

CONTRACT

between

FAR EASTERN REGIONAL HYDROMETEOROLOGICAL RESEARCH INSTITUTE

and

**RESEARCH INSTITUTE FOR HUMANITY AND NATURE
INTER-UNIVERSITY RESEARCH INSTITUTE CORPORATION
NATIONAL INSTITUTES FOR HUMANITIES**

on

"Research Expedition in the Sea of Okhotsk for 2006"

CONTRACT

between

Far Eastern Regional Hydrometeorological Research Institute

and

Research Institute for Humanity and Nature

Inter-University Research Institute Corporation

National Institutes for Humanities

on

"Research Expedition in the Sea of Okhotsk for 2006"

The Amur-Okhotsk Project of Research Institute for Humanity and Nature (RIHN) hereinafter to be called CUSTOMER in the person of Prof. Yoneo Ishii, Director, Inter-University Research Institute Corporation, National Institute for Humanities, on one side, and the Far Eastern Regional Hydrometeorological Research Institute (FERHRI) hereinafter to be called EXECUTOR in the person of Dr. Yu. N. Volkov, Director of FERHRI, on the other side, concluded the present contract for the following.

1. Research Expedition

The Research Expedition shall be carried out on board the R/V "Professor Khromov" (the *Vessel*). The purpose shall be to quantitatively clarify the physical, chemical and biological processes which occur in the Sea of Okhotsk. The date of the Vessel's departure from Vladivostok shall be 5 August 2006 subject to postponement in accordance with clauses 5.1 or 8.1. The detailed schedule of the cruise is set forth in Annex 1.

2. Subject of the Contract

2.1 The CUSTOMER is to be charged with and the EXECUTOR is to be taken the responsibility for the execution of the research project entitled "Research Expedition in the Sea of Okhotsk for 2006"

2.2 During the term of this Contract, the EXECUTOR shall:

- (a) provide the Vessel in seaworthy condition to conduct the cruise in accordance with the research program specified in Annex 1;
- (b) provide without delay all equipment and materials necessary to facilitate the smooth conduct of the Research Expedition;
- (c) provide the crew, the researchers and the technical staff necessary for the Research Expedition;
- (d) prepare and make available for use by the participants the equipment and laboratories necessary for conducting observations, data processing, sample treatments and chemical analyses and provide cabins for accommodating the participants during the cruise;
- (e) apply and obtain the necessary approvals required by Russian authorities for the cruise prior to the Vessel's departure from the port of Vladivostok;
- (f) prepare and send the documents required for the Vessel's call(s) at port in Japan (such documents shall be received by the CUSTOMER no later than 5 days before the Vessel's relevant arrival);
- (g) conduct the operation of all the Vessel's gears, winches and other equipments required to conduct the Research Expedition;
- (h) carry out standard and special observations under the cruise program specified in Annex 1;

- (i) ensure the security and personal safety of all participants aboard the Vessel during the cruise; and
 - (j) advise the CUSTOMER from time to time on request of the location of the Vessel and the state of performance of the cruise.
- 2.3 During the term of this Contract, the CUSTOMER shall:
- (a) pay the costs necessary for the execution of the Research Expedition to the EXECUTOR in accordance with clause 4;
 - (b) take all necessary action to enable the CUSTOMER's participants (Japanese participants including visiting scientist from United State)(set out in Annex 1) to participate in the Research Expedition contemplated during the cruise (including transportation of such persons and transportation, loading and unloading of their research equipments to and from the Vessel);
 - (c) obtain the necessary approval(s) for the Vessel's calls at port(s) in Japan from the authorities concerned; and
 - (d) make necessary instructions to the shipping agency so that the Vessel may received appropriate services at its port of call in Japan.

3. Term of the Contract

The Contract is to be effective after the signing by both sides, and is to terminate at the time of signing of the Completion Report of the Research Expedition by both sides.

4. Fee and Costs

4.1 The CUSTOMER shall pay the EXECUTOR a fee (the *Fee*) of US\$8,000 for each day of the cruise in accordance with the calculations given in Annex 2. The CUSTOMER agrees to pay such Fee for a cruise period of 42 days. Such Fee shall compensate the EXECUTOR for all costs and expenses in relation to the preparation and implementation of the Research Expedition. The CUSTOMER shall in no event be liable to pay the EXECUTOR any additional fees or expenses in connection with the Research Expedition.

4.2 The payment of the Fee shall be made in twice. The first payment of US\$ 268,800 (80% of total amount) and the second payment of US\$ 67,200 (20% of total amount) shall be made at the dates provided in clause 4.3. However, if the actual number of days of the cruise decreases, the CUSTOMER shall reduce the amount of the second payment as the result of such decrease.

4.3 The first payment of the Fee shall be due within 30 days of the date the CUSTOMER receives an invoice from the EXECUTOR just after the conclusion of this Contract. The second payment of the Fee shall be due within 30 days of the date the CUSTOMER receives an invoice and the Completion Report after the cruise.

4.4 The Fee shall be paid to the account standing in the name of FAR EASTERN REGIONAL HYDROMETEOROLOGICAL RESEARCH INSTITUTE, 24, Fontannaya st. Vladivostok, Russia, with the Saving Bank of the Russian Federation (Dalnevostochny office), br. 8635/0174 (SWIFT: SABRRU8KVL), presently located at 12, Aleutskaya st. Vladivostok, Russia (Account № 40503840150260203028), through the corresponding bank, the Bank of New York, USA (SWIFT: IRVTUS3N) (Account № USD 890-0057-610).

4.5 The CUSTOMER shall bear any port charges imposed at a Japanese port of call during the cruise and shall pay such charges through a shipping agency in Japan.

4.6 The EXECUTOR shall bear all costs and expenses incurred in respect of (a) the repair of the Vessel, (b) the installation and testing of additional equipment and special devices for the Vessel and (c) the port charges imposed at the ports of Vladivostok and Korsakov.

4.7 The CUSTOMER and EXECUTOR shall bear for their own account any insurance to be taken out for the duration of the cruise with respect to their own researchers participating in the cruise.

5. Liabilities

5.1 In the event the CUSTOMER fails to make payment when due of the Fee, the EXECUTOR may postpone the date of Vessel's departure until such payment is made.

5.2 In the event the CUSTOMER or EXECUTOR fails to perform their obligation referred in clauses 2.2(e) or 2.3 (c/d) of this Contract, the demurrage imposed in respect of the Vessel (regardless of whether the Vessel is at sea or in port) shall be borne by the defaulting side.

5.3 The CUSTOMER shall not be liable for any losses or damages occurring to the Vessel and/or the equipment belonging to the EXECUTOR or for any loss, cost, injury or damages to any third party during the cruise.

5.4 The EXECUTOR shall not be liable for any losses or damages occurring to the equipment belonging to the CUSTOMER during the cruise.

6. Ownership of Observation Data

Primary data and secondary processed data obtained during the Research Expedition shall be jointly owned by the CUSTOMER and EXECUTOR.

7. Completion Report of the Research Expedition

The EXECUTOR shall submit a Completion Report of the Research Expedition to the CUSTOMER within 30 days after completion of the cruise.

8. Special Conditions

8.1 If the weather conditions become bad, the duration of the cruise, schedule, route or number of days at anchor may be changed by mutual agreement. If, in such event, the cruise period is increased, the expenses and charges relating thereto shall be borne by the CUSTOMER.

8.2 The CUSTOMER and EXECUTOR shall endeavor to make an emergency call at a port of any country or territorial water in case of a storm or upon the occurrence of illness to the crew or participants.

8.3 All expenses relating to emergency care of the crew or participants shall be borne by the CUSTOMER or EXECUTOR in relation to which the relevant person is affiliated.

9. Force Majeure

9.1 Notwithstanding any provision to the contrary herein, neither the EXECUTOR nor CUSTOMER shall be liable to each other for any loss, damages or delay or failure in performing its obligation hereunder if such loss, damages or delay or failure to perform arises out of or from any force majeure event, including but not limited to, acts of God, fire, natural disasters, epidemics, war (regardless of whether declared or undeclared), warlike actions, insurrection, revolution or civil strife, piracy and any other cause, beyond the reasonable control of either the EXECUTOR or CUSTOMER, which makes the continuance of operations impossible.

9.2 In the event either EXECUTOR or CUSTOMER become unable to perform its obligations under this Contract as a result of a force majeure, the defaulting party shall advise the other party of such force majeure within 24 hours of the occurrence of such force majeure and promptly notify of its cessation.

9.3 In the event either EXECUTOR or CUSTOMER is unable to resume the performance of its obligations hereunder, this Contract may be terminated by mutual agreement.

10. Termination

Notwithstanding any other provision in this Contract, if the EXECUTOR breaches any material provision of this Contract and if such breach is not cured within 30 days of notice from the CUSTOMER to cure such breach, the CUSTOMER may terminate this

Contract. Upon such termination, the EXECUTOR shall return all personnel of the CUSTOMER to the closest friendly port (if at sea) and shall repay to the CUSTOMER any portion of the Fee in respect of days reduced in relation to the cruise.

11. Language

This Contract has been prepared in English. Any translation hereof is for convenience purposes only and shall not have any effect on the interpretation or construction hereof.

12. Notices

Any notice required or permitted to be given hereunder shall be in writing and shall be (a) personally delivered or (b) transmitted by postage prepaid registered mail or by courier service or (c) transmitted by facsimile (with postage prepaid mail confirmation) to the address of the CUSTOMER and EXECUTOR listed below. All notice shall be effective on receipt. Any party hereto may change its address for the purposes hereof by notice to the other party.

13. Consultation

Matters not stipulated in this Contract or any doubt with respect to interpretation or performance of this Contract shall be discussed in good faith by the CUSTOMER and EXECUTOR.

14. Legal Address and Signs of both parties


CUSTOMER

Research Institute for Humanity and Nature (RIHN)
Inter-University Research Institute Corporation
National Institutes for the Humanities
457-4 Motoyama, Kamigamo, Kita-Ku, Kyoto 603-8047, JAPAN
Phone: +81-75-707-2320, Fax: +81-75-707-2507

EXECUTOR

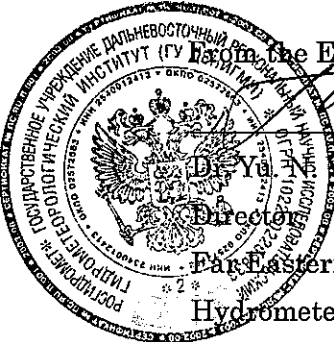
Far Eastern Regional Hydrometeorological Research Institute (FERHRD)
24 Fontannaya ST., Vladivostok 690091, RUSSIA
Phone: +7-4232-26-97-88; Fax: +7-4232-22-77-54 or +7-4232-26-90-40

From the CUSTOMER



Prof. Yoneo Ishii
Director,
Inter-University Research
Institute Corporation, National
Institute for Humanities
(Tokyo, Japan)

From the EXECUTOR



Dr. Yu. N. Volkov
Director,
Far Eastern Regional
Hydrometeorological Research
Institute
(Vladivostok, Russia)

" 23 " June 2006

" 6 " June 2006

IN WITNESS WHEREOF, the CUSTOMER and EXECUTOR have signed this Contract in duplicate, one copy each shall be held by each party.

PROGRAM of “Research Expedition in the Sea of Okhotsk for 2006” on R/V “Professor Khromov”

1. Observational schedules

The Research Expedition on R/V “Professor Khromov” is scheduled as follows:

- (1) Leaving Vladivostok on 8 August.
- (2) Arriving at Otaru on 10 August.
- (3) Leaving Otaru 13 August.
- (4) Observations in the Sea of Okhotsk via Korsakov during the period from 13 August to 14 September (Time schedule of the observations are shown in Table 1).
- (5) Arriving at Otaru on 14 September.
- (6) Leaving Otaru on 16 September.
- (7) Arriving at Vladivostok on 18 September.

Table 1: Detailed schedule of Research Expedition in the Sea of Okhotsk for 2006 on R/V “Professor Khoromov”

8 Aug (Tue)	Departure from Vladivostok
9 Aug (Wed)	
10 Aug (Thu)	Arrival at Otaru (10:00 am) and Preparation & Customs for the cruise (to 12 Aug)
11 Aug (Fri)	
12 Aug (Sat)	
13 Aug (Sun)	Departure from Otaru (10:00 am)
14 Aug (Mon)	Arrival at Korsakov
15 Aug (Tue)	Departure from Korsakov
16 Aug (Wed)	Arrival at Urup-W
17 Aug (Thu)	Observation at Urup-W
18 Aug (Fri)	Arrival and Observation at Urup-E
19 Aug (Sat)	Observation from Bussol 1 to 13 (to 23 Aug)
20 Aug (Sun)	
21 Aug (Mon)	
22 Aug (Tue)	
23 Aug (Wed)	
24 Aug (Thu)	Observation from A1 to A7 (to 26 Aug)

25 Aug (Fri)	
26 Aug (Sat)	
27 Aug (Sun)	Observation from B1 to B7 (to 28 Aug)
28 Aug (Mon)	
29 Aug (Tue)	Observation from C1 to C9 (to 30 Aug)
30 Aug (Wed)	
31 Aug (Thu)	Observation from D1 to D7 (to 1 Sep)
1 Sep (Fri)	
2 Sep (Sat)	Observation from E1 to E9 (to 3 Sep)
3 Sep (Sun)	
4 Sep (Mon)	Observation from F1 to F7 (to 5 Sep)
5 Sep (Tue)	
6 Sep (Wed)	Observation from G1 to G16 (to 9 Sep)
7 Sep (Thu)	
8 Sep (Fri)	
9 Sep (Sat)	
10 Sep (Sun)	Departure from G16
11 Sep (Mon)	
12 Sep (Tue)	Arrival at Korsakov
13 Sep (Wed)	Departure from Korsakov
14 Sep (Thu)	Arrival at Otaru (10:00 am)
15 Sep (Fri)	
16 Sep (Sat)	Departure from Otaru
17 Sep (Sun)	
18 Sep (Mon)	Arrival at Vladivostok

*Schedule and order of the observations may be changed by mutual agreement, according to weather condition and/or degree of accomplishment in the observations.

*Observational stations are shown in Figure 1 and 2, and listed in Table 2.

2. Observational stations and observational items

Figure 1 and 2 show observational area and stations. Detailed location and observational items for each station are listed in Table 2.

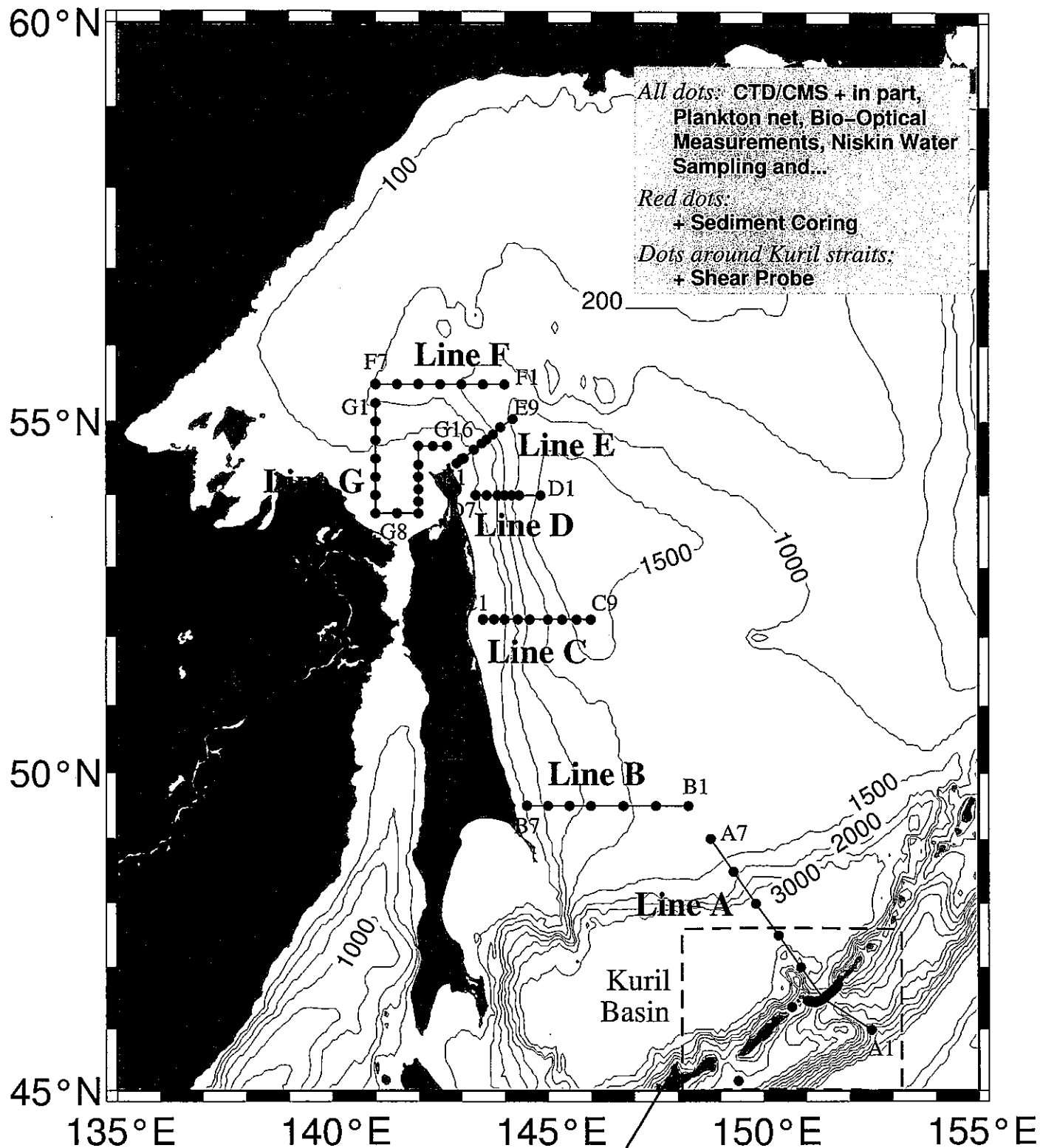
Along the cruise route, following continuous observations will be carried out too.

“Aerosol sampling”: Aerosol sampling by high volume air sampler with wind direction & wind speed monitoring unit.

“Surface water sampling (1)”: Continuous water sampling from shipboard using plastic

Figure 1

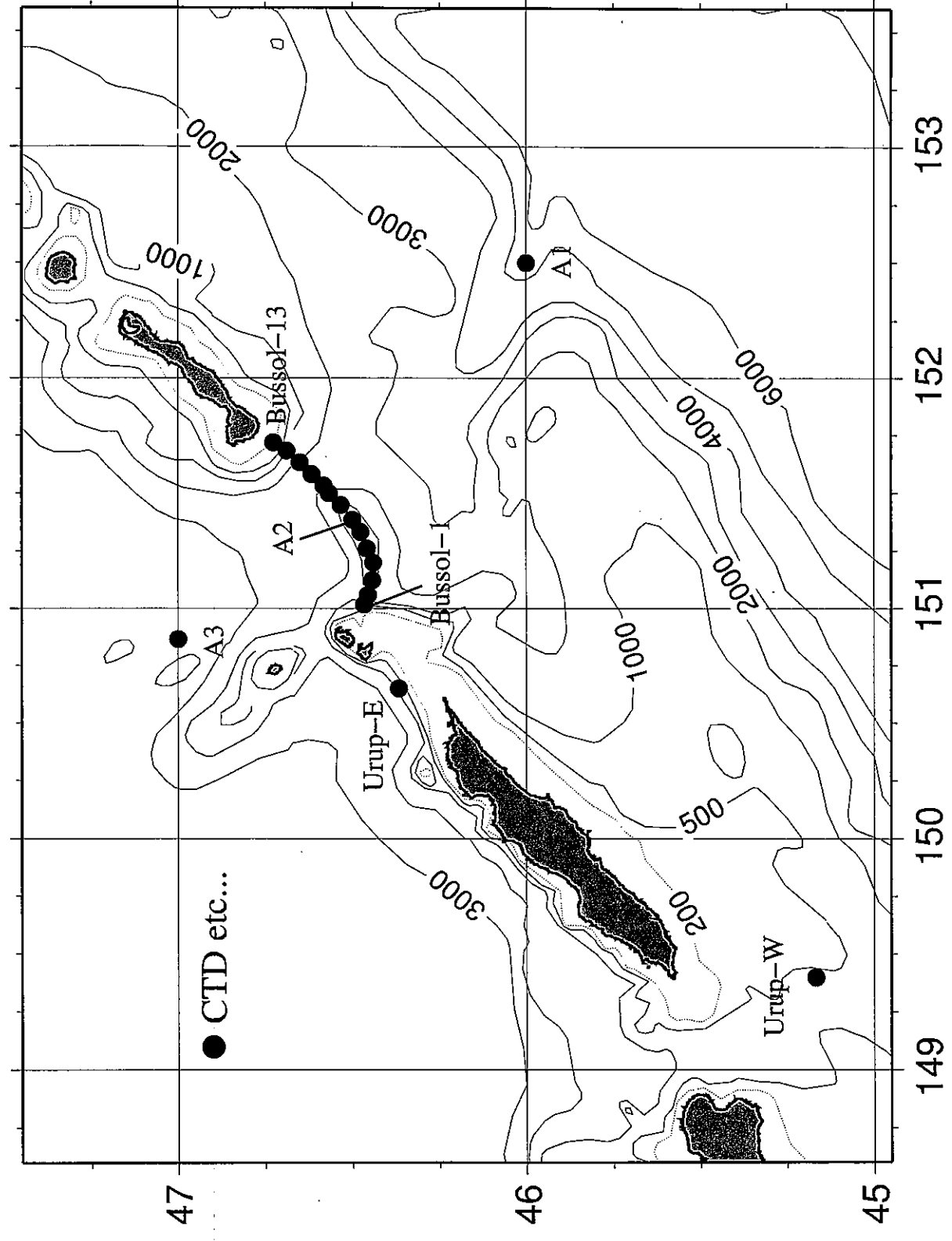
2006 cruise – Planned site map



Please look at a separate sheet for more detailed information around Kuril straits

Figure 2

Around Kuril Straits



tube and pump for bio-optical and chemical measurements
“Surface water sampling (2)”: Surface water sampling for iron analysis by towed-fish clean sampling system.

“Atmospheric Observation”: Radio-sonde observation for profiling of physical structure of atmosphere

Table 2. Observational stations and items

Station	Latitude	Longitude	Observational Items
Urup-W	45 10.08 N	149 24.00 E	CTD, W, P, X, O
Urup-E	46 22.00 N	150 39.00 E	CTD, W, X, O
Bussol-1	46 28.02 N	151 01.02 E	CTD, W, X, O
Bussol-2	46 27.30 N	151 03.60 E	CTD, X
Bussol-3	46 26.58 N	151 07.38 E	CTD, W, X, O
Bussol-4	46 26.40 N	151 12.00 E	CTD, X
Bussol-5	46 27.48 N	151 15.60 E	CTD, X
Bussol-6	46 28.62 N	151 19.98 E	CTD, X
Bussol-7	46 31.98 N	151 27.00 E	CTD, X
Bussol-8	46 34.02 N	151 30.00 E	CTD, X
Bussol-9	46 34.98 N	151 31.98 E	CTD, W, P, X, O
Bussol-10	46 37.02 N	151 34.98 E	CTD, X
Bussol-11	46 39.00 N	151 37.98 E	CTD, X
Bussol-12	46 41.28 N	151 41.10 E	CTD, X
Bussol-13	46 43.62 N	151 43.20 E	CTD, W, X, O
A1	46 00.00 N	152 30.00 E	CTD, W, P, O
A2	46 30.00 N	151 23.18 E	CTD, X, O
A3	47 00.00 N	150 51.82 E	CTD, W, P, X, O
A4	47 30.00 N	150 20.45 E	CTD, O
A5	48 00.00 N	149 49.09 E	CTD, W, P, O
A6	48 30.00 N	149 17.73 E	CTD, O
A7	49 00.00 N	148 46.36 E	CTD, W, P, O
B1	49 30.00 N	148 15.00 E	CTD, W, P, O
B2	49 30.00 N	147 30.00 E	CTD, O
B3	49 30.00 N	146 45.00 E	CTD, W, P, O
B4	49 30.00 N	146 00.00 E	CTD, O
B5	49 30.00 N	145 30.00 E	CTD, W, P, S, O
B6	49 30.00 N	145 00.00 E	CTD, O

B7	49 30.00 N	144 31.10 E	CTD, W, P, S, O
C1	52 15.00 N	143 30.00 E	CTD, W, P, S, O
C2	52 15.00 N	143 45.00 E	CTD, O
C3	52 15.00 N	144 00.00 E	CTD, W, P, S, O
C4	52 15.00 N	144 18.00 E	CTD, O
C5	52 15.00 N	144 35.00 E	CTD, W, P, O
C6	52 15.00 N	145 00.00 E	CTD, O
C7	52 15.00 N	145 20.00 E	CTD, W, P, O
C8	52 15.00 N	145 40.00 E	CTD, O
C9	52 15.00 N	146 00.00 E	CTD, W, P, O
D1	54 00.00 N	144 50.00 E	CTD, W, P, O
D2	54 00.00 N	144 20.00 E	CTD, O
D3	54 00.00 N	144 10.00 E	CTD, W, P, O
D4	54 00.00 N	144 00.00 E	CTD, O
D5	54 00.00 N	143 50.00 E	CTD, W, P, S, O
D6	54 00.00 N	143 35.00 E	CTD, O
D7	54 00.00 N	143 20.00 E	CTD, W, P, S, O
E1	54 26.12 N	142 53.00 E	CTD, W, P, O
E2	54 29.37 N	143 0.00 E	CTD, S, O
E3	54 30.31 N	143 3.40 E	CTD, W, P, O
E4	54 37.24 N	143 17.00 E	CTD, S, O
E5	54 42.25 N	143 28.16 E	CTD, W, P, O
E6	54 45.56 N	143 35.00 E	CTD, O
E7	54 49.70 N	143 44.00 E	CTD, W, P, O
E8	54 55.40 N	143 53.98 E	CTD, O
E9	55 02.10 N	144 11.00 E	CTD, W, P, O
F1	55 30.00 N	144 00.00 E	CTD, W, P, O
F2	55 30.00 N	143 30.00 E	CTD, O
F3	55 30.00 N	143 00.00 E	CTD, W, P, O
F4	55 30.00 N	142 30.00 E	CTD, O
F5	55 30.00 N	142 00.00 E	CTD, W, P, S, O
F6	55 30.00 N	141 30.00 E	CTD, O
F7	55 30.00 N	141 00.00 E	CTD, W, P, S, O
G1	55 15.00 N	141 00.00 E	CTD, O
G2	55 00.00 N	141 00.00 E	CTD, W, P, S, O

G3	54 45.00 N	141 00.00 E	CTD, O
G4	54 30.00 N	141 00.00 E	CTD, W, P, S, O
G5	54 15.00 N	141 00.00 E	CTD, O
G6	54 00.00 N	141 00.00 E	CTD, W, P, S, O
G7	53 45.00 N	141 00.00 E	CTD, O
G8	53 45.00 N	141 30.00 E	CTD, W, P, S, O
G9	53 45.00 N	142 00.00 E	CTD, W, O
G10	53 55.00 N	142 00.00 E	CTD, W, P, S, O
G11	54 05.00 N	142 00.00 E	CTD, O
G12	54 15.00 N	142 00.00 E	CTD, W, P, S, O
G13	54 25.00 N	142 00.00 E	CTD, O
G14	54 40.00 N	142 00.00 E	CTD, W, P, S, O
G15	54 40.00 N	142 20.00 E	CTD, O
G16	54 40.00 N	142 40.00 E	CTD, W, P, S, O

*Capital letters in the column of "Observational Items" indicate following items.

"CTD": CTD/CMS observation or XCTD observation

"W": Water sampling from surface and subsurface layers by Niskin bottles without CTD/CMS system

"P": Zooplankton sampling using plankton nets

"S": Sediment coring

"X": Turbulence monitoring using shear probe or XCP observation

"O": Bio-Optical monitoring of surface and subsurface water

3. Participants

Following 25 people will participate in the cruise from the CUSTOMER side. Some of them may be changed to other person due to some personal issue, although the total number should not increase beyond 25 people.

- (01) Dr. Takeshi NAKATSUKA (Principal Investigator; Chemical Oceanography, Hokkaido University)
- (02) Dr. Kenshi KUMA (Chemical Oceanography, Hokkaido University)
- (03) Dr. Jun NISHIOKA (Chemical Oceanography, Hokkaido University)
- (04) Dr. Yutaka WATANABE (Chemical Oceanography, Hokkaido University)
- (05) Dr. Koji SUZUKI (Biological Oceanography, Hokkaido University)
- (06) Mr. Kazuya ONO (Technical Staff, Physical Oceanogr., Hokkaido University)
- (07) Mr. Masahito SHIGEMITSU (Graduate Student, Chemical Oceanogr., Hokkaido University)
- (08) Ms. Eri MANABE (Graduate Student, Chemical Oceanogr., Hokkaido University)
- (09) Mr. Mitsuru CHIKIRA (Graduate Student, Chemical Oceanogr. Hokkaido University)

- University)
- (10) Mr. Tomonori ISADA (Graduate Student, Biological Oceanogr. Hokkaido University)
 - (11) Mr. Takahiro IIDA (Graduate Student, Biological Oceanogr., Hokkaido University)
 - (12) Mr. Yohei FUKUDA (Graduate Student, Chemical Oceanogr., Hokkaido University)
 - (13) Dr. Hideki MINAMI (Chemical Oceanography, Hokkaido Tokai University)
 - (14) Mr. Naoki FUJITANI (Instructor, Chemical Oceanogr., Hokkaido Tokai University)
 - (15) Mr. Tomohiro OKAZAKI (Graduate Student, Chemical Oceanogr., Hokkaido Tokai University)
 - (16) Dr. Atsushi TSUDA (Biological Oceanography, University of Tokyo)
 - (17) Dr. Ichiro YASUDA (Physical Oceanography, University of Tokyo)
 - (18) Dr. Sachihiko ITOH (Physical Oceanography, University of Tokyo)
 - (19) Mr. Satoshi OSAFUNE (Graduate Student, Physical Oceanogr., University of Tokyo)
 - (20) Mr. Masahiro YAGI (Graduate Student, Physical Oceanogr., University of Tokyo)
 - (21) Mr. Yusuke UDAGAWA (Graduate Student, Meteorology, Tokai University)
 - (22) Dr. Rumi SOHRIN (Biological Oceanography, Shizuoka University)
 - (23) Mr. Hidenori INOUE (Undergraduate Student, Biological Oceanography, Shizuoka University)
 - (24) Dr. Takeshi YOSHIMURA (Chemical Oceanography, Central Research Institute of Electric Power Industry)
 - (25) Dr. Hongbin LIU (Biological Oceanography, Hong Kong University of Science and Technology)

From the CUSTOMER:

From the EXECUTOR:


 Prof. Yoneo Ishii
 Director,
 Inter-University Research
 Institute Corporation, National
 Institute for Humanities
 (Tokyo, Japan)


 Director
 Far Eastern Regional
 Hydrometeorological Research
 Institute
 (Vladivostok, Russia)

“ 23 ” June 2006

“ 6 ” June 2006

Annex 2

ESTIMATE of charges for Research Expedition in the Sea of Okhotsk for 2006 on R/V "Professor Khromov" (Per day)

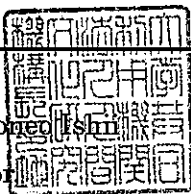
Duration of cruise	42 days
Crew	29 persons
Expedition staff including Japanese participants	33 persons.

1. Fuel	4456 \$
2. Oil	180 \$
3. Fresh water	60 \$
4. Technical supply	900 \$
5. Food	434 \$
6. Repair and preparation of the equipment	1676 \$
7. Port and navigating charges	294 \$

Total:	8000 \$
--------	---------

From the CUSTOMER:

From the EXECUTOR:


 Prof. Yoneo Isomura
 Director
 Inter-University Research
 Institute Corporation, National
 Institute for Humanities
 (Tokyo, Japan)


 Director
 Far Eastern Regional
 Hydrometeorological Research
 Institute
 (Vladivostok, Russia)

" 23 " June 2006

" 6 " June 2006