

A4: Geospace over and related to the Arctic region

Main Convener: Yasunobu Ogawa

April 27 (Monday), Room 202, 14:00-15:30

Chair: Yasunobu Ogawa

- 14:00-14:20 A04-O01 NEUTRAL DYNAMICS IN THE CANADIAN ARCTIC UPPER ATMOSPHERE
W. E. Ward*, A. Manson, M. Shepherd, Q. Wu, J. Drummond
- 14:20-14:35 A04-O02 THERMOSPHERE-MESOSPHERE-STRATOSPHERE COUPLING DURING STRATOSPHERIC
SUDDEN WARMINGS
Y. Orsolini*, V. Limpasuvan, D. Kinnison
- 14:35-14:55 A04-O03
- 14:55-15:15 A04-O04 LONG-TERM TREND OF THE THERMOSPHERE CAUSED BY ANTHROPOGENIC
INCREASES OF GREENHOUSE GASSES SIMULATED BY THE GAIA
Y. Miyoshi*, H. Jin, H. Fujiwara, H. Shinagawa
- 15:15-15:30 A04-O05 LONG-TERM TRENDS IN IONOSPHERIC PARAMETERS MEASURED BY THE EISCAT
RADARS
L. M. Bjolund*, V. Belyey, U. P. Loevhaug, C. L. Hoz

April 27 (Monday), Room 202, 16:00-17:30

Chair: Craig Heinselman

- 16:00-16:15 A04-O06 THE ROLE OF ENERGETIC PARTICLE PRECIPITATION IN COUPLING BETWEEN
GEOSPACE ENVIRONMENT, ATMOSPHERE AND CLIMATE
E. Turunen*, A. Kero, P. Verronen, A. Seppala, M. Andersson, S.-M. Salmi, C. Rodger, M. Clilverd
- 16:15-16:30 A04-O07 GEOSPACE EXPLORATION PROJECT: ERG
Y. Miyoshi*
- 16:30-16:45 A04-O08 RADIATION DOSE OF AIRCREWS DURING A SOLAR PROTON EVENT WITHOUT GROUND-
LEVEL ENHANCEMENT
R. Kataoka*, Y. Nakagawa, T. Sato
- 16:45-17:00 A04-O09 CORONAL BEHAVIOR BEFORE THE LARGE FLARE ONSET AND ITS IMPACT ON EARTH'S
ENVIRONMENT
S. Imada*
- 17:00-17:15 A04-O10 CME FRONT AND SEVERE SPACE WEATHER
N. Balan*, R. Skoug, S. T. Ram, K. Shiokawa, Y. Otsuka, I. S. Batista, Y. Ebihara, T. Nakamura
- 17:15-17:30 A04-O11 AN EXTENSIVE SURVEY OF THE OPTICAL STRUCTURES OF THE DAYSIDE DIFFUSE
AURORA
D. Han*, X. Chen, Q. Qiu, H. Hu, H. Yang

April 28 (Tuesday), Room 202, 10:45-12:15

Chair: Esa Turunen

- 10:45-11:05 A04-O12 EISCAT_3D, A NEW INCOHERENT SCATTER RADAR FOR GEOSPACE RESEARCH IN THE
NORDIC REGION
C. J. Heinselman*
- 11:05-11:20 A04-O13 NEW HORIZON OF ATMOSPHERIC AND GEOSPACE SCIENCES IN THE ARCTIC WITH EISCAT_3D -
JAPAN'S CONTRIBUTIONS -
H. Miyaoka*, S. Nozawa, Y. Ogawa, S. Oyama, T. Nakamura, R. Fujii
- 11:20-11:35 A04-O14 EISCAT_3D SCIENCE TOPICS RELATED TO THE ARCTIC GEOSPACE
J. Kero*, E. Belova, J. Hedin, A. Pellinen-Wannberg, H. Nilsson
- 11:35-11:55 A04-O15 VARSITI - VARIABILITY OF THE SUN AND ITS TERRESTRIAL IMPACT
J. Shiokawa*, K. Georgieva
- 11:55-12:15 A04-O16 JAPANESE SOUNDING ROCKET EXPERIMENTS IN THE ARCTIC
T. Abe*, Y. Saito, N. Ishii

A1: Understanding the Arctic climate change and its global influences: Japan's contributions and suggestions for the future

Main Convener: Kumiko Takata

April 28 (Tuesday), Room 202, 13:45-15:15

Chair: Takashi Yamanouchi

- 13:45-13:55 INTRODUCTION OF THE SESSION
H. Enomoto
- 13:55-14:15 A01-001 TOWARDS AN ICE-FREE ARCTIC OCEAN IN SUMMERTIME
J. C. Gascard*, M. Rafizadeh
- 14:15-14:30 A01-002 A MODELING STUDY ON THE INFLOW OF THE ATLANTIC WATER AT THE FRAM STRAIT
T. Kawasaki*, H. Hasumi
- 14:30-14:45 A01-003 THE EFFECT OF REMOTE FORCING AND LOCAL FEEDBACK ON THE ARCTIC WARMING UNDER THE ELEVATED ATMOSPHERIC CO₂ CONCENTRATION
M. Yoshimori*, A. Abe-Ouchi
- 14:45-15:00 A01-004 MODULATION OF THE ARCTIC LINKAGES ON ATMOSPHERIC ENERGY TRANSPORT IN NORTHERN HIGH LATITUDES
J. Ukita*, M. Honda, M. Kadono, K. Iwamoto, Y. Ogawa, Y. Tomikawa, T. Nakamura, K. Yamazaki, Y. Miyoshi, Y. Harada, H. Kanzawa
- 15:00-15:15 A01-005 GLACIER DYNAMICS NEAR THE CALVING FRONT OF BOWDOIN GLACIER, NORTHWESTERN GREENLAND
S. Sugiyama*, S. Tsutaki, D. Sakakibara, J. Saito, M. Maruyama, N. Katayama, T. Sawagaki, M. Funk, A. Bauder

April 28 (Tuesday), Room 202, 15:45-17:15

Chair: Kumiko Takata

- 15:45-16:00 A01-006 A BIOLOGICAL CONTRIBUTION TO PARTIAL PRESSURE OF CO₂ IN THE WESTERN ARCTIC OCEAN AND BERING SEA
R. Futsuki, T. Hirawake*, A. Fujiwara, T. Kikuchi, S. Nishino, D. Sasano, M. Ishii, H. Uchida, S. Saitoh
- 16:00-16:15 A01-007 CONTINUOUS MEASUREMENTS OF THE ATMOSPHERIC O₂/N₂ RATIO AT NY-ÅLESUND, SVALBARD
D. Goto*, S. Morimoto, S. Aoki, T. Nakazawa, P. K. Patra
- 16:15-16:30 A01-008 SPATIAL AND TEMPORAL PATTERNS ON TREE-RING DELTA-13C AND TREE GROWTH OVER THE PAST 100 YEARS IN CIRCUM-ARCTIC ECOSYSTEMS
S. Tei*, A. Sugimoto, M. Liang, Y. Matsuura, A. Osawa, H. Yonenobu, T. C. Maximov
- 16:30-16:45 A01-009 IMPACTS OF FUTURE CLIMATE CHANGE ON ARCTIC TERRESTRIAL ECOSYSTEMS: AN ANALYSIS BASED ON ISI-MIP
A. Ito*, H. Noda, K. Nishina
- 16:45-17:00 A01-010 DETECTION OF TRENDS IN CO₂ VERTICAL PROFILES DUE TO BIOSPHERIC AND ANTHROPOGENIC FLUX CHANGE
P. K. Patra*, T. Machida, S. Aoki, T. Saeki, T. Nakazawa
- 17:00-17:15 A01-011 EFFECTS OF BLACK CARBON ON THE CLIMATE OF THE ARCTIC - CURRENT STUDIES AND FUTURE PLANNING -
Y. Kondo*, M. Koike, J. Ukita

B3: Changing permafrost and its impact on the physical, ecological, economic and cultural Earth system

Main Convener: Ylva Sjöberg

April 29 (Wednesday), Room 202, 11:00-12:15

Chair: Ylva Sjöberg

- 11:00-11:15 B03-001 THE LIMIT OF PASTORAL ADAPTATION TO PERMAFROST REGION UNDER GLOBAL WARMING: THE SAKHA PEOPLE IN THE MIDDLE BASIN OF LENA RIVER
H. Takakura*
- 11:15-11:30 B03-002 TOWARDS SYSTEMATIC APPROACHES FOR INTERDISCIPLINARY GLOBAL CHANGE

- RESEARCH: THE ALAAS PERMAFROST SOCIO-ECOLOGICAL SYSTEM AS CASE IN POINT
S. Crate*
- 11:30-11:45 B03-O03 CLIMATE-INDUCED CHANGES IN STABILITY OF RUSSIAN URBAN INFRASTRUCTURE BUILT ON PERMAFROST
N. Shiklomanov*, D. Streletskiy
- 11:45-12:15 PANEL: WORKING ACROSS DISCIPLINARY BORDERS
S. Crate, H. Takakura, J. O. Habeck

April 29 (Wednesday), Room 202, 13:45-15:15

Chair: Hiroki Takakura

- 13:45-14:00 B03-O05 INITIAL CONCEPTUALIZATION AND APPLICATION OF ARCTIC TUNDRA LANDSCAPE EVOLUTION USING THE ALASKA THERMOKARST MODEL
W. R. Bolton, V. Romanovsky, A. D. McGuire, M. Lara, L. Hinzman*
- 14:00-14:15 B03-O06 PERMAFROST RESEARCH PRIORITIES: A ROADMAP FOR THE FUTURE OF PERMAFROST RESEARCH
H. Lantuit*, M. Allard, M. Guglielmin, M. Johansson, G. Kraev, M. Krautblatter, G. Krinner, E. A. G. Schuur, Y. Sjoeborg, J. Baeseman, K. Schollaen
- 14:15-14:30 B03-O07 THE INTERNATIONAL PERMAFROST ASSOCIATION: CURRENT INITIATIVES FOR CRYOSPHERIC RESEARCH
K. Schollaen, A. Lewkowicz, H. Christiansen, V. Romanovsky, H. Lantuit*, L. Schrott, D. Sergeev, M. Wei
- 14:30-14:45 B03-O08 METADATA STATISTICS OF THE NEW GLOBAL TERRESTRIAL NETWORK FOR PERMAFROST DATABASE
B. K. Biskaborn*, J.-P. F. Lanckman, H. Lantuit, H. Johansson, V. Romanovsky
- 14:45-15:15 PANEL: FUTURE CHALLENGES FOR THE PERMAFROST RESEARCH COMMUNITY
H. Lantuit, M. Ishikawa, M. Johansson

April 29 (Wednesday), Room 202, 15:45-17:15

Chair: Mamoru Ishikawa

- 15:45-16:00 B03-O09 LANDSLIDE ACTIVITY PEAK OF THE LATE 1980'S IN CENTRAL YAMAL PENINSULA, RUSSIA, OBSERVED FROM TIME SERIES SATELLITE IMAGERY
T. Kumpula, T. Mikhaylova, M. Verdonen, B. Forbes*
- 16:00-16:15 B03-O10 TEMPERATURE, SNOW, PERMAFROST: HETEROGENEITY OF CHANGE IN SHRUB GROWTH ON THE ARCTIC TUNDRA
M. Hallinger*, K. Tape, M. Wilmking
- 16:15-16:30 B03-O11 THERMOKARST LAKE SEDIMENT AS INDICATOR OF CLIMATE VARIATIONS: PRECISE ENVIRONMENTAL ARCHIVE OR WISHFUL THINKING?
M. Fritz*, J. Lenz, K. Gajewski, P. Frenzel, I. Unkel, H. Lantuit
- 16:30-16:45 B03-O12 DETECTION OF MICROORGANISMS IN ANCIENT ICE WEDGES IN THE CENTRAL YAKUTIA (RUSSIA)
K. Elina*, B. Anatoly, C. Maria, F. Svetlana, S. Natalia, G. Valerij
- 16:45-17:00 B03-O13 MODERN TALIK FORMATION ON IV TERRACE OF THE LENA RIVER, CENTRAL YAKUTIA
L. Gagarin*
- 17:00-17:15 B03-O14 PERMAFROST CARBON DEGRADATION AT THE LAND-OCEAN-INTERFACE
G. Tanski*, M. Fritz, H. Lantuit

B8: From human security to geopolitical dynamics in the Global Arctic: the global implications of rapid environmental, economic, and societal change

Main Convener: Lassi Heininen

April 30 (Thursday), Room 202, 10:45-12:15

Chair: Gunhild Hoogensen Gjörv, Lassi Heininen, Aki Tonami

- B08-O01 THE IMPACT OF CLIMATE CHANGE ON ABORIGINAL SUBSISTENCE WHALING IN NORTHWEST ALASKA: INUPIAT WHALERS, BOWHEAD WHALES AND OIL/GAS DEVELOPMENT
N. Kishigami*

- B08-O02 HUMAN SECURITY AS ARCTIC GEOGRAPHIES OF PROVISIONING
A. Mason*
- B08-O03 THE PROJECT "RED CHUM" AS A FORM OF INTERACTION BETWEEN THE INDIGENOUS
PEOPLES OF THE ARCTIC AND THE OIL COMPANIES
N. S. Bobyreva*, G. N. Degteva
- B08-O04 EXTRACTIVE RESOURCES AND SUSTAINABLE DEVELOPMENT IN THE ARCTIC:
RESEARCH PRIORITIES FOR THE NEXT DECADE
C. Southcott*
- OPEN DISCUSSION

April 30 (Thursday), Room 202, 13:45-15:15

Chair: Gunhild Hoogensen Gjörv, Lassi Heininen, Aki Tonami

- B08-O05 NORTHERN TRADE ROUTE
S. Bensassi*, I. M. Zarzoso, J. Stroeve
- B08-O06 THE ARCTIC NARRATIVE IN THE ICELANDIC MEDIA: DO ECONOMIC INTERESTS TRUMP
ENVIRONMENTAL CONCERNS?
K. Schram*, J. G. Olafsson
- B08-O07 MECHANISMS FOR COPING WITH ADVERSE STATES AND THE PERSONALITY CHANGES OF
WORKERS IN A CHANGING ARCTIC CLIMATE
Y. Korneeva*, N. Simonova
- B08-O08 UNDERSTANDING RAPID ENVIRONMENTAL, ECONOMIC, AND SOCIETAL CHANGE:
ADAPTATION ACTIONS FOR A CHANGING ARCTIC – BERING CHUKCHI BEAUFORT
REGION
L. D. Hinzman*, J. L. Fuglestad, A. Klepikov, J. M. Kuperberg, G. Peters, P. Outridge, G. Stern
- OPEN DISCUSSION