em></td>
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<td>14:10-14:15</td>
<td>Bock presentation</td>
<td><em>V. Tynkkynen, S. Tabata, D. Grivensko, M. Goto</em></td>
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#### Break: 15:00-15:15

**Chair:** Peter Schweitzer

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<td>Russian climate policy after the Paris Agreement: Perspectives of the North</td>
<td><em>N. Stepanova, T. Gavrilyeva</em></td>
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<td>15:30-15:45</td>
<td>Economic Development of the Arctic Regions of Russia: Analysis of Regional Budgets</td>
<td><em>S. Takeno</em></td>
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<td>15:45-15:55</td>
<td>Modeling the formation of income and resources of the local population of Sakha (Yakutia)</td>
<td><em>N. Bochinskaya, T. Gavrilyeva</em></td>
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<td>Russian climate policy after the Paris Agreement: Perspectives of the North</td>
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### S15 Technology, Infrastructure and Human Space in the Past and Present of Northern Regions

**Chair:** Naoko Iwasaki/Hiroki Takakura

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<td>High Tech for High North: Bringing remote northern communities closer to the rest of the world through information technology</td>
<td><em>A. Pestereva</em></td>
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<td>13:45-13:55</td>
<td>Fashioning The New Arctic</td>
<td><em>V. Korkina</em></td>
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<td>Innovative Arctic: Geography and Dynamics of Patented Innovation in Alaska</td>
<td><em>A. Petrov, S. Zhelev</em></td>
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<td>GPS tracking of herds in the North: from methodological tool to object of study</td>
<td><em>C. Marchina</em></td>
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#### Discussion: 14:50-15:00

#### Break: 15:00-15:15

**Chair:** Peter Schweitzer

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#### Discussion: 16:35-16:45
Poster session  Draft program as of Nov. 28, 2017

Core Time

January 16

G1  Atmosphere
G2  Ocean and Sea Ice
G5  Terrestrial Ecosystems
G6S6  Changes in Sea Ice, Oceans and Ecosystems in the Arctic Ocean
G9  Social and Cultural Dimensions
S1  Arctic Warming by Natural Variability and/or Human Impact
S7S8  Arctic Challenge for Ice Observation and Ice Navigation
S9  Understanding the Changing Arctic through Data: Stewardship, Publication, and Science

January 17

G3  Rivers, Lakes, Permafrost and Snow Cover
G4  Ice Sheets, Glaciers and Ice Cores
G7  Geospace
G8  Policies and Economy
S2  Synergies for “New Arctic” Climate Prediction, Observation and Modeling
S4  Biogeochemical Cycles and Biodiversity of Terrestrial Ecosystems under Arctic Warming
S5  Synoptic Arctic Survey – An Ocean Research Program for the Future
S14  Synthesizing Local Interactions between Permafrost and Human Societies