

9:00	【OPENING ADDRESS】 Satoshi Ono (Chair, Symposium Committee) Chair, Seiji Katakura (City of Mombetsu)
9:20	【K: KEYNOTE ADDRESS】 K-1 Ice in polar regions and sea ice in Okhotsk Sea - Looking back on 30 years of the symposium - Shuhei Takahashi (Okhotsk Sea Ice Museum of Hokkaido)
9:50	BREAK
10:00	【A: MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS】 Chair, Hiroshi Sasaki (Ishinomaki Senshu Univ.) K: KEYNOTE ADDRESS K-2 Contribution of Mombetsu Symposium to the international study on marine biological research in the high latitudes Satoru Taguchi (Soka Univ.)
10:20	A-1 Early ocean life of Masu salmon in Nemuro Bay, eastern Hokkaido, northern Japan ◇Kiyoshi Kasugai, Mitsuru Torao and Mitsuhiro Nagata (Salmon & Freshwater Fish. Res. Inst.)
10:40	A-2 Adult pink salmon returning rates from hatcheries in the Nemuro Strait region, eastern Hokkaido, Japan Mitsuru Torao (Salmon & Freshwater Fish. Res. Inst.)
11:00	A-3 Migration and homing behavior of chum salmon tagged in the Okhotsk Sea, eastern Hokkaido ◇Yasuyuki Miyakoshi, Tomoya Aoyama (Salmon & Freshwater Fish. Res. Inst.) Akira Shinohara and Kazushi Miyashita (Hokkaido Univ.)
11:20	A-4 Salmon-specific foraging of raptors and their role of nutrient vectors in Okhotsk area ◇Kei Matsumoto, Keisuke Nakayama (Kitami Inst. Tech.), Shuhei Takahashi (Okhotsk Sea Ice Museum of Hokkaido), Shigeru Hisamatsu (Kitami Inst. Tech.), Kenta Watanabe and Tomohiro Kuwae (Port & Airport Res. Inst.)
12:00	LUNCH
13:30 15:30	【PUBLIC PROGRAM: SYMPOSIUM ON LIFE AND CULTURE OF THE PEOPLE RELATED TO SEA ICE】 (in Japanese language only) A study of Ainu clothes, from weaver's experience and view point Nobuko Tsuda (Hokkaido Ainu Center)
18:30	WHITE CONCERT < OKHOTSK SEA ICE MUSEUM >

10:00	【W: WORKSHOP, OIL POLLUTION】 Strategies and control measures for the oil pollution accident Mapping technique for hazard map development Exhibited by: Naigai Map Production Inc.	<i>(in Japanese language only)</i>
12:00	LUNCH	
	【S: SPECIAL SESSION, PROGRESS OF RESEARCH ON THE ARCTIC SEA ROUTES】 Chair, Hajime Yamaguchi (Univ. Tokyo)	
13:00	Introduction , Hajime Yamaguchi (Univ. Tokyo)	
13:05	S-1 Study of mesoscale ocean eddies and its interaction with sea ice in the marginal ice zone using high-resolution ice-ocean coupled model ◇Liyanarachchi Waruna Arampath De Silva (Univ. Tokyo/ NIPR) and Hajime Yamaguchi (Univ. Tokyo)	
13:20	S-2 Medium-range prediction of the Arctic sea ice area by considering processes controlling the ice-thickness change ◇Noriaki Kimura (NIPR/Univ. Tokyo), Toshihiko Mori (Univ. Tokyo), Kazutaka Tateyama (Kitami Inst. Tech.) and Hajime Yamaguchi (Univ. Tokyo)	
13:35	S-3 Development of a method for medium-term prediction of the Arctic sea ice thickness ☆A ◇Toshihiko Mori (Univ. Tokyo), Noriaki Kimura (NIPR/Univ. Tokyo) and Hajime Yamaguchi (Univ. Tokyo)	
13:50	S-4 Validation the sea ice thickness estimated from the satellite passive microwave radiometer by comparing with the in-situ thickness Kazutaka Tateyama, ◇Yasuhiro Tanaka (Kitami Inst. Tech.), Noriaki Kimura (NIPR/Univ. Tokyo) and Jun Ono (JAMSTEC)	
14:05	S-5 Arctic sea route path planning based on the sea ice edge prediction ◇Toshiyuki Takagi (Ntl. Inst. Tech. Kushiro College), Kazutaka Tateyama (Kitami Inst. Tech.) and Jun Ono (JAMSTEC)	
14:20	S-6 Field observation and meteorological analysis of sea spray ice accretion growing on a light beacon ◇Toshihiro Ozeki (Hokkaido Univ. Education) and Satoru Adachi (Ntl. Res. Inst. Earth Sci. Disaster Prevention)	
14:35	S-7 Analysis of sea spray characteristics in large vessels -Case study of the icebreaker Shirase ☆A ◇Toshinari Shiga (Univ. Tokyo), Toshihiro Ozeki (Hokkaido Univ. Education) Junji Sawamura (Osaka Univ.) and Hajime Yamaguchi (Univ. Tokyo)	
14:50	BREAK	
		Chair, Natsuhiko Otsuka (North Japan Port Consultant Ltd.)
15:00	S-8 On a numerical model for 2D numerical simulation of ship-ice interaction for an icebreaker advancing in ice-covered water ◇Junji Sawamura (Osaka Univ.) and Egil Pedersen (UiT the Arctic Univ., Norway)	
15:15	S-9 Estimation of head-on impact load on the large icebreaking vessels in level ice ◇Kyungsik Choi, Eun-Jee Cheon (Korea Maritime & Ocean Univ., Korea), Seong-Yeob Jeong (Korea Res. Inst. Ship & Ocean Engineering, Korea) and Hyun-Soo Kim (Inha Tech. College, Korea)	
15:30	S-10 Shipping cost analysis of northern sea route; LNG and Naphtha ◇Natsuhiko Otsuka (North Japan Port Consultant Ltd.), Keisuke Nagakawa, Ryo Ito Kohei Iwasaki, Yuko Nakashio, Kenji Araoka, Takuya Odagiri and Kota Saito (Univ. Tokyo)	
15:45	S-11 Shipping cost analysis of northern sea route; iron ore and PCC ◇Keisuke Nagakawa (Univ. Tokyo), Natsuhiko Otsuka (North Japan Port Consultant Ltd.) Shun Sato, Takashi Yamaguchi, Keisuke Miyata, Tatsuya Tsuzuki, Tomoya Nakamura and Tomoki Fukuuma (Univ. Tokyo)	
16:00	S-12 An analysis of vessel movements on NSR by satellite AIS ◇Motohisa Abe, Tsuyoshi Tanimoto and Shingo Kinoshita (Ntl. Inst. Land & Infrastructure Mgt.)	
16:15	S-13 Study on navigability and ice condition of the northern sea route from the 2014 sailing record Natsuhiko Otsuka (North Japan Port Consultant Ltd.), ◇Hiroshi Morishita, Kazutaka Tateyama (Kitami Inst. Tech.) and Koh Izumiyama (North Japan Port Consultant Ltd.)	
16:30	S-14 The outlook for Arctic shipping and ice-class vessels - Form the view of Japanese shipping company - Hiroyuki Goda (NYK Line)	
16:45	S-15 Human errors and environmental physiology of seafarers ◇Hiromitsu Kitagawa and Eiji Sakai (Ocean Policy Res. Foundation)	
18:30	WHITE CONCERT < OKHOTSK SEA ICE MUSEUM >	

[A: MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS]	
	Chair, Katsumi Yokouchi (Hokkaido Ntl. Fish. Res. Inst.)
9:00	A-5 Photoprotective acclimation in ice algal community in Saroma-Ko Lagoon, Hokkaido ☆A ◇Tomoyo Katayama, Kayoko Takimoto, Shozo Motokawa, Yasuhiro Masuda, Mitsuko Obata and Satoru Taguchi (Soka Univ.)
9:20	A-6 Distribution of the phytoplankton community in the southwestern Okhotsk Sea during the summer ☆A ◇Yukiko Taniuchi, Tsuyoshi Watanabe (Tohoku Ntl. Fish. Res. Inst.), Hiromi Kasai (Hokkaido Ntl. Fish. Res. Inst.) and Akira Kuwata (Tohoku Ntl. Fish. Res. Inst.)
9:40	A-7 Seasonal and interannual variability of phytoplankton in the marginal sea ice zone of the Southern Ocean ☆A ◇Takahiro Iida (NIPR/SOKENDAI), Sanae Morimoto and Satoru Taguchi (Soka Univ.)
10:00	A-8 Influences of temporal change of sea-ice distribution on oceanographic environments in the coastal region around Mombetsu, the southwestern Okhotsk Sea ◇Hiromi Kasai (Hokkaido Ntl. Fish. Res. Inst.), Kazutaka Tateyama (Kitami Inst. Tech.) Seiji Katakura (City of Mombetsu), Ryuichi Nagata (Okhotsk Garinko & Tower Co., Ltd.) and Soshi Hamaoka (City of Mombetsu)
10:20	BREAK
	Chair, Hajime Matsubara (Tokyo Univ. Agriculture) and Seiji Katakura (City of Mombetsu)
10:30	A-9 Plankton metagenomics in Okhotsk Sea ◇Satoshi Nagai (Ntl. Res. Inst. Fish. Sci.), Shingo Urushizaki (AXIOHELIX Co. Ltd.) Motoshige Yasuike, Yoji Nakamura, Atushi Fujiwara, Yoshihito Takano, Akifumi S. Tanabe Yuki Hongo (Ntl. Res. Inst. Fish. Sci.) and Seiji Katakura (City of Mombetsu)
10:50	A-10 Occurrence and abundance Japanese scallop larvae in water around Okhotsk Tower in 2011-2014 ◇Seiji Katakura, Soshi Hamaoka (City of Mombetsu), Toru Miyagawa (Abashiri-Seibu Fish. Technical Guidance Office), Takuma Kawasaki and Yohei Shimizu (Hokkaido Res. Organization Mariculture Fish. Res. Inst.)
11:10	A-11 Reproductive cycle of Japanese crayfish in Okhotsk freshwater area ◇Hajime Matsubara, Aya Takada, Yuki Kubara, Yoshifumi Horie, Takuto Imai (Tokyo Univ. Agriculture) and Kazuyoshi Nakata (Okayama Univ.)
11:30	A-12 Salmon fishery diversity of the North Pacific Ocean - Introduction of Pacific Salmon, fisheries sustainability overview 2014 - Ikutaro Shimizu (Hokkaido Ntl. Fish. Res. Inst.)
12:00	LUNCH
	◆Reports of Okhotsk Tokkari Center <i>(in Japanese language only)</i> Chair, Yoshitsugu Hirosaki (Okhotsk Tokkari Center)
13:30	A-13 Training seals to tame them for their transportation by car and airplane ◇Naho Furukawa, Miyu Takahashi and Yoshitsugu Hirosaki (Okhotsk Tokkari Center)
13:50	A-14 The cessation of juvenile seals' play behavior ◇Megumi Imai and Yoshitsugu Hirosaki (Okhotsk Tokkari Center)
14:10	A-15 Changes in the health condition of a seal that took in foreign bodies and problems on its captive environment ◇Masako Okazaki and Yoshitsugu Hirosaki (Okhotsk Tokkari Center)
14:30	BREAK
18:30	DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>

	【B: ENVIRONMENTAL CHANGE IN THE POLAR REGIONS】 Chair, Noriaki Kimura (NIPR/Univ. Tokyo)
9:00	B-1 Recent activities and selected outcomes of the GRENE Arctic climate change research project ◇Takashi Yamanouchi, Hiroyuki Enomoto and Yoshiyuki Fujii (NIPR/SOKENDAI)
9:20	B-2 Comparisons of Arctic decrease and Antarctic increase in sea ice Hiroyuki Enomoto (NIPR/SOKENDAI) and ◇Hironori Yabuki (NIPR/JAMSTEC)
9:40	B-3 A mechanism of ice-band pattern formation due to resonant interaction between sea ice and internal waves ☆A ◇Ryu Saiki, Humio Mitsudera (Hokkaido Univ.), Ayumi Manome (Univ. Michigan, USA) Takenobu Toyota (Hokkaido Univ.), Noriaki Kimura (Univ. Tokyo), Jinro Ukita (Niigata Univ.) and Tomohiro Nakamura (Hokkaido Univ.)
10:00	B-4 Parametric study of assimilating sea ice concentration in a coupled ice-ocean model using nudging ☆A ◇Dulini Yasara Mudunkotuwa (Univ. Tokyo), Liyanarachchi Waruna Arampath De Silva (Univ. Tokyo/NIPR) and Hajime Yamaguchi (Univ. Tokyo)
10:20	B-5 Comparison between sea ice heights measured by aerial photography and X-band Doppler radar Yasushi Fujiyoshi (Hokkaido Univ.)
10:40	BREAK
	Chair, Koh Izumiyama (North Japan Port Consultant Ltd.)
10:50	B-6 Sea ice thickness observation using GNSS-R ☆A ◇Yuki Yamagishi (Tokyo Univ.), Takuji Ebinuma (Tokyo Univ. Mar. Sci. Tech.) Yoshinori Mikawa (Axelspace Co.) and Masataka Fujimoto (Tokyo Univ.)
11:10	B-7 Estimation of melt pond fraction on Arctic sea ice using satellite microwave data ☆A ◇Yasuhiro Tanaka, Kazutaka Tateyama, Takao Kameda (Kitami Inst. Tech.) and Hiroyuki Enomoto (NIPR)
11:30	B-8 Adaptive spectrallipsometric identifier for the diagnosis of aquatic systems ◇Ferdinant A. Mkrtychyan, V. F. Krapivin and V. V. Klimov (Inst. Radioengineering & Electronics, Russia)
12:00	LUNCH
13:30	B-9 Remote monitoring systems for detecting and classifying phenomena on the sea surface Ferdinant A. Mkrtychyan (Inst. Radioengineering & Electronics, Russia)
13:50	B-10 Methane flux from lakes in the Alaskan Arctic zone ◇Masafumi Sasaki (Kitami Inst. Tech.), Masao Uchida (Ntl. Inst. Environmental Studies) Motoo Utsumi (Univ. Tsukuba), Miyuki Kondo (Ntl. Inst. Environmental Studies) Yong-Won Kim (Univ. Alaska, USA) and Noboru Endoh (Kitami Inst. Tech.)
14:10	BREAK
	【C: ENVIRONMENTAL CHANGE IN THE SUB-POLAR REGIONS】 Chair, Kyungsik Choi (Korea Maritime & Ocean Univ., Korea)
14:20	C-1 Formation mechanism of the quasi-stationary jets in the North Pacific Transitional Domain ◇Humio Mitsudera (Hokkaido Univ.), Toru Miyama (JAMSTEC), Hajime Nisigaki (Oita Univ.) Taku Wagawa (Tohoku Ntl. Fish. Res. Inst.) and Shin-ichi Itoh (Univ. Tokyo)
14:40	C-2 Currents structures of the coastal Oyashio in the continental shelf off the Doto area, Japan ◇Akira Kusaka, Yugo Shimizu, Takashi Setou (Ntl. Res. Inst. Fish. Sci.), Toru Sato (Kushiro Fish. Res. Inst.) and Jiro Yoshida (Tokyo Univ. Mar. Sci. Tech.)
15:00	C-3 The relationship between sea ice and small low pressure in Sea of Japan which causes heavy snowfall on the west coast of Hokkaido Mitsuharu Nishimura (Kushiro Local Meteorological Office)
15:20	C-4 Drift ice detection by HF ocean radar off Mombetsu ☆A ◇Wei Zhang, Naoto Ebuchi (Hokkaido Univ.), Brian Emery (Univ. California, USA) and Hiroto Abe (Hokkaido Univ.)
Poster	C-5 On the modern climate shift in the regime of iciness of the Sea of Okhotsk and the Sea of Japan Vladimir Pishchalnik, Igor Minervin, Valery Romanyuk and Alevtina Batukhtina (Sakhalin State Univ., Russia)
15:40	BREAK
16:00	【PUBLIC PROGRAM: HOW DO WE ACT AT HEAVY SNOWSTORM IN OKHOTSK AREA?
	- BY INDIVIDUAL, MUTUAL AND PUBLIC WAYS -] <i>(in Japanese language only)</i>
17:00	I Driving judgment and refuge action in snowstorm Yasuaki Matsuda (Civil Engineering Research Institute for Cold Region)
	II Countermeasures and preparations in a car stacked in snowstorm Masahiro Nemoto (The Japanese Red Cross Hokkaido College of Nursing)
18:30	DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>

13:00 **【 P: POSTER SESSION】**

Place: 3F Lobby

- 13:30 | **P- I** Introduction of National Maritime Research Institute
Exhibited by National Maritime Research Institute
- P- II** Development of accurate ice observation technologies and ice database for oil & gas development in Arctic region
Exhibited by National Maritime Research Institute
- P-2** Demersal fish stocks observed by underwater robot on the deep-sea fishing ground in the southwestern Okhotsk Sea
Tomonori Hamatsu, ◇Hiromi Kasai (Hokkaido Ntl. Fish. Res. Inst.), Yuya Nishida Kenji Nagahashi, Shogo Inaba (Univ. Tokyo), Michio Kumagai (Ritsumeikan Univ.) Akinao Hamada (Oki-Seatec Inc.), Shota Chikushi and Tamaki Ura (Kyushu Inst. Tech.)
- P-5** Development of the vessel navigation support system for sea ice area
◇Takeshi Terui, Takeshi Sugimura, Daisuke Simizu (NIPR)
Takeshi Tamura (NIPR/SOKENDAI) and Hironori Yabuki (NIPR/JAMSTEC)

【 DEMONSTRATION】

Place: 3F Lobby

Polar data products by Arctic Data Archive System (ADS)
Exhibited by National Institute of Polar Research

【 DISPLAY AND DEMONSTRATION OF INSTRUMENTS FOR MARINE RESEARCH】

Display and demonstration of instruments for marine research
Exhibited by MATSUI Corporation

13:30 **【 OPEN SEMINAR:DISASTERS IN COLD AREA, MONODUKURI AND KOTODUKKURI】***(in English and Japanese language)* Place: 3F Seal

What do we need and what should we do to face disasters?
Let's think about it together.

- Section 1 : Case Study
- Section 2 : Brainstorming
- Section 3 : Poster Presentation

【D:GLACIOLOGY AND HUMAN LIFE】 Chair, Shuhei Takahashi (Okhotsk Sea Ice Museum)

- 9:00 **D-1** Projecting crop yield in northern high latitude area
Kanichiro Matsumura (Tokyo Univ. Agriculture)
- 9:20 **D-2** The verification study of snow stooped roofing practice method for sloped roof in Hokkaido Japan
Kiyoko Kamada (Hokkaido Bunkyo Univ.)
- 9:40 **D-3** Development of discrimination method of snow layers by use of infrared image
◇Tatsuo Shirakawa, Miki Ogura (Kitami Inst. Tech.) and Shuhei Takahashi (Okhotsk Sea Ice Museum)
- 10:00 **D-4** Applying engineering skills to disasters in cold regions - International workshop programs for students -
◇Kazutaka Yokota and Kei Horio (Utsunomiya Univ.)
- 10:20 **D-5** Snowstorm countermeasures for highways in Hokkaido: - Snowbreak forest in Okhotsk area -
◇Toshikazu Sawamatsu, Hiroki Yuasa (Abashiri Develop. Construction Dept.), Hideki Honda (Koken Engineering Co., Ltd.), Yoshinori Kawashima (Docon Co., Ltd.), Masaru Matsuzawa (Civil Engineering Res. Inst. Cold Region) and Shuhei Takahashi (Okhotsk Sea Ice Museum)
- 10:40 **D-6** Characteristics of pressure distributions at times of heavy snowfall and snowstorms, and their regional occurrence in Hokkaido
◇Masaru Matsuzawa, Yusuke Harada, Masayo Ueda (Civil Engineering Res. Inst. Cold Region) and Hiroki Matsushita (Snow Avalanche Landslide Res. Center)

11:00 **【CLOSING SESSION】** Chair, Seiji Katakura (City of Mombetsu)

A Review of the Symposium:

Prize-awarding Ceremony of the Aota Masaaki Award:

11:30 Closing Remarks: Satoshi Ono (Chair, Symposium Committee)

12:00 LUNCH

14:00 **【PUBLIC PROGRAM:SYMPOSIUM ON THE FOREST-OCEAN LINKAGE】**

16:00 | *(in Japanese language only)*

[P: POSTER SESSION]

- P-1** Sediment upward dispersion and frazil ice formation by strong windy events in the Sea of Okhotsk observed with ADCP - A possible mechanism of iron supply to sea ice -
Masato Ito, Kay I. Ohshia, Jun Nishioka (Hokkaido Univ.), Yoshimu Kusumoto (Hydro Systems Develop. Inc.), Genta Mizuta and Yasushi Fukamachi (Hokkaido Univ.)
- P-2** Demersal fish stocks observed by underwater robot on the deep-sea fishing ground in the southwestern Okhotsk Sea
Tomonori Hamatsu, Hiromi Kasai (Hokkaido Ntl. Fish. Res. Inst.), Yuya Nishida, Kenji Nagahashi Shogo Inaba (Univ. Tokyo), Michio Kumagai (Ritsumeikan Univ.), Akinao Hamada (Oki-Seatec Inc.), Shota Chikushi and Tamaki Ura (Kyushu Inst. Tech.)
- P-3** Distribution patterns of micro- and meso- zooplankton communities in the seasonal ice zone of the Antarctic Ocean in austral summer of 2009
Kunio T. Takahashi (NIPR/SOKENDAI), Motoha Ojima (SOKENDAI), Atsushi Tanimura and Mitsuo Fukuchi (NIPR/SOKENDAI)
- P-4** Distribution pattern of micro- and meso-zooplankton in the seasonal ice zone of the East Antarctica, during 1983-1995
Motoha Ojima (SOKENDAI), Kunio T. Takahashi, Atsushi Tanimura, Tsuneo Odate (NIPR/SOKENDAI) and Mitsuo Fukuchi (NIPR/SOKENDAI/Hokkaido Univ.)
- P-5** Development of the vessel navigation support system for sea ice area
Takeshi Terui, Takeshi Sugimura, Daisuke Simizu (NIPR), Takeshi Tamura (NIPR/SOKENDAI) and Hironori Yabuki (NIPR/JAMSTEC)
- P-6** Remote sensing monitoring of the atmosphere-ocean system as generator of tropical cyclones
Vladimir Yu. Soldatov (Kotelnikov's Inst. Radioengineering & Electronics, Russia)
- P-7** Detection of snow and ice thickness from temperature profiles of unmanned ice mass balance buoys
Bin Cheng (Finnish Meteorological Inst., Finland), Jiechen Zhao (Ntl. Mar. Environmental Forecasting Center, China) and Timo Vihma (Finnish Meteorological Inst., Finland)
- P-8** Assessment of Arctic sea ice cover
A. N. Chetyrbotsky and V. A. Chetyrbotsky (Moscow State Univ., Russia)
- P-9** Application of the method of determining dynamic hardness and specific energy of mechanical destruction of ice to assessment its strength
Vladimir G. Tsuprik and Victor G. Zanegin (Far Eastern Federal Univ., Russia)
- P-10** Influence of ice mechanical properties on ice-structure interaction failure
Vladimir G. Tsuprik, Victor G. Zanegin and Lev V. Kim (Far Eastern Federal Univ., Russia)
- P-11** The Okhotsk Sea biocomplexity model
Vladimir F. Krapivin (Kotelnikov's Inst. Radioengineering & Electronics, Russia)
- P-12** Peculiarities of spatial distribution of Alaska Pollock' and Bering flounder's eggs off eastern Sakhalin in 2012 and 2014 years
Ilyas N. Moukhametov and Valeryi N. Chastikov (SakhNIRO, Russia)
- P-13** Species composition and biomass of benthic and demersal fish in the Russian economic zone of the Bering Sea on research in the 2005-2012
Gennady M. Gavrilov and Igor I. Glebov (TINRO-Centre, Russia)
- P-14** The habitat area of *Lycodes soldatovi* (*Perciformes: Zoarcidae*)
Oleg Z. Badaev and Aleksnder. L. Figurkin (TINRO-Centre, Russia)
- P-15** New data concerning the state of ichthyoplankton community in Aniva Bay
Olga N. Moukhametova (SakhNIRO, Russia)
- P-16** Complex information system for maintenance of marine activities and research in the far eastern region of Russia
Natalia Rudykh, Igor Rostov and Vladimir Rostov (V.I. Il'ichev Pacific Oceanological Inst., Russia)
- P-17** Character of ice formation in extreme types of winters in the Seas of Okhotsk and the Sea of Japan
Alevtina Batukhtina, Yevgeniya Kolesova and Valery Romanyuk (Sakhalin State Univ., Russia)
- P-18** Recovery ice cover Okhotsk and Sea of Japan for the period from 1929 to 2014
Valery Romanyuk and Anna Kozeka (Sakhalin State Univ., Russia)
- P- I** Introduction of National Maritime Research Institute
Exhibited by National Maritime Research Institute
- P- II** Development of accurate ice observation technologies and ice database for oil & gas development in Arctic region
Exhibited by National Maritime Research Institute

