

Completion Report of the Research Expedition in the Sea of Okhotsk for 2006



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18 September, 2006

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On behalf of
Far Eastern Regional
Hydrometeorological
Research Institute



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TABLE OF CONTENTS

| | Page |
|---|------|
| 1. INTRODUCTION | 3 |
| 2. PROGRAM OF THE EXPEDITION AND ITS IMPLEMENTATION | 3 |
| 2.1. CTD & LADCP observations and Water Chemistry and Biogeochemistry | 3 |
| 2.1.1. CTD & LADCP observations | 3 |
| 2.1.2. Water Chemistry and Biogeochemistry | 5 |
| 2.2. Shear Probe Observations | 7 |
| 2.3. Sediment Coring | 7 |
| 2.4. Plankton Net Samplings | 8 |
| 2.5. Optical Observations | 9 |
| 2.6. Air Soundings | 10 |
| 2.7. Aerosol Samplings | 11 |
| 3. CONCLUDING REMARKS | 12 |
| 4. ACKNOWLEDGEMENTS | 12 |
| 5. APPENDICES | |
| A. Cruise Chart | |
| B. List of Participants | |
| C. Data logs | |
| D. Data exchange schedule | |

1. INTRODUCTION

The Research Expedition in the Sea of Okhotsk for 2006 has been carried out in the period from 8 August to 18 September in 2006 by *R/V Professor Khromov* of Far Eastern Regional Hydrometeorological Research Institute (FERHRI), Vladivostok, Russia. This expedition was a part of a Research Project, entitled as “Human Activities in Northeastern Asia and Their Impact to the Biological Productivity in North Pacific Ocean” conducted by Research Institute of Humanity and Nature (RIHN), Kyoto, Japan.

The main purpose of this research expedition was to understand transport processes of land-derived materials, especially iron, from Amur River to the Sea of Okhotsk and Pacific Ocean and their contribution to biological productivity there. This research expedition had following subjects.

1) To clarify the vertical and horizontal distribution of iron and related substances in water masses of the Sea of Okhotsk, especially in areas of Amur River mouth, northern and eastern continental shelves of Sakhalin, and area around Bussol strait.

2) To quantify the physical processes, which transport iron and related substances from Amur River to Pacific Ocean, such as shelf tidal mixing, intermediate water formation, East Sakhalin current and water dispersion around Bussol strait.

3) To investigate the biomass and productivity of phytoplankton and heterotrophic organisms in the Sea of Okhotsk, relating to the spatial distributions of the iron, nutrients and organic matter.

4) To measure the budget and the deposition-regeneration rates of iron and related substances in the sediment on shelf, slope and basin of the western Sea of Okhotsk.

5) To monitor the optical and meteorological conditions, which govern the primary productivity, in the Sea of Okhotsk.

6) To infer the contribution of aerosol, which supply iron from atmosphere to the surface water, in the Sea of Okhotsk.

2. PROGRAM OF THE EXPEDITION AND ITS IMPLEMENTATION

2.1. CTD & LADCP observations, water chemistry and biogeochemistry

2.1.1. CTD and LADCP observations

Purpose. The purpose of CTD (Conductivity, Temperature and Depth probe) casts was to examine the water characteristics in the Sea of Okhotsk from the Sakhalin Bay

and around Sakhalin Island through the Kuril Straits (especially Bussol' Strait), in order to elucidate the influence of the Amur River water and dense shelf water on the Okhotsk Sea water-masses and on bio-chemistry in the Sea of Okhotsk and the North Pacific. The purpose of LADCP (Lowered Acoustic Doppler Current Profiler) attached to CTD frame was to measure the horizontal current profiles at the CTD casts to know horizontal currents including tidal and mean currents.

Data Acquisition. The CTD/Carousel water sampling system was used to acquire water samples and CTD data (pressure, temperature and conductivity). The CTD is Sea-Bird 911 plus system, and Seabird Carousel bottle release systems were used. The CTD/rosette held twelve 10-liter Niskin bottles with Teflon coating for iron measurements. The CTD instruments were equipped with a dissolved oxygen sensor (Sea-bird SBE43), transmissiometer (Wet lab C-Star) and altimeter (Data sonic PSA-900D). The CTD-frame was deployed via the right-side A-frame at the sites described in Figure A-1, A-2 and Table C-1 in Appendix A and C, respectively.

Water samples were drawn for dissolved oxygen and salinity at most of the CTD/rosette casts. The samples of dissolved oxygen were analyzed by Winkler method using an automated titration system with an oxidation-reduction electrode. Salinities were analyzed with a Guildline Model 8400A Autosol salinometer, using a computer interface and software. IAPSO Standard Seawater, batch P-146, served as the standard.

The LADCP is the RD-instruments 300kHz workhorse ADCP with battery case. These were attached to the CTD-frame. Velocity data relative to the LADCP sensor in the 1 second interval was obtained throughout the casts. The time, position and depth data is obtained from the GPS and the CTD, which were merged with the LADCP data to produce the absolute horizontal velocity profiles.

Data Processing. Conductivities and dissolved oxygen obtained by CTD sensors at each bottle level will be merged with the results from bottle salinity and oxygen analyses. Bottle salinity and oxygen concentrations will be calculated and compared with the CTD data. CTD performance will be monitored by means of these comparisons. Final processing of CTD data will be completed at a later date.

Preliminary velocity data from the LADCP were processed during the cruise. Some of the stations cannot be processed due to various problems. The final data will be provided at a later time.

2.1.2. Water Chemistry and Biogeochemistry

Purpose. The most important goal of this cruise is to grasp direct evidences of the tight connections between land and ocean ecosystems through material transports via river and shelf systems. Main targets are riverine iron and related substances, which are dissolved and/or suspended in the water of the Sea of Okhotsk, and their impacts on biological productivity there. In order to clarify the spatial distributions of iron and related substances and its influences to biological productivity, water samplings were performed from the areas near Amur River mouth to Pacific Ocean.

Water Samplings and Sample Treatments. Waters were collected during most of the CTD casts listed in Table C-1 of Appendix C. In addition, surface water was continuously analyzed for some parameters using underway waters supplied from engine room. Water samples were distributed into various sizes of bottles at once for on-board and/or on-shore analyses. Some were then filtrated, and some were utilized to ^{13}C -incubation for primary productivity measurements on board. The incubated waters were finally filtrated, and filters were frozen for further ^{13}C analyses on shore.

Water Analyses. The distributed waters and filter samples are to be measured on the following list of chemical and biogeochemical parameters. Some of them have been analyzed on board, and the rests are to be analyzed on shore. The data analyzed on board have been already compiled in a separate data file, except for the total alkalinity and pH, monitored using underway water, which requires recalculation by comparison with the on-shore measurement of total alkalinity.

| Substance | Number of water samples * | Analytical Method or Instrument | Measurement Remarks |
|--------------------------------|---------------------------|---|---------------------|
| <u>Basic properties</u> | | | |
| Salinity | All | Guildline Auto-Sal | <u>On board</u> |
| Dissolved Oxygen | All | Winkler method (Titrated by Oxidation –Reduction Electrode) | <u>On board</u> |
| Nutrients | All | Continuous Flow type of Auto Analyzer | On shore |

| | | | |
|---|-----------------------------|--|-------------------------------------|
| <u>Biogeochemical parameters</u> | | | |
| Iron (dissolved and total) | All | Chemiluminescence method (Kimoto-Denshi, EN-701) | On shore (<u>partly on board</u>) |
| Barium | About 50% | ICP-MS | On shore |
| Chlorophyll a | All, but only shallow layer | Fluorescence Spectrophotometer (Turner, 10-AU) | <u>On board</u> |
| Suspended matter | About 50% | X-rays Diffraction method | On shore |
| Chromo-Dissolved Organic Matter | Almost all | 3D-fluorescence method | On shore |
| <u>Carbon chemistry</u> | | | |
| Dissolved inorganic carbon | About 60% | CO ₂ coulometer | On shore |
| Total Alkalinity | About 60% | Radiometer PHM93 | On shore |
| Total Alkalinity | (Underway) | Spectrophotometer | <u>On board</u> |
| pH | (Underway) | Spectrophotometer | <u>On board</u> |
| Dissolved Organic Carbon | Almost all | High Temperature Combustion method | On shore |
| <u>Incubation study</u> | | | |
| Primary Production | About 30% | ¹³ C-inculation method, (mass spectrometer) | On shore |

* "Number of water samples" indicates how much % of water samples collected by CTD/carousel systems were applied for the analyses of the corresponding substances.

2.2. Shear probe observations

Purpose. Around the Kuril Islands in the Okhotsk Sea, tidal currents are strong and the vertical mixing is expected to be large and to contribute to the material circulation and resulting biological activity as well as the physical processes. However the mixing activity has not been directly measured. Measurements of turbulence and microstructure were performed around the Bussol' Strait and Urup Islands. The modification process of dense shelf water around the northwestern shelf due to vertical mixing was also examined by the profiler data.

Instruments and observation. A real time system of VMP2000 (Vertical Microstructure Profiler for 2000m casts) manufactured in Rockland Scientific Service (Victoria Canada) was used with the hydraulic motor, winch and line puller system. The fish deploys and recoveries were from the stern using A-frame and capstan at the site listed in Table C-2 of Appendix C. During the profiling, the ship moved as slowly as possible against the surface currents or winds in order the ship to be away from the cable and to avoid the cable cut by ship propeller. The motor (380V, 50Hz 3-phase) was broken in the midway at Sta. Bussol-2. The spare motor of 220V 60Hz was replaced and used from Sta. Bussol-3 to G2.

Data acquisition and processing. Shear probe, micro-temperature probe and acceleration data were obtained in 512Hz, and the pressure and Sea-Bird temperature and conductivity were obtained in 64Hz. These were used to obtain the turbulent kinetic energy dissipation rate during 2 seconds from velocity shear spectra. Very preliminary data of diapycnal mixing coefficients of density in the interval of 1dbar were processed during the cruise. But the careful treatments are necessary to make final data because the probes are quite sensitive and the Sea-Bird sensors had troubles with water invasion and also because the data is frequently influenced by various matters. The final data will be provided at a later time.

2.3. Sediment Coring

Purpose. Although the dissolve iron discharged from Amur River has a large potential to activate primary productivity in the Sea of Okhotsk, it is well-known that most of dissolved iron in river water flocculates and settles down to sediment surface in the contact zone of fresh water and sea water. Therefore, it is very important to estimate

how much % of dissolved iron is actually removed from the water mass near Amur River mouth and understand the fate of precipitated iron on the shelf. Because shelf sediments are usually anoxic due to heavy supply of organic matter, most of precipitated iron can be dissolved and released again from the sediment. Strong tidal current and dense water formation due to brine rejection during winter sea-ice formation may also support the transport of the labile iron from shelf to open ocean. In order to estimate of the budget and flux of labile iron on the shelf sediment, surface sediments and sediment cores were collected on the shelf and slope areas for analyses of iron and related chemical compounds.

Sediment Samplings. Three types of sediment samplers (Smith-Macintyre Type of Grab Sampler, “Ashura” type of Multiple Corer and a Gravity Corer) were applied in this research expedition. Surface sediments were collected using the Grab Sampler at many sites on the shelf and slope areas as described in Table C-3 of Appendix C and Figure A-1 of Appendix A. However, good sediment cores could not be obtained at most of the shelf sites, except for Line-B and F, due to the inadequate sediment conditions for coring such as sand or gravels and the unidentified mechanical trouble in the Gravity Corer.

Sample Treatments. Surface sediments collected by the grab sampler were stored in refrigerator. In cases that sediment cores were successfully collected, two of the three cores collected simultaneously by the multiple corer were sliced at 1 cm or 2 cm intervals on board and stored in freezer. The rest one core was sliced in a closed box, which is full of N₂ gases, and squeezed to extract pore water in the anoxic condition.

Chemical Analyses. The extracted pore waters and the sliced and surface sediments are to be analyzed for concentrations of iron and related inorganic and organic elements at on-shore laboratories using ICP-AES and an elemental analyzer. For sediment cores, ²¹⁰Pb concentrations are to be profiled vertically in order to determine sedimentation rates and calculate the flux of iron and related substances through the sediment-water interface.

2.4. Plankton Net Samplings

Purpose. The Sea of Okhotsk is an unique marginal sea, semi-enclosed from the North Pacific, fast-ice formation at relatively low latitude, and mega-river discharge,

and is considered to have ecological influence to the Oyashio current and subarctic North Pacific ecosystems by the water exchange through the limited number of straits. Moreover, preliminary surveys of zooplankton showed that life histories of dominant zooplankton are different from those of Oyashio current and eastern subarctic Pacific (Tsuda unpublished). The goal of this study is to show the geographical and vertical distribution of major zooplankton species in late summer season.

Instruments. Two types of plankton nets were used. One is Norpac net (mouth opening; 0.16 m², net-length; 180 cm; mesh opening; 0.1 mm) was vertically towed from 30 and 150 m-depth to surface. When the bottom depth was shallower than 150 m, the net was towed from the near-bottom to the surface. Filtered water volume was estimated with a flow meter (Rigosh Co Ltd) attached to the mouth of the net. Another net is VMPS (Vertical Multilayer Plankton Sampler, Tsurumi-Seiki Co Ltd: mouth opening; 0.25 m², net-length; 180 cm; mesh opening; 0.33 mm). The VMPS equipped four nets which were remotely closed and opened at the designated depth from the ship. The all samples were preserved with 5 % buffered formalin sea water (5%).

Observations. The Norpac net and VMPS were towed at 35 and 7 stations, respectively (listed in Table C-4 of Appendix C).

Expected Outputs. Plankton samples are to be applied to following analyses on shore. 1. Settling volume of the all samples, 2. Vertical distribution of *Neocalanus* spp. (VMPS samples), 3. Community composition of Norpac net samples

2.5. Optical Observations

Purpose. To clear the optical properties in this study area, the absorbance of phytoplankton, particles and colored dissolved organic matter (CDOM), which called inherent optical properties of sea water, were investigated. In addition, the apparent optical properties were measured using in water spectra radiometers, and compared with each optical characteristics of sea water.

Instruments. Three types of instruments were used for optical measurements in this research expedition, as follows.

1) *MER2040/2041 in water radiance measurements.* The underwater downward irradiance and upward radiance were measured using MER2040 (Biospherical Inc.)

instrument. The measurements were carried out from the sea surface to 70m depth at satellite over passing time (from 9 am to 4 pm local time). The incident solar spectral irradiance was measured using deck unit of MER2041 (Biospherical Inc.), located in upper deck. The spectral channels of MERs are the wavelength of 412, 443, 465, 490, 510, 520, 555, 565, 625, 665, 670 and 683nm. Those channels were corresponding Sea-viewing Wide Field-of-view Sensor (SeaWiFS) channels. The measurement stations are listed in the Table C-5 of Appendix C.

2) *Eco-VSF3 scattering radiation meter observations.* The scattering radiation was measured using Eco-VSF3 (Wet Labs) instruments. The angular distribution of scattered radiation in the backward hemisphere is important in the interpretation of remote sensing measurements. This instrument measures the optical scattering at three distinct angles: 100, 125 and 150 degrees, at three wavelengths, thus providing the shape of the volume scattering function throughout its angular domain. The measurement stations are listed in the Table C-5 of Appendix C.

3) *TriOS/RAMSES hyperspectral radiometer observations.* The solar radiance and upward water irradiance were measured by TriOS/RAMSES spectrophotometers. The spectra channel was 300 to 1000 nm in 1nm interval. The TriOS/RAMSES was equipped to a drifting buoy and the TriOS buoy observations were carried out with MER2040 in water optical measurements. The measurement stations are listed in the Table C-5 of Appendix C.

Data list. Following data were obtained during this research expedition.

1. *MER2040/2041 observation.* Microsoft excel csv format data in each station
2. *Eco-VSF3 observation.* Text format data in each station
3. *Drifter buoy TriOS observation.* Text format data in each station (water leaving radiance (L) and solar irradiance (E))

2.6. Air Soundings

Purpose. In summer season, the Sea of Okhotsk is often covered by a persistent high pressure field, so called as “Okhotsk-High”. “Okhotsk-High” usually creates low cloud system on the sea surface, which reduces the solar radiation necessary for phytoplankton growth and affects the biological productivity there. In spite of its importance, “Okhotsk-High” has seldom been observed directly until now. In this research expedition, radiosonde observations were carried out during the period from 16 August to 31 August for following two purposes. (1) To solve the structure of

anticyclone above the sea of Okhotsk, that is “Okhotsk - High”. (2) To solve the thermodynamic structure of low cloud system, especially stratus, stratocumulus etc., which frequently accompanies “Okhotsk – High”.

Instruments. The observation were carried out using the “Radiosonde Observation MW31 Sounding System (Vaisala Oyj, Finland)”. The MW31 sounding system consists of MW31 sounding soft ware “DigiCORA III” and PC computer system, which is connected to Ground Check “GC-25” (Radiosonde sensor reconditioning tool), Receiver “SPS311”, UHF Telemetry Antenna and GPS Antenna via cable.

Observation Condition. Totally, 63 times of radiosonde observations were conducted during the cruise. The observational and meteorological conditions at each operation are listed in Table C-6 of Appendix C.

2.7. Aerosol Samplings

Purpose. In general, land-derived iron is believed to be supplied to ocean surface via atmosphere by aerosol. Because the Sea of Okhotsk is located on the eastern end of Eurasia continent, huge amount of aerosol containing iron must be supplied to this area by the strong westerly. In order to estimate the relative importance of the iron from Amur River, it is necessary to monitor and quantify the iron load from atmosphere in the Sea of Okhotsk Therefore, aerosol samplings were conducted in this research expedition.

Observation. Aerosol samples were collected with a High Volume Sampler during the cruise (Aug. 13 – Sep. 13). Wind direction was continually monitored and the sampler was turned off if there was any risk of contamination by exhaust from the ship’s stack. The sample collection period was every 12 hours (07:00-19:00, 19:00-07:00), and samples were collected on the 90 mm Teflon filter. Sampling log is shown in the Table C-7 of Appendix C.

Sample analyses. Teflon filters with collected aerosol samples are to be used for analyzing major ions (Na^+ , Ca^{2+} , SO_4^{2-} , NO_3^-) and trace metals (Fe, Al) at on-shore laboratory. Soluble major ions and trace metals are to be extracted from the filters and analyzed by ion chromatography and ICP-AES.

3. CONCLUDING REMARKS

In general, the program of this expedition was successfully completed with the combined efforts of Russian, Japanese and United State specialists. In particular, it is notable that clean water samplings were successfully performed on *R/V Professor Khromov* in this expedition. The quality of collected waters was continuously monitored during the cruise by on-board analyses of trace amount of iron, and apparent contaminations of iron from the vessel itself have never been identified. This success is greatly owing to Russian efforts to clean up the vessel before the cruise and Japanese carefulness to avoid any kind of contaminations at all procedures during the samplings of water.

All the primary and secondary data collected during the cruise will be shared according to the mutually agreed schedule.

4. ACKNOWLEDGEMENTS

This expedition was successfully completed with the effort and patience of many peoples, and with the good weather condition throughout the cruise. We would like deeply to appreciate Captain Alexander D'YACHENKO of the *R/V Professor Khromov* and his fine crews for their outstanding works during this cruise; without them, none of this expedition would have been possible.

5. APPENDICES

A. Cruise Chart

Figure A-1. Chart of the Whole Cruise

Figure A-2. Chart around Bussol' Strait

B. List of participants

C. Data logs

Table C-1. CTD & LADCP casts

Table C-2. Shear Probe operations

Table C-3. Sediment Corings

Table C-4. Plankton Net samplings

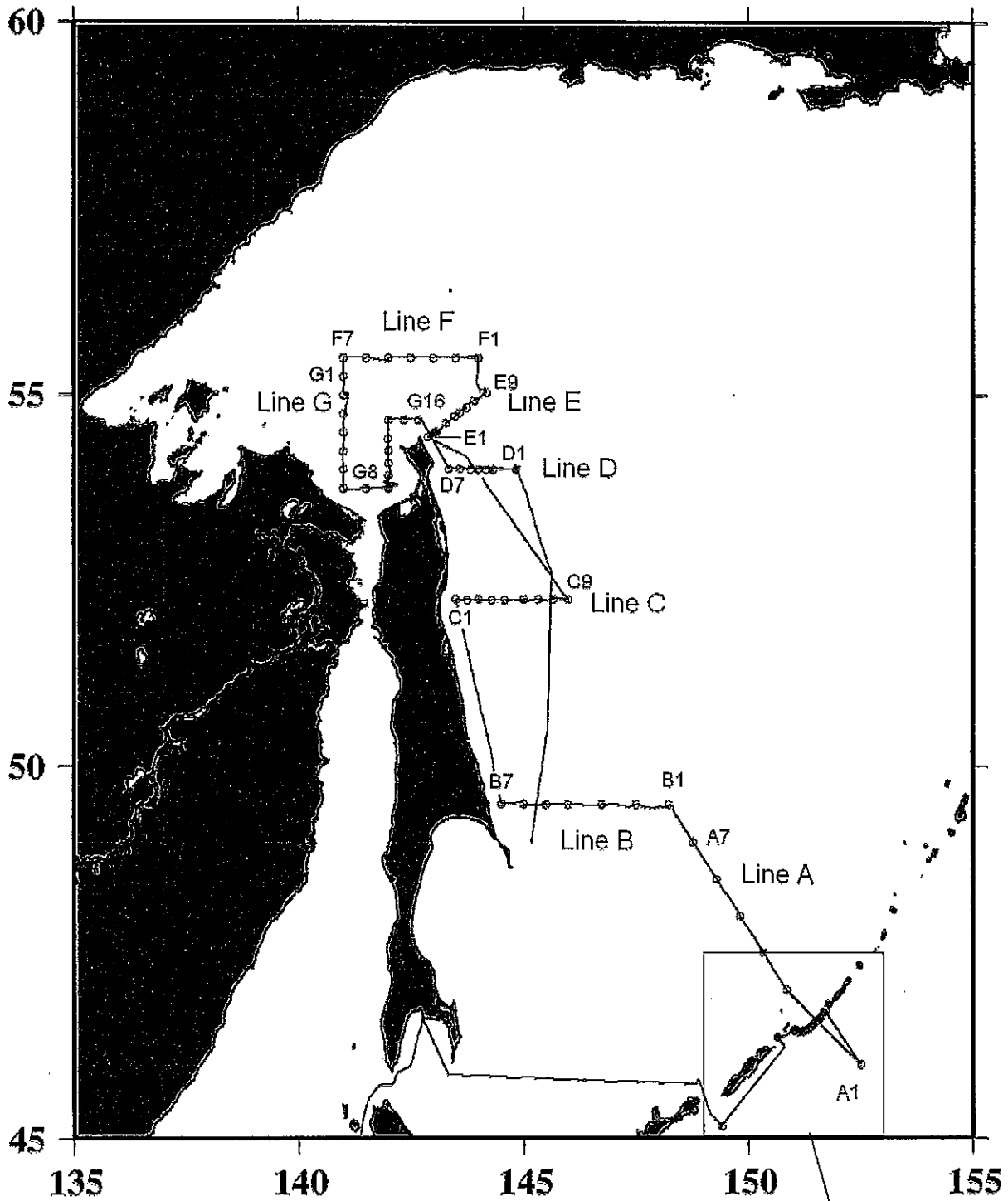
Table C-5. Optical Measurements

Table C-6. Air Soundings

Table C-7. Aerosol Samplings

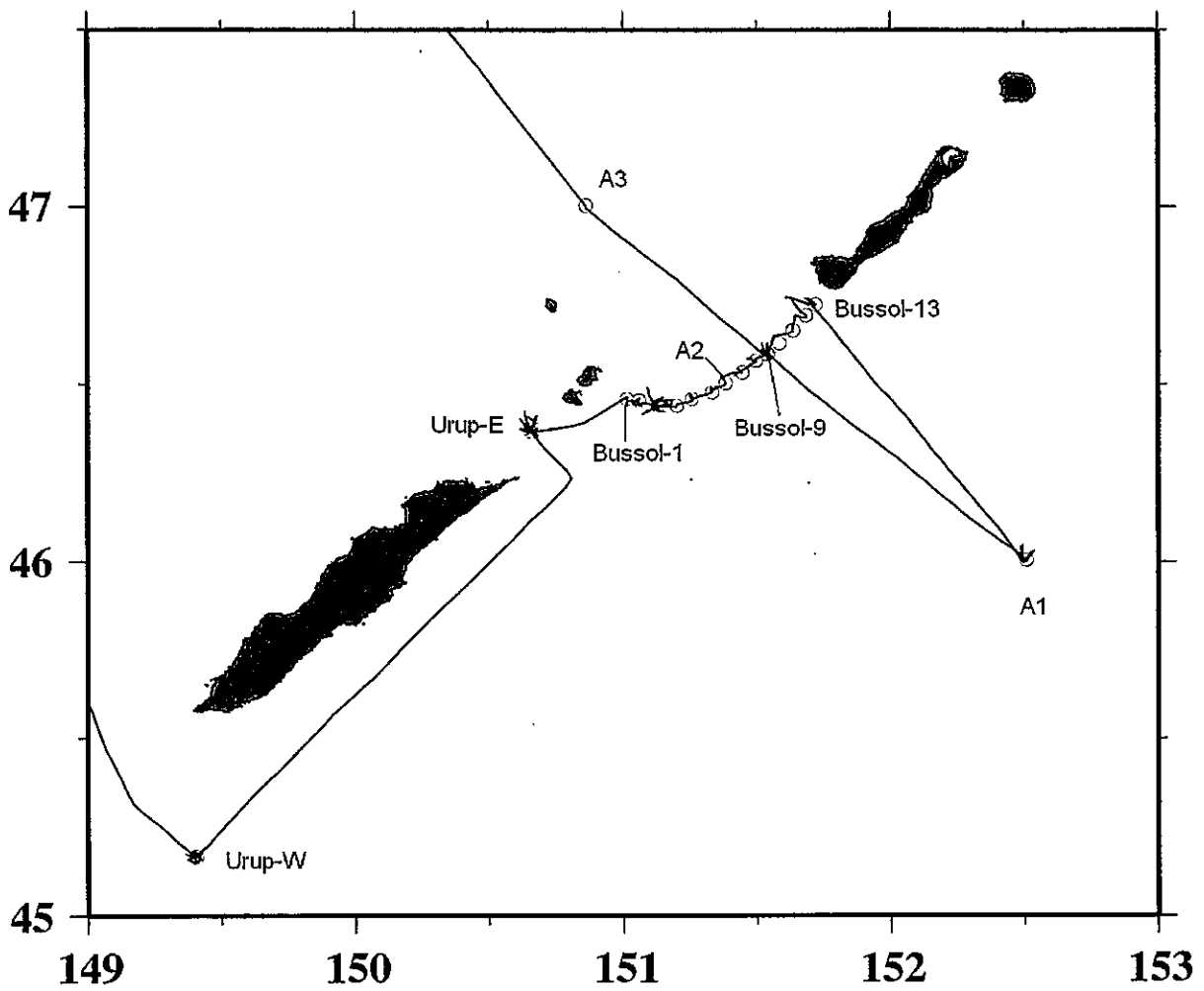
D. Data exchange schedule

Figure A-1. Chart of the Whole Cruise



See Figure A-2 for more detailed information around Kuril Straits

Figure A-2. Chart around Bussol' Strait



LIST OF PARTICIPANTS

(Research Expedition in the Sea of Okhotsk, R/V “Professor Khromov”, Aug - Sep 2006)

Russia

Mr. Alexey SCHERBININ (Department of Marine Expeditions, FERHRI)
Mr. Sergey YAROSH (Department of Marine Expeditions, FERHRI)
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United States

Dr. Hongbin LIU (Biological Oceanography, Hong Kong University of Science and Technology)

Table C-1. CTD & LADCP Cast Logs

| Station | Cast Name (LADCP-No) | Type (*) | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|----------|-------------------------|-------------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| URUP-W | CTD-1 (kr001) | Total | 506 | Start | 45 10.051 | 149 24.308 | 16-Aug | 4:42 |
| | | | | Bottom | 45 10.000 | 149 24.491 | 16-Aug | 5:09 |
| | | | | End | 45 09.992 | 149 24.627 | 16-Aug | 5:34 |
| URUP-W | Urup-W-1 (kr002) | Deep | 510 | Start | - | - | 16-Aug | - |
| | | | | Bottom | - | - | 16-Aug | - |
| | | | | End | 45 10.608 | 149 23.431 | 16-Aug | 9:47 |
| URUP-W | Urup-W-2 (kr003) | Shallow | 504 | Start | 45 10.234 | 149 24.001 | 16-Aug | 12:24 |
| | | | | Bottom | 45 10.377 | 149 24.009 | 16-Aug | 12:41 |
| | | | | End | 45 10.499 | 149 23.959 | 16-Aug | 13:04 |
| URUP-W | Urup-W-3 (kr004) | No water | 504 | Start | 45 10.084 | 149 24.187 | 16-Aug | 16:15 |
| | | | | Bottom | 45 10.148 | 149 24.320 | 16-Aug | 16:36 |
| | | | | End | 45 10.193 | 149 24.364 | 16-Aug | 16:50 |
| URUP-W | Urup-W-4 (kr005) | No water | 499 | Start | 45 10.027 | 149 24.079 | 16-Aug | 20:25 |
| | | | | Bottom | 45 10.151 | 149 24.066 | 16-Aug | 20:41 |
| | | | | End | 45 10.425 | 149 24.037 | 16-Aug | 21:01 |
| URUP-W | Urup-W-5 (kr006) | No water | 490 | Start | 45 10.328 | 149 24.637 | 17-Aug | 0:15 |
| | | | | Bottom | 45 10.456 | 149 24.865 | 17-Aug | 0:29 |
| | | | | End | 45 10.718 | 149 25.305 | 17-Aug | 0:50 |
| URUP-W | Urup-W-6 (kr007) | No water | 493 | Start | 45 09.967 | 149 24.424 | 17-Aug | 4:15 |
| | | | | Bottom | 45 09.917 | 149 24.846 | 17-Aug | 4:34 |
| | | | | End | 45 09.812 | 149 25.134 | 17-Aug | 4:50 |
| URUP-E | Urup-E-1 (kr008) | Deep | >678 | Start | 46 21.917 | 150 39.359 | 17-Aug | 19:07 |
| | | | | Bottom | 46 22.013 | 150 39.875 | 17-Aug | 19:26 |
| | | | | End | 46 22.100 | 150 40.308 | 17-Aug | 19:55 |
| URUP-E | Urup-E-2 (kr009) | Shallow | >680 | Start | 46 21.850 | 150 38.993 | 17-Aug | 23:10 |
| | | | | Bottom | 46 22.021 | 150 39.268 | 17-Aug | 23:30 |
| | | | | End | 46 22.206 | 150 39.525 | 17-Aug | 23:58 |
| URUP-E | Urup-E-3 (kr010) | No water | >646 | Start | 46 21.974 | 150 39.014 | 18-Aug | 3:12 |
| | | | | Bottom | 46 21.968 | 150 39.156 | 18-Aug | 3:34 |
| | | | | End | 46 21.986 | 150 39.326 | 18-Aug | 3:55 |
| URUP-E | Urup-E-4 (kr011) | No water | >750 | Start | 46 21.934 | 150 39.354 | 18-Aug | 7:07 |
| | | | | Bottom | 46 22.045 | 150 39.606 | 18-Aug | 7:35 |
| | | | | End | 46 22.113 | 150 39.708 | 18-Aug | 7:59 |
| URUP-E | Urup-E-5 (kr012) | No water | >750 | Start | 46 22.295 | 150 39.187 | 18-Aug | 11:08 |
| | | | | Bottom | - | - | 18-Aug | - |
| | | | | End | 46 24.299 | 150 40.283 | 18-Aug | 12:16 |
| URUP-E | Urup-E-6 (kr013) | Bio | >854 | Start | 46 22.190 | 150 39.323 | 18-Aug | 15:13 |
| | | | | Bottom | 46 22.749 | 150 39.890 | 18-Aug | 15:45 |
| | | | | End | 46 23.318 | 150 40.308 | 18-Aug | 16:14 |
| Bussol-1 | Bussol-1 (kr014) | No water | 574 | Start | 46 27.563 | 151 00.972 | 18-Aug | 22:15 |
| | | | | Bottom | 46 27.112 | 151 00.889 | 18-Aug | 22:39 |
| | | | | End | 46 26.697 | 151 00.776 | 18-Aug | 23:01 |

* "Type" indicates how water samples were collected during the CTD cast.

"No water": Water samples were not collected at all.

"Total", "Deep", "Shallow": Waters were collected from the total, deep and shallow layers of the water column, respectively.

"Bio": Water samples were collected only from the euphotic layer for primary productivity study.

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|-----------|-------------------------|----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| Bussol-2 | Bussol-2 (kr015) | No water | 1185 | Start | 46 27.232 | 151 03.544 | 19-Aug | 0:46 |
| | | | | Bottom | 46 26.997 | 151 03.504 | 19-Aug | 1:19 |
| | | | | End | 46 26.708 | 151 03.520 | 19-Aug | 1:50 |
| Bussol-3 | Bussol-3 (kr016) | No water | >1500 | Start | 46 26.406 | 151 07.845 | 19-Aug | 12:14 |
| | | | | Bottom | 46 26.349 | 151 08.901 | 19-Aug | 13:02 |
| | | | | End | 46 26.667 | 151 09.426 | 19-Aug | 13:43 |
| Bussol-3 | Bussol-3-2 (kr017) | No water | >1500 | Start | 46 26.694 | 151 07.420 | 19-Aug | 20:08 |
| | | | | Bottom | 46 27.258 | 151 08.168 | 19-Aug | 20:47 |
| | | | | End | 46 27.795 | 151 08.785 | 19-Aug | 21:28 |
| Bussol-3 | Bussol-3-3 (kr018) | No water | 1529 | Start | 46 26.350 | 151 07.681 | 20-Aug | 0:10 |
| | | | | Bottom | 46 26.107 | 151 07.908 | 20-Aug | 0:53 |
| | | | | End | 46 26.091 | 151 07.934 | 20-Aug | 1:35 |
| Bussol-3 | Bussol-3-4 (kr019) | No water | 1537 | Start | 46 26.483 | 151 07.242 | 20-Aug | 4:06 |
| | | | | Bottom | 46 26.057 | 151 07.012 | 20-Aug | 4:45 |
| | | | | End | 46 25.668 | 151 07.000 | 20-Aug | 5:10 |
| Bussol-3 | Bussol-3-5 (kr020) | No water | 1510 | Start | 46 26.602 | 151 07.326 | 20-Aug | 8:04 |
| | | | | Bottom | 46 26.444 | 151 07.022 | 20-Aug | 8:39 |
| | | | | End | 46 26.112 | 151 06.702 | 20-Aug | 9:17 |
| Bussol-4 | Bussol-4 (kr021) | No water | 695 | Start | 46 26.393 | 151 12.035 | 20-Aug | 13:38 |
| | | | | Bottom | 46 26.475 | 151 12.112 | 20-Aug | 14:01 |
| | | | | End | 46 26.660 | 151 12.378 | 20-Aug | 14:23 |
| Bussol-5 | Bussol-5 (kr022) | No water | 1175 | Start | 46 27.496 | 151 15.510 | 20-Aug | 16:07 |
| | | | | Bottom | 46 27.826 | 151 15.382 | 20-Aug | 16:37 |
| | | | | End | 46 28.211 | 151 15.304 | 20-Aug | 17:10 |
| Bussol-6 | Bussol-6 (kr023) | No water | 578 | Start | 46 28.636 | 151 20.069 | 20-Aug | 19:00 |
| | | | | Bottom | 46 28.799 | 151 20.143 | 20-Aug | 19:14 |
| | | | | End | 46 29.029 | 151 20.218 | 20-Aug | 19:29 |
| A2 | Bussol-A2 (kr024) | No water | 548 | Start | 46 30.179 | 151 23.158 | 20-Aug | 21:35 |
| | | | | Bottom | 46 30.532 | 151 22.947 | 20-Aug | 21:48 |
| | | | | End | 46 30.842 | 151 22.662 | 20-Aug | 22:02 |
| Bussol-7 | Bussol-7 (kr025) | No water | 556 | Start | 46 31.970 | 151 26.764 | 21-Aug | 0:41 |
| | | | | Bottom | 46 32.156 | 151 26.241 | 21-Aug | 1:01 |
| | | | | End | 46 32.315 | 151 26.075 | 21-Aug | 1:17 |
| Bussol-8 | Bussol-8 (kr026) | No water | 1380 | Start | 46 34.038 | 151 29.819 | 21-Aug | 3:39 |
| | | | | Bottom | 46 34.298 | 151 28.310 | 21-Aug | 4:37 |
| | | | | End | 46 34.287 | 151 28.134 | 21-Aug | 5:15 |
| Bussol-9 | Bussol-9 (kr027) | No water | 2295 | Start | 46 35.100 | 151 32.602 | 21-Aug | 8:34 |
| | | | | Bottom | 46 35.071 | 151 32.835 | 21-Aug | 9:26 |
| | | | | End | 46 34.519 | 151 33.214 | 21-Aug | 10:08 |
| Bussol-10 | Bussol-10 (kr028) | No water | 2300 | Start | 46 36.930 | 151 35.116 | 21-Aug | 12:04 |
| | | | | Bottom | 46 36.735 | 151 35.034 | 21-Aug | 12:50 |
| | | | | End | 46 36.658 | 151 34.994 | 21-Aug | 13:30 |
| Bussol-11 | Bussol-11 (kr029) | No water | 1968 | Start | 46 39.016 | 151 38.076 | 21-Aug | 16:05 |
| | | | | Bottom | 46 39.609 | 151 38.102 | 21-Aug | 16:43 |
| | | | | End | 46 40.829 | 151 38.526 | 21-Aug | 17:27 |
| Bussol-12 | Bussol-12 (kr030) | No water | 1455 | Start | 46 41.568 | 151 41.119 | 21-Aug | 19:03 |
| | | | | Bottom | 46 42.659 | 151 39.505 | 21-Aug | 19:41 |
| | | | | End | 46 43.481 | 151 38.698 | 21-Aug | 20:12 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|-----------|-------------------------|----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| Bussol-13 | Bussol-13 (kr031) | Deep | 577 | Start | 46 43.815 | 151 43.002 | 21-Aug | 23:04 |
| | | | | Bottom | - | - | 21-Aug | - |
| | | | | End | 46 44.416 | 151 41.856 | 21-Aug | 23:48 |
| Bussol-13 | Bussol-13-2 (kr032) | Shallow | 913 | Start | 46 43.426 | 151 43.348 | 22-Aug | 1:30 |
| | | | | Bottom | 46 43.455 | 151 43.012 | 22-Aug | 1:54 |
| | | | | End | 46 43.752 | 151 42.440 | 22-Aug | 2:35 |
| A1 | A1 (kr033) | Deep | >2000 | Start | 46 00.168 | 152 30.516 | 22-Aug | 9:14 |
| | | | | Bottom | 46 00.705 | 152 31.177 | 22-Aug | 9:51 |
| | | | | End | 46 01.527 | 152 31.791 | 22-Aug | 10:46 |
| A1 | A-1-2 (kr034) | Shallow | - | Start | 46 00.073 | 152 30.069 | 22-Aug | 14:49 |
| | | | | Bottom | - | - | 22-Aug | - |
| | | | | End | 46 00.516 | 152 30.454 | 22-Aug | 15:19 |
| A1 | A-1-3 (kr035) | Bio | - | Start | 46 00.071 | 152 29.975 | 22-Aug | 18:34 |
| | | | | Bottom | - | - | 22-Aug | - |
| | | | | End | 46 00.244 | 152 30.154 | 22-Aug | 18:45 |
| Bussol-9 | Bussol-9-2 (kr036) | Deep | >2000 | Start | 46 35.087 | 151 32.165 | 23-Aug | 0:01 |
| | | | | Bottom | 46 35.821 | 151 32.364 | 23-Aug | 0:39 |
| | | | | End | 46 36.927 | 151 32.505 | 23-Aug | 1:35 |
| Bussol-9 | Bussol-9-2-2 (kr037) | Shallow | - | Start | 46 35.032 | 151 32.024 | 23-Aug | 5:37 |
| | | | | Bottom | 46 34.992 | 151 32.205 | 23-Aug | 5:47 |
| | | | | End | 46 34.864 | 151 32.630 | 23-Aug | 6:07 |
| A3 | A-3 (kr038) | No water | 2100 | Start | 47 00.182 | 150 51.781 | 23-Aug | 10:08 |
| | | | | Bottom | 47 00.287 | 150 51.701 | 23-Aug | 10:43 |
| | | | | End | 47 00.527 | 150 51.561 | 23-Aug | 11:20 |
| A4 | A-4 (kr039) | Deep | 3300 | Start | 47 30.164 | 150 20.652 | 23-Aug | 17:36 |
| | | | | Bottom | 47 30.707 | 150 21.593 | 23-Aug | 18:06 |
| | | | | End | 47 31.255 | 150 22.597 | 23-Aug | 18:59 |
| A4 | A-4-2 (kr040) | Shallow | - | Start | 47 29.963 | 150 20.630 | 23-Aug | 21:52 |
| | | | | Bottom | 47 30.041 | 150 20.771 | 23-Aug | 22:00 |
| | | | | End | 47 30.190 | 150 20.959 | 23-Aug | 22:17 |
| A4 | A-4-3 (kr041) | Bio | - | Start | 47 30.520 | 150 20.889 | 24-Aug | 2:22 |
| | | | | Bottom | 47 30.576 | 150 20.948 | 24-Aug | 2:26 |
| | | | | End | 47 30.700 | 150 21.064 | 24-Aug | 2:36 |
| A5 | A-5 (kr042) | No water | 3300 | Start | 48 00.015 | 149 49.098 | 24-Aug | 5:22 |
| | | | | Bottom | 48 00.405 | 149 49.199 | 24-Aug | 6:02 |
| | | | | End | 48 00.693 | 149 49.429 | 24-Aug | 6:39 |
| A6 | A-6 (kr043) | Deep | >1415 | Start | 48 29.985 | 149 17.495 | 24-Aug | 10:55 |
| | | | | Bottom | - | - | 24-Aug | - |
| | | | | End | 48 29.693 | 149 15.554 | 24-Aug | 12:05 |
| A6 | A-6-2 (kr044) | Shallow | - | Start | 48 30.155 | 149 17.311 | 24-Aug | 14:25 |
| | | | | Bottom | 48 30.223 | 149 17.119 | 24-Aug | 14:34 |
| | | | | End | 48 30.339 | 149 16.803 | 24-Aug | 14:51 |
| A6 | A-6-3 (kr045) | Bio | - | Start | 48 30.117 | 149 17.692 | 24-Aug | 17:48 |
| | | | | Bottom | 48 30.173 | 149 17.655 | 24-Aug | 17:52 |
| | | | | End | 48 30.250 | 149 17.586 | 24-Aug | 17:59 |
| A7 | A-7 (kr046) | No water | 1211 | Start | 48 59.909 | 148 46.577 | 24-Aug | 22:16 |
| | | | | Bottom | 48 59.917 | 148 46.474 | 24-Aug | 22:39 |
| | | | | End | 48 59.862 | 148 46.240 | 24-Aug | 23:06 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| B1 | B-1 (kr047) | Deep | 1050 | Start | 49 30.051 | 148 14.751 | 25-Aug | 4:09 |
| | | | | Bottom | 49 30.223 | 148 14.414 | 25-Aug | 4:29 |
| | | | | End | 49 30.403 | 148 13.944 | 25-Aug | 5:00 |
| B1 | B-1-2 (kr048) | Shallow | - | Start | 49 30.026 | 148 15.008 | 25-Aug | 7:15 |
| | | | | Bottom | 49 30.050 | 148 14.987 | 25-Aug | 7:23 |
| | | | | End | 49 30.050 | 148 14.916 | 25-Aug | 7:38 |
| B1 | B-1-3 (kr049) | Bio | - | Start | 49 29.566 | 148 14.592 | 25-Aug | 12:08 |
| | | | | Bottom | 49 29.343 | 148 14.399 | 25-Aug | 12:13 |
| | | | | End | 49 28.945 | 148 14.017 | 25-Aug | 12:24 |
| B2 | B-2 (kr050) | No water | >1175 | Start | 49 29.762 | 147 29.772 | 25-Aug | 15:36 |
| | | | | Bottom | 49 29.094 | 147 28.827 | 25-Aug | 16:05 |
| | | | | End | 49 28.525 | 147 27.992 | 25-Aug | 16:34 |
| B3 | B-3-1 (kr051) | Deep | >860 | Start | 49 29.804 | 146 44.575 | 25-Aug | 20:01 |
| | | | | Bottom | 49 29.701 | 146 44.137 | 25-Aug | 20:20 |
| | | | | End | 49 29.481 | 146 43.597 | 25-Aug | 20:53 |
| B3 | B-3-2 (kr052) | Shallow | - | Start | 49 29.662 | 146 45.155 | 26-Aug | 0:22 |
| | | | | Bottom | 49 29.512 | 146 45.141 | 26-Aug | 0:29 |
| | | | | End | 49 29.191 | 146 45.128 | 26-Aug | 0:42 |
| B4 | B-4 No LADCP | No water | 594 | Start | 49 29.918 | 145 59.956 | 26-Aug | 4:08 |
| | | | | Bottom | 49 29.729 | 145 59.843 | 26-Aug | 4:24 |
| | | | | End | 49 29.598 | 145 59.714 | 26-Aug | 4:38 |
| B5 | B-5-1 (kr053) | Deep | 423 | Start | 49 29.942 | 145 29.917 | 26-Aug | 6:52 |
| | | | | Bottom | 49 29.851 | 145 29.765 | 26-Aug | 7:02 |
| | | | | End | 49 29.744 | 145 29.416 | 26-Aug | 7:22 |
| B5 | B-5-2 (kr054) | Shallow | 418 | Start | - | 145 29.866 | 26-Aug | 10:47 |
| | | | | Bottom | 49 30.206 | 145 29.473 | 26-Aug | 11:00 |
| | | | | End | 49 30.395 | 145 28.928 | 26-Aug | 11:19 |
| B5 | B-5-3 (kr055) | Bio | - | Start | 49 30.183 | 145 30.094 | 26-Aug | 13:09 |
| | | | | Bottom | 49 30.235 | 145 30.096 | 26-Aug | 13:13 |
| | | | | End | 49 30.372 | 145 30.100 | 26-Aug | 13:23 |
| B6 | B-6 (kr056) | No water | 262 | Start | 49 30.231 | 145 00.072 | 26-Aug | 15:39 |
| | | | | Bottom | 49 30.463 | 145 00.189 | 26-Aug | 15:49 |
| | | | | End | 49 30.681 | 145 00.283 | 26-Aug | 15:59 |
| B7 | B-7 (kr057) | Total | 129 | Start | 49 30.065 | 144 31.017 | 26-Aug | 18:31 |
| | | | | Bottom | 49 30.128 | 144 31.015 | 26-Aug | 18:36 |
| | | | | End | 49 30.241 | 144 31.060 | 26-Aug | 18:47 |
| C1 | C-1-1 (kr058) | Total | 28 | Start | 52 15.167 | 143 29.786 | 27-Aug | 14:27 |
| | | | | Bottom | 52 15.181 | 143 29.780 | 27-Aug | 14:29 |
| | | | | End | 52 15.208 | 143 29.793 | 27-Aug | 14:35 |
| C1 | C-1-2 (kr059) | Bio | - | Start | 52 14.865 | 143 30.020 | 27-Aug | 16:41 |
| | | | | Bottom | - | - | 27-Aug | - |
| | | | | End | 52 14.898 | 143 30.111 | 27-Aug | 16:52 |
| C2 | C-2 (kr060) | No water | 47 | Start | 52 15.087 | 143 45.072 | 27-Aug | 17:33 |
| | | | | Bottom | 52 15.134 | 143 45.076 | 27-Aug | 17:37 |
| | | | | End | 52 15.210 | 143 45.060 | 27-Aug | 17:45 |
| C3 | C-3-1 (kr061) | Total | 75 | Start | 52 15.103 | 143 59.950 | 27-Aug | 21:08 |
| | | | | Bottom | 52 15.101 | 143 59.891 | 27-Aug | 21:15 |
| | | | | End | 52 15.041 | 143 59.663 | 27-Aug | 21:31 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|-----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| C3 | C-3-2 (kr062) | Bio | - | Start | 52 14.879 | 144 00.064 | 28-Aug | 0:04 |
| | | | | Bottom | 52 14.869 | 144 00.025 | 28-Aug | 0:08 |
| | | | | End | 52 14.839 | 143 59.960 | 28-Aug | 0:15 |
| C4 | C-4 (kr063) | No water | 119 | Start | 52 14.994 | 144 17.927 | 28-Aug | 1:47 |
| | | | | Bottom | 52 14.931 | 144 17.908 | 28-Aug | 1:54 |
| | | | | End | 52 14.871 | 144 17.914 | 28-Aug | 2:02 |
| C5 | C-5-1 (kr064) | Deep | 377 | Start | 52 14.938 | 144 34.918 | 28-Aug | 4:15 |
| | | | | Bottom | 52 14.848 | 144 34.779 | 28-Aug | 4:29 |
| | | | | End | 52 14.632 | 144 34.463 | 28-Aug | 4:53 |
| C5 | C-5-2 (kr065) | Shal.+Bio | - | Start | 52 14.936 | 144 34.794 | 28-Aug | 8:09 |
| | | | | Bottom | 52 14.896 | 144 34.680 | 28-Aug | 8:13 |
| | | | | End | 52 14.802 | 144 34.356 | 28-Aug | 8:25 |
| C6 | C-6 (kr066) | No water | >750 | Start | 52 15.189 | 144 59.887 | 28-Aug | 10:26 |
| | | | | Bottom | 52 15.277 | 144 59.481 | 28-Aug | 10:49 |
| | | | | End | 52 15.292 | 144 59.242 | 28-Aug | 11:06 |
| C7 | C-7-1 (kr067) | Deep | 1364 | Start | 52 15.135 | 145 20.094 | 28-Aug | 12:52 |
| | | | | Bottom | 52 15.262 | 145 19.743 | 28-Aug | 13:25 |
| | | | | End | 52 15.342 | 145 19.418 | 28-Aug | 14:00 |
| C7 | C-7-2 (kr068) | Shallow | - | Start | 52 15.074 | 145 19.913 | 28-Aug | 16:39 |
| | | | | Bottom | - | - | 28-Aug | - |
| | | | | End | 52 15.052 | 145 19.335 | 28-Aug | 17:12 |
| C7 | C-7-3 (kr069) | Bio | - | Start | 52 15.128 | 145 19.565 | 28-Aug | 20:04 |
| | | | | Bottom | - | - | 28-Aug | - |
| | | | | End | 52 15.185 | 145 19.118 | 28-Aug | 20:18 |
| C8 | C-8 (kr070) | No water | 1363 | Start | 52 15.223 | 145 39.644 | 28-Aug | 23:12 |
| | | | | Bottom | 52 15.817 | 145 38.572 | 28-Aug | 23:42 |
| | | | | End | 52 16.442 | 145 37.301 | 29-Aug | 0:15 |
| C9 | C-9-1 (kr071) | Deep | 1431 | Start | 52 15.207 | 145 59.769 | 29-Aug | 2:17 |
| | | | | Bottom | 52 16.045 | 145 59.133 | 29-Aug | 2:52 |
| | | | | End | 52 16.842 | 145 58.478 | 29-Aug | 3:36 |
| C9 | C-9-2 (kr072) | Shallow | - | Start | 52 15.035 | 146 00.081 | 29-Aug | 8:01 |
| | | | | Bottom | 52 15.082 | 146 00.111 | 29-Aug | 8:09 |
| | | | | End | 52 15.152 | 146 00.125 | 29-Aug | 8:24 |
| E1 | E-1-1 (kr073) | Total | 99 | Start | 54 26.604 | 142 52.856 | 30-Aug | 0:44 |
| | | | | Bottom | 54 26.802 | 142 52.941 | 30-Aug | 0:50 |
| | | | | End | 54 27.184 | 142 53.094 | 30-Aug | 1:01 |
| E1 | E-1-2 (kr074) | Bio | - | Start | 54 26.075 | 142 53.352 | 30-Aug | 3:35 |
| | | | | Bottom | - | - | 30-Aug | - |
| | | | | End | 54 26.051 | 142 53.702 | 30-Aug | 3:46 |
| E2 | E-2 (kr075) | Total | 85 | Start | 54 29.623 | 143 00.577 | 30-Aug | 4:51 |
| | | | | Bottom | 54 29.687 | 143 00.772 | 30-Aug | 4:57 |
| | | | | End | 54 29.711 | 143 01.159 | 30-Aug | 5:10 |
| E3 | E-3-1 (kr076) | Total | 94 | Start | 54 30.175 | 143 03.678 | 30-Aug | 6:51 |
| | | | | Bottom | 54 30.106 | 143 03.772 | 30-Aug | 6:57 |
| | | | | End | 54 30.004 | 143 03.984 | 30-Aug | 7:08 |
| E3 | E-3-2 (kr077) | Bio | - | Start | 54 29.795 | 143 01.833 | 30-Aug | 10:06 |
| | | | | Bottom | 54 29.770 | 143 01.698 | 30-Aug | 10:10 |
| | | | | End | 54 29.722 | 143 01.480 | 30-Aug | 10:18 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| E4 | E-4-1 (kr078) | Total | 106 | Start | 54 37.344 | 143 16.855 | 30-Aug | 12:00 |
| | | | | Bottom | 54 37.433 | 143 16.813 | 30-Aug | 12:09 |
| | | | | End | 54 37.552 | 143 16.689 | 30-Aug | 12:22 |
| E5 | E-5-1 (kr079) | Total | 112 | Start | 54 42.676 | 143 28.313 | 30-Aug | 14:17 |
| | | | | Bottom | 54 42.779 | 143 28.365 | 30-Aug | 14:24 |
| | | | | End | 54 43.012 | 143 28.482 | 30-Aug | 14:38 |
| E5 | E-5-2 (kr080) | Bio | - | Start | 54 42.432 | 143 28.342 | 30-Aug | 16:53 |
| | | | | Bottom | - | - | 30-Aug | - |
| | | | | End | 54 42.540 | 143 28.509 | 30-Aug | 17:03 |
| E6 | E-6 (kr081) | Total | 116 | Start | 54 45.660 | 143 34.940 | 30-Aug | 18:05 |
| | | | | Bottom | 54 45.734 | 143 34.932 | 30-Aug | 18:13 |
| | | | | End | 54 45.850 | 143 34.955 | 30-Aug | 18:24 |
| E7 | E-7 (kr082) | Total | 125 | Start | 54 49.649 | 143 43.937 | 30-Aug | 21:05 |
| | | | | Bottom | 54 49.702 | 143 43.853 | 30-Aug | 21:12 |
| | | | | End | 54 49.768 | 143 43.628 | 30-Aug | 21:21 |
| E8 | E-8-1 (kr083) | Deep | 492 | Start | 54 55.478 | 143 53.997 | 31-Aug | 2:06 |
| | | | | Bottom | 54 55.546 | 143 54.131 | 31-Aug | 2:19 |
| | | | | End | 54 55.700 | 143 54.359 | 31-Aug | 2:41 |
| E8 | E-8-2 (kr084) | Shallow | - | Start | 54 55.377 | 143 54.122 | 31-Aug | 7:27 |
| | | | | Bottom | 54 55.311 | 143 54.108 | 31-Aug | 7:33 |
| | | | | End | 54 55.231 | 143 54.051 | 31-Aug | 7:42 |
| E9 | E-9-1 (kr085) | Deep | 911 | Start | 55 02.026 | 144 11.104 | 31-Aug | 9:27 |
| | | | | Bottom | 55 01.773 | 144 11.179 | 31-Aug | 9:47 |
| | | | | End | 55 01.392 | 144 11.285 | 31-Aug | 10:18 |
| E9 | E-9-2 (kr086) | Shallow | - | Start | 55 02.135 | 144 10.601 | 31-Aug | 13:14 |
| | | | | Bottom | - | - | 31-Aug | - |
| | | | | End | 55 02.178 | 144 10.215 | 31-Aug | 13:34 |
| E9 | E-9-3 (kr087) | Bio | - | Start | 55 02.153 | 144 10.906 | 31-Aug | 16:17 |
| | | | | Bottom | 55 02.183 | 144 10.878 | 31-Aug | 16:21 |
| | | | | End | 55 02.266 | 144 10.791 | 31-Aug | 16:29 |
| F1 | F-1-1 (kr088) | Deep | 909 | Start | 55 30.073 | 143 59.784 | 2-Sep | 0:04 |
| | | | | Bottom | 55 30.523 | 143 59.113 | 2-Sep | 0:29 |
| | | | | End | 55 30.898 | 143 58.461 | 2-Sep | 0:56 |
| F1 | F-1-2 (kr089) | Shallow | - | Start | 55 29.981 | 143 59.709 | 2-Sep | 4:38 |
| | | | | Bottom | 55 29.969 | 143 59.652 | 2-Sep | 4:44 |
| | | | | End | 55 30.163 | 143 59.472 | 2-Sep | 5:00 |
| F2 | F-2 (kr090) | No water | 650 | Start | 55 30.046 | 143 30.033 | 2-Sep | 8:00 |
| | | | | Bottom | 55 30.150 | 143 30.068 | 2-Sep | 8:16 |
| | | | | End | 55 30.193 | 143 30.205 | 2-Sep | 8:34 |
| F3 | F-3-1 (kr091) | Deep | 356 | Start | 55 29.995 | 143 00.051 | 2-Sep | 11:00 |
| | | | | Bottom | 55 30.025 | 143 00.083 | 2-Sep | 11:10 |
| | | | | End | 55 30.065 | 143 00.115 | 2-Sep | 11:26 |
| F3 | F-3-2 (kr092) | Shallow | - | Start | 55 30.068 | 142 59.952 | 2-Sep | 14:35 |
| | | | | Bottom | 55 30.062 | 142 59.867 | 2-Sep | 14:39 |
| | | | | End | 55 30.043 | 142 59.697 | 2-Sep | 14:47 |
| F3 | F-3-3 (kr093) | Bio | - | Start | 55 30.165 | 142 59.942 | 2-Sep | 17:02 |
| | | | | Bottom | 55 30.148 | 142 59.896 | 2-Sep | 17:06 |
| | | | | End | 55 30.119 | 142 59.811 | 2-Sep | 17:13 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|----------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| F4 | F-4 (kr094) | No water | 298 | Start | 55 30.021 | 142 29.918 | 2-Sep | 19:08 |
| | | | | Bottom | 55 30.008 | 142 29.755 | 2-Sep | 19:16 |
| | | | | End | 55 29.999 | 142 29.548 | 2-Sep | 19:28 |
| F5 | F-5-1 (kr095) | Deep | 251 | Start | 55 29.955 | 141 59.998 | 2-Sep | 22:02 |
| | | | | Bottom | 55 29.798 | 141 59.970 | 2-Sep | 22:10 |
| | | | | End | 55 29.495 | 141 59.804 | 2-Sep | 22:24 |
| F5 | F-5-2 (kr096) | Shallow | - | Start | 55 29.788 | 142 00.019 | 3-Sep | 2:06 |
| | | | | Bottom | 55 29.599 | 141 59.963 | 3-Sep | 2:11 |
| | | | | End | 55 29.347 | 141 59.887 | 3-Sep | 2:19 |
| F6 | F-6 (kr097) | No water | 247 | Start | 55 29.989 | 141 30.106 | 3-Sep | 5:24 |
| | | | | Bottom | 55 29.883 | 141 30.090 | 3-Sep | 5:33 |
| | | | | End | 55 29.675 | 141 29.961 | 3-Sep | 5:46 |
| F7 | F-7-1 (kr098) | Total | 200 | Start | 55 29.872 | 141 00.077 | 3-Sep | 7:54 |
| | | | | Bottom | 55 29.623 | 140 59.977 | 3-Sep | 8:03 |
| | | | | End | 55 29.166 | 140 59.864 | 3-Sep | 8:18 |
| F7 | F-7-2 (kr100) | Bio | - | Start | 55 29.925 | 140 59.993 | 3-Sep | 11:23 |
| | | | | Bottom | 55 29.831 | 140 59.996 | 3-Sep | 11:27 |
| | | | | End | 55 29.660 | 141 00.031 | 3-Sep | 11:33 |
| G1 | G-1 (kr101) | Total | 163 | Start | 55 14.875 | 141 00.075 | 3-Sep | 13:17 |
| | | | | Bottom | 55 14.736 | 141 00.109 | 3-Sep | 13:24 |
| | | | | End | 55 14.440 | 141 00.146 | 3-Sep | 13:39 |
| G2 | G-2 (kr102) | Total | 135 | Start | 54 59.950 | 141 00.226 | 3-Sep | 16:31 |
| | | | | Bottom | 54 59.893 | 141 00.403 | 3-Sep | 16:37 |
| | | | | End | 54 59.752 | 141 00.812 | 3-Sep | 16:50 |
| G3 | G-3 (kr103) | Total | 111 | Start | 54 44.942 | 140 59.992 | 4-Sep | 12:04 |
| | | | | Bottom | 54 44.895 | 141 00.058 | 4-Sep | 12:10 |
| | | | | End | 54 44.775 | 141 00.158 | 4-Sep | 12:21 |
| G4 | G-4-1 (kr104) | Total | 68 | Start | 54 30.100 | 141 00.161 | 4-Sep | 14:33 |
| | | | | Bottom | 54 30.110 | 141 00.203 | 4-Sep | 14:38 |
| | | | | End | 54 30.108 | 141 00.281 | 4-Sep | 14:49 |
| G4 | G-4-2 (kr105) | Bio | - | Start | 54 30.032 | 141 00.013 | 4-Sep | 17:28 |
| | | | | Bottom | 54 30.032 | 141 00.025 | 4-Sep | 17:31 |
| | | | | End | 54 30.021 | 141 00.077 | 4-Sep | 17:39 |
| G5 | G-5 (kr106) | Total | 42 | Start | 54 14.845 | 140 59.723 | 4-Sep | 20:02 |
| | | | | Bottom | 54 14.815 | 140 59.626 | 4-Sep | 20:06 |
| | | | | End | 54 14.750 | 140 59.445 | 4-Sep | 20:13 |
| G6 | G-6 (kr107) | Total | 25 | Start | 53 59.872 | 140 59.813 | 4-Sep | 22:30 |
| | | | | Bottom | 53 59.792 | 140 59.815 | 4-Sep | 22:34 |
| | | | | End | 53 59.675 | 140 59.837 | 4-Sep | 22:40 |
| G7 | G-7 (kr108) | Total | 20 | Start | 53 44.960 | 141 00.030 | 5-Sep | 3:04 |
| | | | | Bottom | 53 44.889 | 141 00.002 | 5-Sep | 3:07 |
| | | | | End | 53 44.720 | 140 59.875 | 5-Sep | 3:13 |
| G8 | G-8 (kr109) | Total | 36 | Start | 53 44.938 | 141 29.960 | 5-Sep | 5:38 |
| | | | | Bottom | 53 44.800 | 141 29.935 | 5-Sep | 5:42 |
| | | | | End | 53 44.515 | 141 29.927 | 5-Sep | 5:52 |
| G9 | G-9-1 (kr110) | Total | 23 | Start | 53 44.973 | 142 00.121 | 6-Sep | 8:00 |
| | | | | Bottom | 53 44 948 | 142 00.174 | 6-Sep | 8:03 |
| | | | | End | 53 44 882 | 142 00.298 | 6-Sep | 8:10 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|---------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| G9 | G-9-2 (kr111) | Bio | - | Start | 53 44.928 | 142 00.125 | 6-Sep | 9:52 |
| | | | | Bottom | 53 44.907 | 142 00.160 | 6-Sep | 9:55 |
| | | | | End | 53 44.863 | 142 00.242 | 6-Sep | 10:01 |
| G10 | G-10 (kr112) | Total | 33 | Start | 53 55.153 | 142 00.039 | 6-Sep | 12:05 |
| | | | | Bottom | 53 55.152 | 142 00.117 | 6-Sep | 12:08 |
| | | | | End | 53 55.131 | 142 00.316 | 6-Sep | 12:16 |
| G11 | G-11 (kr113) | Total | 39 | Start | 54 04.977 | 142 00.011 | 6-Sep | 16:01 |
| | | | | Bottom | 54 04.938 | 142 00.085 | 6-Sep | 16:05 |
| | | | | End | 54 04.764 | 142 00.185 | 6-Sep | 16:16 |
| G12 | G-12 (kr114) | Total | 48 | Start | 54 15.021 | 141 59.959 | 6-Sep | 18:16 |
| | | | | Bottom | - | - | 6-Sep | 18:20 |
| | | | | End | 54 14.868 | 141 59.814 | 6-Sep | 18:30 |
| G13 | G-13 (kr115) | Total | 50 | Start | 54 24.933 | 141 59.394 | 6-Sep | 21:44 |
| | | | | Bottom | 54 24.906 | 141 59.356 | 6-Sep | 21:48 |
| | | | | End | 54 24.868 | 141 59.225 | 6-Sep | 21:56 |
| G14 | G-14 (kr116) | Total | 57 | Start | 54 40.040 | 141 59.926 | 6-Sep | 23:49 |
| | | | | Bottom | 54 40.065 | 141 59.902 | 6-Sep | 23:53 |
| | | | | End | 54 40.114 | 141 59.851 | 6-Sep | 23:59 |
| G15 | G-15 (kr117) | Total | 55 | Start | 54 40.121 | 142 19.976 | 7-Sep | 3:01 |
| | | | | Bottom | 54 40.158 | 142 19.979 | 7-Sep | 3:05 |
| | | | | End | 54 40.251 | 142 20.058 | 7-Sep | 3:14 |
| G16 | G-16 (kr118) | Total | 70 | Start | 54 39.963 | 142 39.964 | 7-Sep | 5:38 |
| | | | | Bottom | 54 39.957 | 142 39.992 | 7-Sep | 5:42 |
| | | | | End | 54 39.941 | 142 40.017 | 7-Sep | 5:55 |
| G16 | G-16-2 (kr119) | Bio | - | Start | 54 39.896 | 142 41.647 | 7-Sep | 8:31 |
| | | | | Bottom | 54 39.888 | 142 41.699 | 7-Sep | 8:34 |
| | | | | End | 54 39.868 | 142 41.827 | 7-Sep | 8:40 |
| D7 | D-7 (kr120) | Total | 94 | Start | 54 00.376 | 143 19.954 | 8-Sep | 0:20 |
| | | | | Bottom | 54 00.487 | 143 19.962 | 8-Sep | 0:24 |
| | | | | End | 54 00.714 | 143 19.954 | 8-Sep | 0:35 |
| D6 | D-6 (kr121) | Total | 107 | Start | 54 00.276 | 143 34.988 | 8-Sep | 3:38 |
| | | | | Bottom | 54 00.509 | 143 34.967 | 8-Sep | 3:44 |
| | | | | End | 54 00.907 | 143 35.003 | 8-Sep | 3:55 |
| D5 | D-5 (kr122) | Total | 136 | Start | 54 00.464 | 143 50.001 | 8-Sep | 5:56 |
| | | | | Bottom | 54 00.711 | 143 50.029 | 8-Sep | 6:03 |
| | | | | End | 54 01.269 | 143 50.112 | 8-Sep | 6:19 |
| D5 | D-5-2 (kr123) | Bio | - | Start | 54 00.032 | 143 50.130 | 8-Sep | 9:41 |
| | | | | Bottom | 54 00.121 | 143 50.220 | 8-Sep | 9:45 |
| | | | | End | 54 00.334 | 143 50.456 | 8-Sep | 9:54 |
| D4 | D4 (kr124) | Deep | 435 | Start | 54 00.064 | 144 00.282 | 8-Sep | 11:05 |
| | | | | Bottom | 54 00.268 | 144 00.896 | 8-Sep | 11:19 |
| | | | | End | 54 00.528 | 144 01.658 | 8-Sep | 11:40 |
| D4 | D-4-2 (kr125) | Shallow | - | Start | 53 59.943 | 144 00.128 | 8-Sep | 14:18 |
| | | | | Bottom | 53 59.964 | 144 00.232 | 8-Sep | 14:21 |
| | | | | End | 53 59.998 | 144 00.451 | 8-Sep | 14:28 |
| D3 | D-3-1 (kr126) | Deep | 992 | Start | 53 59.993 | 144 10.148 | 8-Sep | 16:43 |
| | | | | Bottom | - | - | 8-Sep | - |
| | | | | End | 54 00.385 | 144 11.560 | 8-Sep | 17:49 |

| Station | Cast Name (LADCP-No) | Type | Depth (m) | | Latitude (N) | Longitude (E) | Date (Local) | Time (Local) |
|---------|-------------------------|---------|--------------|--------|-----------------|------------------|-----------------|-----------------|
| D3 | D-3-2 (kr127) | Shallow | - | Start | 54 00.018 | 144 09.999 | 8-Sep | 20:48 |
| | | | | Bottom | 54 00.070 | 144 10.172 | 8-Sep | 20:55 |
| | | | | End | 54 00.137 | 144 10.301 | 8-Sep | 21:05 |
| D2 | D-2-1 (kr128) | Deep | 1180 | Start | 54 00.104 | 144 19.898 | 9-Sep | 0:30 |
| | | | | Bottom | 54 00.489 | 144 20.048 | 9-Sep | 1:01 |
| | | | | End | 54 00.861 | 144 20.285 | 9-Sep | 1:35 |
| D2 | D-2-2 (kr129) | Shallow | - | Start | 54 00.062 | 144 19.921 | 9-Sep | 4:06 |
| | | | | Bottom | 54 00.144 | 144 19.978 | 9-Sep | 4:14 |
| | | | | End | 54 00.329 | 144 20.074 | 9-Sep | 4:32 |
| D1 | D-1-1 (kr130) | Deep | 1425 | Start | 54 00.281 | 144 50.237 | 9-Sep | 7:59 |
| | | | | Bottom | 54 01.004 | 144 50.749 | 9-Sep | 8:33 |
| | | | | End | 54 01.952 | 144 51.174 | 9-Sep | 9:11 |
| D1 | D-1-2 (kr131) | Shallow | - | Start | 54 00.107 | 144 50.211 | 9-Sep | 13:20 |
| | | | | Bottom | 54 00.267 | 144 50.510 | 9-Sep | 13:29 |
| | | | | End | 54 00.509 | 144 51.012 | 9-Sep | 13:44 |
| D1 | D-1-3 (kr132) | Bio | - | Start | 54 00.027 | 144 50.019 | 8-Sep | 16:45 |
| | | | | Bottom | 54 00.087 | 144 50.070 | 8-Sep | 16:48 |
| | | | | End | 54 00.237 | 144 50.383 | 8-Sep | 16:59 |

Table C-2. Shear Probe Operation Logs.

| Station | File Name | Date | Time | Lat.(Start) | Lon.(Start) | END | Lat.(End) | Lon.(End) | Max Depth(m) |
|------------|-------------|--------|-------|-------------|--------------|-------|-------------|--------------|--------------|
| Urup-W-1 | VMP_007_049 | 14-Aug | 20:34 | 45 09.983 N | 149 24.164 E | 20:48 | 45 10.098 N | 149 24.212 E | 207 |
| | VMP_007_050 | 14-Aug | 23:31 | 45 10.426 N | 149 23.695 E | 23:50 | 45 10.345 N | 149 23.883 E | 335 |
| Urup-W-2 | VMP_007_051 | 15-Aug | 2:25 | 45 10.437 N | 149 24.060 E | 2:44 | 45 10.234 N | 149 23.975 E | 415 |
| Urup-W-3 | VMP_007_052 | 15-Aug | 6:20 | 45 10.101 N | 149 24.387 E | 6:43 | 45 09.914 N | 149 23.806 E | 350 |
| Urup-W-4 | VMP_007_053 | 15-Aug | 10:23 | 45 10.475 N | 149 24.125 E | 10:45 | 45 10.135 N | 149 24.027 E | 380 |
| Urup-W-5 | VMP_007_054 | 15-Aug | 14:07 | 45 10.551 N | 149 25.435 E | 14:31 | 45 10.319 N | 149 25.173 E | 203 |
| Urup-W-6 | VMP_007_055 | 15-Aug | 18:52 | 45 09.414 N | 149 24.820 E | 19:20 | 45 09.332 N | 149 24.443 E | 354 |
| Urup-W-7 | VMP_007_056 | 15-Aug | 21:08 | 45 10.090 N | 149 24.089 E | 21:36 | 45 10.356 N | 149 24.356 E | 419 |
| Urup-E-1 | VMP_007_057 | 16-Aug | 9:46 | 46 22.246 N | 150 40.264 E | 10:16 | 46 22.124 N | 150 39.527 E | 498 |
| Urup-E-2 | VMP_007_058 | 16-Aug | 13:28 | 46 22.033 N | 150 39.285 E | 14:12 | 46 22.422 N | 150 37.849 E | 497 |
| Urup-E-3 | VMP_007_060 | 16-Aug | 17:45 | 46 22.327 N | 150 39.002 E | 18:30 | 46 23.017 N | 150 38.277 E | 487 |
| Urup-E-4 | VMP_007_062 | 16-Aug | 21:37 | 46 21.877 N | 150 40.027 E | 22:06 | 46 21.424 N | 150 40.258 E | 488 |
| Urup-E-5 | VMP_007_063 | 17-Aug | 1:44 | 46 24.453 N | 150 40.531 E | 2:14 | 46 24.133 N | 150 40.615 E | 555 |
| Urup-E-6 | VMP_007_064 | 17-Aug | 5:42 | 46 23.504 N | 150 40.425 E | 6:31 | 46 24.505 N | 150 38.707 E | 550 |
| Urup-E-7 | VMP_007_066 | 17-Aug | 8:06 | 46 23.039 N | 150 38.877 E | 8:45 | 46 22.360 N | 150 38.398 E | 686 |
| Bussol-1 | VMP_007_067 | 17-Aug | | | | 13:00 | 46 27.037 N | 151 00.891 E | 450 |
| Bussol-2 | VMP_007_068 | 17-Aug | 15:08 | 46 26.782 N | 151 03.619 E | | | | 505 |
| Bussol-3-1 | VMP_007_069 | 18-Aug | 3:23 | 46 26.901 N | 151 09.570 E | 5:58 | 46 27.157 N | 151 11.067 E | 800 |
| Bussol-3-2 | VMP_007_071 | 18-Aug | 10:50 | 46 27.763 N | 151 08.867 E | 11:29 | 46 27.377 N | 150 07.777 E | 565 |
| Bussol-3-3 | VMP_007_072 | 18-Aug | 15:08 | 46 26.100 N | 151 07.627 E | 16:09 | 46 25.432 N | 151 08.622 E | 465 |
| Bussol-3-4 | VMP_007_073 | 18-Aug | 18:37 | 46 25.591 N | 151 07.052 E | 19:12 | 46 25.820 N | 151 06.757 E | 288 |
| Bussol-3-5 | VMP_007_075 | 18-Aug | 22:35 | 46 26.153 N | 151 06.792 E | 23:08 | 46 26.354 N | 151 06.960 E | 315 |
| Bussol-3-6 | VMP_007_078 | 19-Aug | 1:11 | 46 26.261 N | 151 07.593 E | 1:46 | 46 26.387 N | 151 07.410 E | 602 |
| Bussol-4 | VMP_007_080 | 19-Aug | 3:42 | 46 26.776 N | 151 12.428 E | 4:16 | 46 26.687 N | 151 12.690 E | 670 |
| Bussol-5 | VMP_007_081 | 19-Aug | 6:34 | 46 28.148 N | 151 15.125 E | 7:13 | 46 27.648 N | 151 15.407 E | 630 |
| Bussol-6 | VMP_007_083 | 19-Aug | 9:17 | 46 29.299 N | 151 19.765 E | 9:39 | 46 29.101 N | 151 19.739 E | 458 |
| A-2 | VMP_007_085 | 19-Aug | 11:30 | 46 31.524 N | 151 22.206 E | 12:02 | 46 31.317 N | 151 22.098 E | 528 |
| Bussol-7 | VMP_007_087 | 19-Aug | 15:04 | 46 32.464 N | 151 26.183 E | 15:39 | 46 31.930 N | 151 25.792 E | 415 |
| Bussol-8 | VMP_007_089 | 19-Aug | 18:57 | 46 34.476 N | 151 28.884 E | 19:54 | 46 33.888 N | 151 29.156 E | 855 |
| Bussol-9 | VMP_007_091 | 19-Aug | 23:44 | 46 34.302 N | 151 32.444 E | 0:27 | 46 34.417 N | 151 32.268 E | 617 |
| Bussol-10 | VMP_007_093 | 20-Aug | 2:43 | 46 36.748 N | 151 34.934 E | 3:21 | 46 37.189 N | 151 34.641 E | 620 |
| Bussol-11 | VMP_007_095 | 20-Aug | 6:43 | 46 41.104 N | 151 38.719 E | 7:25 | 46 41.592 N | 151 38.632 E | 520 |
| Bussol-12 | VMP_007_097 | 20-Aug | 9:51 | 46 44.505 N | 151 38.170 E | 10:55 | 46 44.702 N | 151 36.729 E | 497 |
| Bussol-13 | VMP_007_100 | 20-Aug | 13:16 | 46 44.489 N | 151 41.517 E | 13:46 | 46 44.506 N | 151 41.240 E | 455 |
| A-3 | VMP_007_102 | 22-Aug | 1:09 | 46 59.957 N | 150 51.799 E | 1:50 | 46 59.652 N | 150 52.232 E | 635 |
| G-2-1 | VMP_007_104 | 2-Sep | 10:06 | 54 59.958 N | 141 00.417 E | 10:12 | 55 00.015 N | 141 00.560 E | 97 |
| G-2-2 | VMP_007_106 | 2-Sep | 12:01 | 55 00.104 N | 141 00.064 E | 12:07 | 55 00.145 N | 141 00.120 E | 125 |
| G-2-3 | VMP_007_108 | 2-Sep | 13:58 | 54 59.958 N | 141 00.301 E | 14:04 | 55 00.007 N | 141 00.268 E | 125 |
| G-2-4 | VMP_007_110 | 2-Sep | 15:58 | 55 00.068 N | 141 00.301 E | 16:05 | 55 00.033 N | 141 00.397 E | 120 |
| G-2-5 | VMP_007_113 | 2-Sep | 17:56 | 54 59.995 N | 141 00.235 E | 18:02 | 54 59.895 N | 141 00.314 E | 104 |
| G-2-6 | VMP_007_116 | 2-Sep | 20:07 | 55 00.414 N | 141 00.945 E | 20:15 | 55 00.459 N | 141 00.931 E | 122 |

Table C-3. Sediment Corings Logs

* SC, AC, GC indicate "Smith-Macintyre type of Grab Sampler", "Ashura type of Multiple Corer" and "Gravity Corer", respectively.

| Station Name | Type of Corer (*) | Time of Start (GMT) | | Bottom | | End | Bottom Location | | Depth | Wire Out | Remark |
|--------------|-------------------|---------------------|-------|--------|-------|-------|-----------------|------------|-------|----------|--|
| | | date | h/min | h/min | h/min | | Lat. (N) | Long. (E) | | | |
| B5 | SC | 25-Aug | 21:03 | 21:13 | 21:40 | 21:40 | 49 29.932 | 145 29.793 | 435 | 430 | Mud |
| B5 | AC | 25-Aug | 22:05 | 22:20 | 22:25 | 22:25 | 49 30.019 | 145 29.557 | 435 | 440 | |
| B5 | GC | 25-Aug | 22:41 | 22:49 | 23:00 | 23:00 | 49 29.965 | 145 28.943 | 435 | 445 | |
| B7 | SC | 26-Aug | 7:55 | 7:58 | 8:01 | 8:01 | 49 30.381 | 144 31.149 | 127 | 135 | Mud (stiff) |
| B7 | AC | 26-Aug | 8:28 | 8:32 | 8:35 | 8:35 | 49 30.070 | 144 31.075 | 127 | 137 | 1 long core among 3 |
| B7 | GC | 26-Aug | 8:46 | 8:51 | 8:54 | 8:54 | 49 30.312 | 144 31.236 | 127 | 137 | ~ 10cm |
| C1 | SC | 27-Aug | 3:44 | 3:44 | 3:45 | 3:45 | 52 15.248 | 143 29.814 | 29.1 | 30 | Sand / Large plankton biomass |
| C1 | AC | 27-Aug | 3:51 | 3:53 | 3:55 | 3:55 | 52 15.272 | 143 29.869 | 29.1 | 27 | Sand / Large plankton biomass |
| C3 | SC | 27-Aug | 10:37 | 10:40 | 10:45 | 10:45 | 52 14.953 | 143 59.621 | 73 | 77 | Sand |
| E2 | SC | 29-Aug | 18:12 | 18:21 | 18:27 | 18:27 | 52 29.728 | 143 01.495 | 89 | 95 | including gravels |
| E4 | SC | 30-Aug | 1:28 | 1:32 | 1:30 | 1:30 | 54 47.673 | 143 16.610 | 110 | 118 | Sand / Abundant organisms as echinoid |
| E4 | AC | 30-Aug | 1:39 | 1:46 | 1:50 | 1:50 | 54 37.844 | 143 16.542 | 110 | 120 | Sand |
| F5 | SC | 2-Sep | 11:31 | 11:41 | 11:51 | 11:51 | 55 29.087 | 141 59.488 | 245 | 300 | Bottom undetected |
| F5 | AC | 2-Sep | 11:51 | 11:59 | 12:15 | 12:15 | 55 28.625 | 141 59.231 | 245 | 290 | |
| F5 | GC | 2-Sep | 12:15 | 12:23 | 12:35 | 12:35 | 55 27.935 | 141 58.876 | 245 | 310 | |
| F7 | SC | 2-Sep | 21:50 | 21:56 | 22:00 | 22:00 | 55 29.774 | 140 59.845 | 200 | 300 | Bottom undetected |
| F7 | AC | 2-Sep | 22:08 | 22:12 | 22:17 | 22:17 | 55 29.316 | 140 59.661 | 200 | 230 | |
| F7 | GC | 2-Sep | 22:46 | 22:49 | 22:54 | 22:54 | 55 30.021 | 141 00.178 | 200 | 250 | |
| G2 | SC | 3-Sep | 5:58 | 5:58 | 6:08 | 6:08 | 54 59.624 | 141 01.155 | 135 | 187 | Bottom undetected / Abundant gravels etc |
| G2 | AC | 3-Sep | 6:33 | 6:33 | 6:42 | 6:42 | 55 00.190 | 141 00.239 | 135 | 145 | Abundant gravels and starfish |
| G2 | GC | 3-Sep | 6:51 | 6:51 | 6:59 | 6:59 | 55 00.058 | 141 00.911 | 135 | 150 | Abundant gravels and starfish |
| G4 | SC | 4-Sep | 4:37 | 4:39 | 4:42 | 4:42 | 54 30.047 | 141 00.525 | 65 | 70 | Sand, bivalve |
| G4 | AC | 4-Sep | 4:45 | 4:48 | 4:51 | 4:51 | 54 30.066 | 141 00.589 | 65 | 70 | Sand |
| G6 | SC | 4-Sep | 11:47 | 11:49 | 11:51 | 11:51 | 53 59.454 | 140 59.920 | 26 | 28 | Sand / Abundant starfish, bivalves |
| G8 | SC | 4-Sep | 9:49 | 19:51 | 19:54 | 19:54 | 53 44.326 | 141 31.389 | 36 | 50 | Mud / Bones, gravels, bivalves |
| G10 | SC | 6-Sep | 2:11 | 2:12 | 2:14 | 2:14 | 53 55.064 | 142 00.531 | 31 | 35 | Mixture of Mud and Sand. Black layers below / Bivalves and clamworms |
| G10 | AC | 6-Sep | 2:25 | 2:27 | 2:29 | 2:29 | 53 55.123 | 142 01.049 | 30 | 34 | Sand |
| G12 | SC | 6-Sep | 7:36 | 7:39 | 7:41 | 7:41 | 54 14.775 | 141 59.661 | 48 | 52 | Abundant clamworm pipes, gravels, bivalves, gastropod, crabs |
| G12 | AC | 6-Sep | 7:44 | 7:47 | 7:50 | 7:50 | 54 14.696 | 141 59.495 | 48 | 55 | Mud with clamworm pipes and gravels |
| G14 | SC | 6-Sep | 13:06 | 13:09 | 13:12 | 13:12 | 54 40.198 | 141 59.728 | 58 | 62 | Sand / Abundant starfish |
| G16 | SC | 6-Sep | 19:01 | 21:03 | 19:07 | 19:07 | 54 39.949 | 142 40.021 | 70 | 75 | Sand / Abundant gravels (~ 10cm) |
| D7 | SC | 7-Sep | 13:40 | 13:44 | 13:48 | 13:48 | 54 00.933 | 143 19.978 | 93 | 99 | Sand / Abundant gravels, gastropods, seaweed |
| D6 | SC | 7-Sep | 16:58 | 17:01 | 17:06 | 17:06 | 54 01.178 | 143 50.777 | 118 | 118 | Sand and gravels |
| D5 | SC | 7-Sep | 21:03 | 19:28 | 19:32 | 19:32 | 54 39.949 | 143 50.194 | 137 | 145 | Sand, gravels and actinian |
| D4 | SC | 8-Sep | 1:54 | 2:00 | 2:17 | 2:17 | 54 01.572 | 144 01.173 | 440 | 700 | Bottom undetected / Mixture of sand and mud |
| D4 | AC | 8-Sep | 2:20 | 2:30 | 2:38 | 2:38 | 54 00.096 | 144 01.876 | 480 | 536 | Mixture of sand and mud |
| D3 | AC | 8-Sep | 8:22 | 8:46 | 9:05 | 9:05 | 54 00.289 | 144 08.755 | 970 | 1300 | Bottom undetected / Mud attached on top of 2 corers, too |
| D2 | AC | 8-Sep | 15:05 | 15:32 | 15:52 | 15:52 | 54 00.372 | 144 20.323 | 1182 | 1400 | Surface oxidation layer of 1cm |
| D1 | AC | 9-Sep | 3:54 | 4:14 | 4:32 | 4:32 | 54 00.545 | 144 50.953 | 1425 | 1650 | Surface oxidation layer of 4cm |

Table C-4. Plankton Net Logs

| Stn | Lat | Long | Date | Local time | Net type | Mesh (mm) | Wire out (m) | Sampling layer (m) | Wire angle | Flow M. reading | Estimate d depth (m) | Estimated filtered Volume (m ³) | Remarks (HU: Hokkaido University; No sign: University of Tokyo) |
|----------|----------|-----------|-----------|------------|----------|-----------|--------------|--------------------|------------|-----------------|----------------------|---|---|
| URUP-E | 46 22.2 | 150 39.53 | 2006/8/16 | 19:07 | Norpac | 0.1 | 30 | | | - | - | - | for HU |
| | | | | 19:39 | Norpac | 0.1 | 150 | | 42 | 1839 | 112 | 29.4 | |
| A1 | 46 0.17 | 152 30.52 | 2006/8/22 | 11:40 | Norpac | 0.1 | 30 | | 39 | 909 | 23 | 14.5 | for HU |
| | | | | 11:52 | Norpac | 0.1 | 150 | | 53 | 2000 | 90 | 32.0 | |
| A1 | 46 0.17 | 152 30.52 | 2006/8/22 | 13:15 | VMPS | 0.33 | | 1500-1000 | | | | 125.0 | |
| | | | | | | 0.33 | | 1000-500 | | | | 125.0 | |
| | | | | | | 0.33 | | 500-200 | | | | 75.0 | |
| | | | | | | 0.33 | | 200-0 | | | | 50.0 | |
| Bussol-9 | 46 35.09 | 151 32.17 | 2006/8/23 | 2:17 | Norpac | 0.1 | 30 | | 2 | 270 | 30 | 4.3 | for HU |
| | | | | 2:26 | Norpac | 0.1 | 150 | | 8 | 1335 | 149 | 21.4 | |
| Bussol-9 | 46 35.09 | 151 32.17 | 2006/8/23 | 3:31 | VMPS | 0.33 | | 1500-1000 | | | | 125.0 | |
| | | | | | | 0.33 | | 1000-500 | | | | 125.0 | |
| | | | | | | 0.33 | | 500-200 | | | | 75.0 | |
| | | | | | | 0.33 | | 200-0 | | | | 50.0 | |
| A4 | 47 29.96 | 150 20.63 | 2006/8/23 | 20:03 | Norpac | 0.1 | 30 | | 12 | 302 | 29 | 4.8 | for HU |
| | | | | 20:10 | Norpac | 0.1 | 150 | | 4 | 1160 | 150 | 18.6 | |
| A6 | 48 29.99 | 149 17.5 | 2006/8/24 | 13:16 | Norpac | 0.1 | 30 | | 23 | 316 | 28 | 5.1 | for HU |
| | | | | 13:25 | Norpac | 0.1 | 150 | | 43 | 1850 | 110 | 29.6 | |
| B1 | 49 30.05 | 148 14.75 | 2006/8/25 | 5:40 | Norpac | 0.1 | 50 | | 14 | 492 | 49 | 7.9 | for HU |
| | | | | 5:50 | Norpac | 0.1 | 150 | | 33 | 1696 | 126 | 27.1 | |
| B1 | 49 30.05 | 148 14.75 | 2006/8/25 | 6:24 | VMPS | 0.33 | | 800-500 | | | | 75.0 | |
| | | | | | | 0.33 | | 500-200 | | | | 75.0 | |
| | | | | | | 0.33 | | 200-30 | | | | 42.5 | |
| | | | | | | 0.33 | | 30-0 | | | | 7.5 | |
| B3 | 49 29.8 | 146 44.58 | 2006/8/25 | 21:40 | Norpac | 0.1 | 50 | | 2 | 460 | 50 | 7.4 | for HU |
| | | | | 21:54 | Norpac | 0.1 | 150 | | 15 | 1600 | 145 | 25.6 | |
| B5 | 49 29.94 | 145 29.92 | 2006/8/26 | 12:15 | Norpac | 0.1 | 50 | | 3 | 555 | 50 | 8.9 | for HU |
| | | | | 12:25 | Norpac | 0.1 | 150 | | 49 | 2120 | 98 | 33.9 | |

| Stn | Lat | Long | Date | Local time | Net type | Mesh (mm) | Wire out (m) | Sampling layer (m) | Wire angle | Flow M. reading | Estimate d depth (m) | Estimated filtered Volume (m ³) | Remarks (HU: Hokkaido University; No sign: University of Tokyo) |
|-----|----------|-----------|-----------|------------|----------|-----------|--------------|--------------------|------------|-----------------|----------------------|---|---|
| B7 | 49 30.07 | 144 31.02 | 2006/8/26 | 20:21 | Norpac | 0.1 | 50 | | 15 | 555 | 48 | 8.9 | for HU |
| | | | | 20:30 | Norpac | 0.1 | 135 | | 16 | 2120 | 130 | 33.9 | from the bottom |
| C1 | 52 15.17 | 143 29.79 | 2006/8/27 | 14:10 | Norpac | 0.1 | 30 | | 16 | 255 | 29 | 4.1 | for HU |
| | | | | 14:20 | Norpac | 0.1 | 27 | | 16 | 258 | 26 | 4.1 | from the bottom |
| C3 | 52 15.1 | 143 59.95 | 2006/8/27 | 21:58 | Norpac | 0.1 | 30 | | 6 | 143 | 30 | 2.3 | for HU |
| | | | | 22:05 | Norpac | 0.1 | 72 | | 0 | 410 | 72 | 6.6 | from the bottom |
| C5 | 52 14.94 | 144 34.92 | 2006/8/28 | 5:30 | Norpac | 0.1 | 50 | | 21 | 505 | 47 | 8.1 | for HU |
| | | | | 5:39 | Norpac | 0.1 | 150 | | 25 | 1390 | 136 | 22.2 | |
| C7 | 52 15.14 | 145 20.09 | 2006/8/28 | 14:52 | Norpac | 0.1 | 50 | | 6 | 490 | 50 | 7.8 | for HU |
| | | | | 15:00 | Norpac | 0.1 | 160 | | 15 | 1420 | 155 | 22.7 | |
| C9 | 52 15.21 | 145 59.77 | 2006/8/29 | 5:32 | Norpac | 0.1 | 50 | | 20 | 510 | 47 | 8.2 | for HU |
| | | | | 5:40 | Norpac | 0.1 | 150 | | 28 | 1382 | 132 | 22.1 | |
| C9 | 52 15.21 | 145 59.77 | 2006/8/29 | 6:31 | VMPS | 0.33 | | 1200-500 | | | | 175.0 | |
| | | | | | | | | 500-200 | | | | 75.0 | |
| | | | | | | | | 200-30 | | | | 42.5 | |
| | | | | | | | | 30-0 | | | | 7.5 | |
| E1 | 54 26.6 | 142 52.86 | 2006/8/30 | 1:39 | Norpac | 0.1 | 30 | | 9 | 335 | 30 | 5.4 | for HU |
| | | | | | Norpac | 0.1 | 108 | | 10 | 904 | 106 | 14.5 | from the bottom |
| E3 | 54 30.18 | 143 3.68 | 2006/8/30 | 7:25 | Norpac | 0.1 | 30 | | 13 | 278 | 29 | 4.4 | for HU |
| | | | | 7:31 | Norpac | 0.1 | 96 | | 13 | 832 | 94 | 13.3 | from the bottom |
| E5 | 54 42.68 | 143 28.31 | 2006/8/30 | 15:42 | Norpac | 0.1 | 50 | | 34 | 778 | 41 | 12.4 | for HU |
| | | | | 15:53 | Norpac | 0.1 | 130 | | 34 | 1764 | 108 | 28.2 | from the bottom |
| E7 | 54 49.65 | 143 43.94 | 2006/8/30 | 21:32 | Norpac | 0.1 | 50 | | 8 | 480 | 50 | 7.7 | for HU |
| | | | | 21:42 | Norpac | 0.1 | 125 | | 22 | 1540 | 116 | 24.6 | |
| E9 | 55 2.03 | 144 11.1 | 2006/8/31 | 10:53 | Norpac | 0.1 | 50 | | 7 | 450 | 50 | 7.2 | for HU |
| | | | | 11:03 | Norpac | 0.1 | 150 | | 2 | 2033 | 150 | 32.5 | |
| E9 | 55 2.03 | 144 11.1 | 2006/8/31 | 11:35 | VMPS | 0.33 | | 800-500 | | | | 75.0 | |
| | | | | | | | | 500-200 | | | | 75.0 | |
| | | | | | | | | 200-30 | | | | 42.5 | |
| | | | | | | | | 30-0 | | | | 7.5 | |
| F1 | 55 30.07 | 143 59.78 | 2006/9/2 | 1:38 | Norpac | 0.1 | 50 | | 9 | 441 | 49 | 7.1 | for HU |
| | | | | 1:48 | Norpac | 0.1 | 150 | | 5 | 1170 | 149 | 18.7 | |

| Stn | Lat | Long | Date | Local time | Net type | Mesh (mm) | Wire out (m) | Sampling layer (m) | Wire angle | Flow M. reading | Estimate d depth (m) | Estimated filtered Volume (m ³) | Remarks (HU: Hokkaido University; No sign: University of Tokyo) |
|-----|----------|-----------|----------|------------|----------|-----------|--------------|--------------------------------------|------------|-----------------|----------------------|---|---|
| F1 | 55 30.07 | 143 59.78 | 2006/9/2 | 2:25 | VMPS | 0.33 | | 800-500 500-200 200-30 30-0 | | | | 75.0 75.0 42.5 7.5 | |
| F3 | 55 30 | 143 0.05 | 2006/9/2 | 11:55 | Norpac | 0.1 | 50 | | 13 | 410 | 49 | 6.6 | for HU |
| F5 | 55 29.96 | 142 0 | 2006/9/3 | 12:04 | Norpac | 0.1 | 150 | | 6 | 1040 | 149 | 16.6 | |
| F7 | 55 29.87 | 141 0.08 | 2006/9/3 | 0:29 | Norpac | 0.1 | 50 | | 31 | 658 | 43 | 10.5 | for HU |
| G2 | 54 59.95 | 141 0.23 | 2006/9/3 | 0:33 | Norpac | 0.1 | 150 | | 44 | 2026 | 108 | 32.4 | |
| G4 | 54 30.1 | 141 0.16 | 2006/9/3 | 10:01 | Norpac | 0.1 | 50 | | 40 | 745 | 38 | 11.9 | for HU |
| G6 | 53 59.87 | 140 59.81 | 2006/9/3 | 10:11 | Norpac | 0.1 | 150 | | 45 | 1900 | 106 | 30.4 | |
| G8 | 53 44.94 | 141 29.96 | 2006/9/5 | 18:10 | Norpac | 0.1 | 30 | | 44 | 448 | 22 | 7.2 | for HU |
| G10 | 53 55.15 | 142 0.04 | 2006/9/6 | 18:18 | Norpac | 0.1 | 150 | | 60 | 2070 | 75 | 33.1 | |
| G12 | 54 15.02 | 141 59.96 | 2006/9/6 | 15:23 | Norpac | 0.1 | 30 | | 3 | 319 | 30 | 5.1 | for HU |
| G14 | 54 40.04 | 141 59.93 | 2006/9/7 | 15:30 | Norpac | 0.1 | 66 | | 0 | 250 | 66 | 4.0 | from the bottom |
| G16 | 54 39.96 | 142 39.96 | 2006/9/7 | 23:01 | Norpac | 0.1 | 32 | | 19 | 485 | 30 | 7.8 | for HU |
| D7 | 54 0.38 | 143 19.95 | 2006/9/8 | 23:07 | Norpac | 0.1 | 31 | | 24 | 390 | 28 | 6.2 | from the bottom |
| D5 | 54 0.46 | 143 50 | 2006/9/8 | 6:23 | Norpac | 0.1 | 30 | | 47 | 847 | 20 | 13.6 | for HU |
| D3 | 53 59.99 | 144 10.15 | 2006/9/8 | 6:31 | Norpac | 0.1 | 55 | | 47 | 1409 | 38 | 22.5 | from the bottom |
| | | | | 12:58 | Norpac | 0.1 | 34 | | 26 | 390 | 31 | 6.2 | for HU |
| | | | | 13:04 | Norpac | 0.1 | 32 | | 20 | 349 | 30 | 5.6 | |
| | | | | 19:57 | Norpac | 0.1 | 30 | | 7 | 238 | 30 | 3.8 | for HU |
| | | | | 20:02 | Norpac | 0.1 | 48 | | 5 | 419 | 48 | 6.7 | |
| | | | | 0:22 | Norpac | 0.1 | 30 | | 7 | 230 | 30 | 3.7 | for HU |
| | | | | 0:28 | Norpac | 0.1 | 57 | | 15 | 492 | 55 | 7.9 | |
| | | | | 6:33 | Norpac | 0.1 | 30 | | 10 | 235 | 30 | 3.8 | for HU |
| | | | | 6:39 | Norpac | 0.1 | 70 | | 3 | 430 | 70 | 6.9 | |
| | | | | 1:27 | Norpac | 0.1 | 30 | | 16 | 365 | 29 | 5.8 | for HU |
| | | | | 1:32 | Norpac | 0.1 | 96 | | 30 | 943 | 83 | 15.1 | from the bottom |
| | | | | 8:52 | Norpac | 0.1 | 50 | | 22 | 567 | 46 | 9.1 | for HU |
| | | | | 9:03 | Norpac | 0.1 | 155 | | 39 | 1992 | 120 | 31.9 | from the bottom |
| | | | | 18:22 | Norpac | 0.1 | 50 | | 29 | 560 | 44 | 9.0 | for HU |
| | | | | 18:29 | Norpac | 0.1 | 150 | | 52 | 1900 | 92 | 30.4 | |

| Stn | Lat | Long | Date | Local time | Net type | Mesh (mm) | Wire out (m) | Sampling layer (m) | Wire angle | Flow M. reading | Estimate d depth (m) | Estimated filtered Volume (m ³) | Remarks (HU: Hokkaido University, No sign: University of Tokyo) |
|-----|---------|-----------|----------|------------|----------|-----------|--------------|--------------------|------------|-----------------|----------------------|---|---|
| D1 | 54 0.28 | 144 50.23 | 2006/9/9 | 9:56 | Norpac | 0.1 | 50 | | 43 | 900 | 37 | 14.4 | HU |
| | | | | 10:07 | Norpac | 0.1 | 150 | | 60 | 2640 | 75 | 42.2 | |
| D1 | 54 0.28 | 144 50.23 | | 10:42 | VMPS | 0.33 | | 1200-500 | | | | 75.0 | |
| | | | | | | | | 500-200 | | | | 75.0 | |
| | | | | | | | | 200-30 | | | | 42.5 | |
| | | | | | | | | 30-0 | | | | 7.5 | |

Table C-5. Optical Measurement Logs

| Station | Date (yymmdd) | Time (UTC) (MER obs.) | Latitude | longitude | Obs. depth (m) | Sampling gear |
|---------|------------------|--------------------------|-----------|------------|-------------------|------------------|
| Urup-W | 60816 | 03:10-03:16 | 45-10.200 | 149-23.100 | 70 | M,T |
| Urup-E | 60818 | 03:18-03:28 | 46-22.200 | 150-39.500 | 70 | M |
| A1 | 60822 | 02:53-03:05 | 46-02.500 | 152-29.600 | 80 | M,T |
| A4 | 60823 | 05:54-06:03 | 47-30.045 | 150-20.526 | 60 | M,T |
| A6 | 60824 | 02:03-02:21 | 48-29.983 | 149-17.643 | 70 | M,T |
| B1 | 60825 | 22:25-22:37 | 49-30.022 | 148-14.610 | 70 | M |
| B5 | 60826 | 00:57-01:06 | 49-30.114 | 145-29.878 | 80 | M,T |
| C1 | 60827 | 02:54-03:02 | 52-15.023 | 143-30.023 | 25 | M,T |
| C5 | 60827 | 20:31-20:38 | 52-14.852 | 144-35.038 | 50 | M |
| C7 | 60828 | 03:27-03:35 | 52-15.000 | 145-20.036 | 70 | M,V,T |
| E3 | 60829 | 22:07-22:15 | 54-30.326 | 143-03.403 | 70 | M,V,T |
| E5 | 60830 | 04:09-04:15 | 54-42.252 | 143-28.139 | 40 | M,V,T |
| E9 | 60831 | 02:47-02:55 | 55-02.217 | 144-10.022 | 70 | M,V,T |
| F3 | 60902 | 01:14-01:21 | 55-29.800 | 143-00.065 | 50 | M,V,T |
| F7 | 60902 | 23:45-23:54 | 55-29.945 | 141-00.122 | 50 | M,V,T |
| G4 | 60904 | 04:03-04:10 | 54-29.944 | 141-00.339 | 40 | M,V,T |
| G9 | 60905 | 21:21-21:25 | 53-44.798 | 142-00.503 | 18 | M,V,T |
| G10 | 60906 | 01:25-01:30 | 53-55.082 | 142-00.494 | 20 | M,V,T |
| G16 | 60906 | 21:03-21:07 | 54-39.222 | 142-41.086 | 60 | M,V,T |
| D5 | 60907 | 21:25-21:36 | 54-00.073 | 143-50.038 | 60 | M,V,T |
| D4 | 60908 | 01:13-01:22 | 54-00.007 | 144-00.073 | 60 | M,V,T |
| D1 | 60909 | 03:13-03:20 | 54-00.050 | 144-50.010 | 50 | M,V,T |

*M (MER: MER/2040 in water radiance observation)

*V (VSF: Eco-VSF3 scattering observation)

*T (TriOS: TriOS/RAMSES drifter buoy observation)

Table C-6. Air Sounding Operation Logs

| No | Time (UTC) | | | Weather condition at lift off time | | | Observation parameter | | | | | | | | | | | | | | | |
|----|----------------|-------------|--------------|------------------------------------|-----------------------|---------------------|--------------------------|--------------|-----------------|---------------|-----------------------------|-------------------|--------------------|----------------------|------------------|------------------------|--------------------|---------------------------|-----------------------------|------------------------|------------------|-----|
| | Time (UTC) | Latitude | Longitude | File name | Freq-ency [MHz] (UTC) | Lift off time (UTC) | Falling start time (UTC) | Weath. (/10) | Amount of Cloud | Type of Cloud | Atmos-pheric Pressure [hPa] | Temp-erature [°C] | Humi-dity (RH) [%] | Wind Direction [deg] | Wind Speed [m/s] | Sea Surface Temp. [°C] | Observ. time [sec] | Vertical Velocity [m/min] | Maximum Altitude [km] [hPa] | Horizon. Distance [km] | Direc-tion [deg] | |
| 1 | 2006/8/16/0000 | 45°10.791'N | 149°23.376'E | 06081600EDT | 404.5 | 0:05 | 1:36 | Fog | 10 | Fog | 1013.1 | 14.4 | 99 | 180 | 3.6 | 5.4 | 5642 | 266.9 | 25.105 | 26.5 | 60.9 | 88 |
| 2 | 2006/8/16/0600 | 45°10.058'N | 149°24.106'E | 06081606EDT | 404.5 | 5:47 | 7:43 | Fog | 10 | Fog | 1012.0 | 10.8 | 99 | 163 | 6.7 | 5.8 | 6874 | 248.6 | 28.483 | 15.9 | 63.4 | 88 |
| 3 | 2006/8/16/1200 | 45°10.122'N | 149°24.137'E | 06081612EDT | 404.5 | 11:46 | 12:33 | Fog | 10 | Fog | 1012.3 | 11.5 | 100 | 159 | 9.3 | 6.6 | 2816 | 242.6 | 11.391 | 234.1 | 36.6 | 82 |
| 4 | 2006/8/16/1800 | 45°10.016'N | 149°24.020'E | 06081618EDT | 404.5 | 17:52 | 19:23 | Fog | 10 | Fog | 1011.9 | 10.0 | 99 | 142 | 3.4 | 5.8 | 5435 | 307.3 | 27.860 | 17.4 | 52.4 | 96 |
| 5 | 2006/8/17/0000 | 45°19.151'N | 149°35.838'E | 06081700EDT | 404.5 | 23:35 | 1:13 | Fog | 10 | Fog | 1013.0 | 10.7 | 99 | 153 | 8.1 | 5.7 | 5608 | 260.6 | 24.364 | 29.7 | 51.8 | 92 |
| 6 | 2006/8/17/0600 | 46°02.818'N | 150°34.165'E | 06081706EDT | 404.5 | 5:35 | 7:15 | Rain | 10 | Fog | 1013.1 | 8.4 | 100 | 217 | 6.2 | 4.4 | 5768 | 300.1 | 28.850 | 15.1 | 31.7 | 85 |
| 7 | 2006/8/17/1200 | 46°22.098'N | 150°30.358'E | 06081712EDT | 404.5 | 11:40 | 14:24 | Fog | 10 | Fog | 1011.9 | 9.6 | 99 | 168 | 14.6 | 4.8 | 9480 | 187.3 | 29.593 | 13.5 | 55.8 | 61 |
| 8 | 2006/8/17/1800 | 46°21.994'N | 150°39.381'E | 06081718EDT | 404.5 | 17:29 | 19:21 | Fog | 10 | Fog | 1012.8 | 10.8 | 99 | 180 | 7.2 | 4.6 | 6594 | 244.6 | 26.888 | 20.2 | 65.3 | 55 |
| 9 | 2006/8/18/0000 | 46°22.721'N | 150°39.084'E | 06081800EDT | 404.5 | 23:31 | 1:02 | Fog | 10 | Fog | 1013.1 | 8.8 | 99 | 173 | 6.2 | 4.5 | 5470 | 204.2 | 18.623 | 73.7 | 71.9 | 49 |
| 10 | 2006/8/18/0600 | 46°23.075'N | 150°40.075'E | 06081806EDT | 404.5 | 5:30 | 7:00 | Fog | 10 | Fog | 1014.1 | 9.0 | 100 | 174 | 5.6 | 4.0 | 8796 | 159.0 | 23.341 | 34.9 | 100 | 50 |
| 11 | 2006/8/18/1200 | 46°27.789'N | 151°01.046'E | 06081812EDT | 404.5 | 12:02 | 14:15 | Fog | 10 | Fog | 1014.9 | 8.9 | 100 | 227 | 5.7 | 4.4 | 7234 | 212.8 | 25.563 | 24.4 | 78.1 | 53 |
| 12 | 2006/8/18/1800 | 46°27.686'N | 151°03.742'E | 06081818EDT | 405.5 | 18:14 | 19:57 | Fog | 10 | Fog | 1014.5 | 8.9 | 99 | 195 | 4.0 | 4.2 | 6070 | 271.1 | 27.436 | 18.6 | 67.8 | 53 |
| 13 | 2006/8/19/0000 | 46°26.870'N | 151°04.638'E | 06081900EDT | 404.5 | 23:30 | 1:27 | Fog | 10 | Fog | 1015.7 | 12.0 | 99 | 212 | 7.4 | 4.4 | 6552 | 258.0 | 28.252 | 16.4 | 69 | 47 |
| 14 | 2006/8/19/0600 | 46°26.583'N | 151°05.523'E | 06081906EDT | 404.5 | 5:32 | 7:43 | Rain | 10 | Fog | 1014.3 | 10.1 | 99 | 195 | 7.4 | 5.0 | 7846 | 179.8 | 23.517 | 33.9 | 128.9 | 54 |
| 15 | 2006/8/19/1200 | 46°27.649'N | 151°08.626'E | 06081912EDT | 405.5 | 11:57 | 13:45 | Fog | 10 | Fog | 1013.0 | 9.8 | 99 | 198 | 9.2 | 4.6 | 6326 | 216.0 | 22.808 | 37.8 | 108 | 67 |
| 16 | 2006/8/19/1800 | 46°26.539'N | 151°07.342'E | 06081918EDT | 404.5 | 17:32 | 19:18 | Fog | 10 | Fog | 1012.8 | 7.1 | 99 | 220 | 5.2 | 4.4 | 6384 | 246.8 | 26.266 | 22.1 | 81.2 | 95 |
| 17 | 2006/8/20/0000 | 46°26.316'N | 151°06.927'E | 06082000EDT | 404.5 | 23:30 | 1:12 | Fog | 10 | Fog | 1014.8 | 9.5 | 97 | 324 | 6.1 | 4.8 | 6144 | 252.0 | 25.854 | 23.5 | 60 | 118 |
| 18 | 2006/8/20/0600 | 46°27.463'N | 151°15.547'E | 06082006EDT | 404.5 | 5:32 | 7:10 | Fog | 10 | Fog | 1014.9 | 8.4 | 97 | 350 | 1.0 | 7.5 | 5936 | 275.5 | 27.262 | 19.1 | 58.4 | 109 |
| 19 | 2006/8/20/1200 | 46°31.348'N | 151°22.174'E | 06082012EDT | 404.5 | 11:44 | 14:20 | Fog | 10 | Fog | 1016.2 | 8.5 | 99 | 54 | 5.1 | 9.4 | 10118 | 178.4 | 30.082 | 12.5 | 80.2 | 124 |
| 20 | 2006/8/20/1800 | 46°34.215'N | 151°29.063'E | 06082018EDT | 404.5 | 17:32 | 19:50 | Fog | 10 | Fog | 1014.7 | 8.8 | 100 | 83 | 5.4 | 3.9 | 8234 | 218.7 | 30.014 | 12.6 | 71.8 | 168 |
| 21 | 2006/8/21/0000 | 46°34.544'N | 151°33.170'E | 06082100EDT | 404.5 | 23:30 | 1:30 | Fog | 10 | Fog | 1014.6 | 7.9 | 99 | 78 | 7.9 | 3.8 | 7000 | 223.6 | 26.096 | 22.7 | 51.4 | 171 |
| 22 | 2006/8/21/0600 | 46°38.984'N | 151°38.077'E | 06082106EDT | 404.5 | 5:30 | 7:12 | Fog | 10 | Fog | 1012.1 | 8.3 | 97 | 95 | 6.0 | 3.6 | 6106 | 252.1 | 25.663 | 24.1 | 39.1 | 160 |
| 23 | 2006/8/21/1200 | 46°44.697'N | 151°36.647'E | 06082112EDT | 404.5 | 11:34 | 14:10 | Fog | 10 | Fog | 1012.4 | 8.8 | 99 | 176 | 2.3 | 3.0 | 9478 | 191.0 | 30.175 | 12.3 | 38.5 | 120 |
| 24 | 2006/8/21/1800 | 46°34.960'N | 151°51.715'E | 06082118EDT | 404.5 | 17:30 | 19:33 | Fog | 10 | Fog | 1012.5 | 10.6 | 99 | 133 | 4.9 | 6.6 | 7392 | 231.2 | 28.488 | 15.8 | 38.4 | 90 |
| 25 | 2006/8/22/0000 | 46°00.828'N | 152°31.260'E | 06082200EDT | 404.5 | 23:37 | 1:45 | Fog | 10 | Fog | 1014.1 | 15.6 | 99 | 192 | 8.4 | 13.9 | 7980 | 221.7 | 29.489 | 13.6 | 40 | 57 |
| 26 | 2006/8/22/0600 | 46°01.113'N | 152°31.262'E | 06082206EDT | 404.5 | 5:30 | 8:00 | Fog | 10 | Fog | 1013.6 | 15.3 | 98 | 204 | 7.9 | 14.0 | 9128 | 198.4 | 30.185 | 12.3 | 54 | 60 |
| 27 | 2006/8/22/1200 | 46°23.367'N | 151°51.126'E | 06082212EDT | 404.5 | 11:30 | 13:30 | Fog | 10 | Fog | 1013.3 | 11.3 | 97 | 308 | 6.2 | 2.8 | 7376 | 230.3 | 28.316 | 16.3 | 66.6 | 55 |
| 28 | 2006/8/22/1800 | 46°36.245'N | 151°31.420'E | 06082218EDT | 404.5 | 17:31 | 20:25 | Fog | 10 | Fog | 1011.6 | 10.4 | 99 | 188 | 9.7 | 3.5 | 10472 | 168.7 | 29.440 | 13.7 | 93 | 50 |
| 29 | 2006/8/23/0000 | 47°00.187'N | 150°51.702'E | 06082300EDT | 404.5 | 23:30 | 1:06 | Fair | 5 | Middle cloud | 1013.5 | 9.4 | 97 | 175 | 6.9 | 8.6 | 5766 | 265.2 | 25.490 | 25.0 | 64.4 | 57 |
| 30 | 2006/8/23/0600 | 47°30.932'N | 150°21.903'E | 06082306EDT | 404.5 | 7:35 | 9:35 | Rain | 10 | Fog | 1012.9 | 10.8 | 98 | 194 | 3.7 | 10.6 | 8414 | 208.4 | 29.232 | 14.2 | 100 | 69 |
| 31 | 2006/8/23/1200 | 47°30.287'N | 150°21.071'E | 06082312EDT | 404.5 | 11:48 | 14:14 | Fog | 10 | Fog | 1014.1 | 10.0 | 99 | 165 | 4.4 | 10.9 | 8026 | 191.4 | 25.614 | 24.4 | 109 | 67 |
| 32 | 2006/8/23/1800 | 47°51.315'N | 149°58.438'E | 06082318EDT | 404.5 | 17:32 | 19:25 | Fog | 10 | Fog | 1014.8 | 14.0 | 98 | 59 | 1.1 | 14.3 | 7982 | 235.2 | 31.294 | 10.4 | 94.5 | 67 |
| 33 | 2006/8/24/0000 | 48°26.257'N | 149°21.755'E | 06082400EDT | 404.5 | 23:30 | 1:23 | Cloudy | 10 | Low cloud | 1016.0 | 13.3 | 98 | 86 | 6.2 | 14.9 | 6764 | 194.9 | 21.980 | 42.8 | 115 | 59 |
| 34 | 2006/8/24/0600 | 48°30.873'N | 149°15.517'E | 06082406EDT | 404.5 | 5:30 | 5:49 | Rain | 10 | Low cloud | 1014.2 | 13.9 | 97 | 104 | 2.8 | 14.7 | 1198 | 232.8 | 4.653 | 578.7 | 13.7 | 30 |
| 35 | 2006/8/24/1200 | 48°59.923'N | 148°46.605'E | 06082412EDT | 404.5 | 11:34 | 12:34 | Rain | Unknown | Unknown | 1010.8 | 14.8 | 97 | 77 | 5.2 | 15.1 | 2582 | 233.2 | 10.039 | 279.4 | 49.8 | 33 |

| No | Weather condition at lift off time | | | | Observation parameter | | | | | | | | | | | | | | | | |
|----|------------------------------------|-------------|---------------|-------------|-----------------------|---------------------|--------------------------|------------------------|-----------------------------|-------------------|--------------------|----------------------|------------------|------------------------|--------------------|---------------------------|-----------------------|------------------------|-------------------|-------|-----|
| | Time (UTC) | Latitude | Longitude | File name | Freq-ency [MHz] | Lift off time (UTC) | Falling start time (UTC) | Weath. of Cloud (/10) | Atmos-pheric Pressure [hPa] | Temp-erature [°C] | Humi-dity (RH) [%] | Wind Direction [deg] | Wind Speed [m/s] | Sea Surface Temp. [°C] | Obs-er. time [sec] | Vertical Velocity [m/min] | Maximum Altitude [km] | Horizon. Distance [km] | Direc- tion [deg] | | |
| 36 | 2006/8/24/1800 | 49°29.996'N | 148°14.953' E | 06082418EDT | 404.5 | 17:48 | 18:33 | Fog | 10 | 1005.7 | 14.5 | 98 | 101 | 3.5 | 14.1 | 2686 | 220.0 | 9.867 | 283.1 | 48.8 | 25 |
| 37 | 2006/8/25/0000 | 49°29.391'N | 148°15.287' E | 06082500EDT | 404.5 | 23:30 | 1:36 | Rain | 10 | 1005.5 | 13.0 | 97 | 14 | 11.1 | 15.8 | 7528 | 216.0 | 27.104 | 19.5 | 88.8 | 46 |
| 38 | 2006/8/25/0600 | 49°28.891'N | 147°28.570' E | 06082506EDT | 404.5 | 5:33 | 7:38 | Fair | 0 | 1010.3 | 14.2 | 89 | 345 | 8.0 | 14.0 | 7512 | 221.2 | 27.700 | 17.8 | 66 | 95 |
| 39 | 2006/8/25/1200 | 49°29.808'N | 146°45.100' E | 06082512EDT | 404.5 | 11:30 | 13:20 | Unknown | Unknown | 1014.0 | 13.7 | 92 | 290 | 4.3 | 13.2 | 5634 | 241.9 | 22.720 | 38.1 | 59.1 | 90 |
| 40 | 2006/8/25/1800 | 49°30.016'N | 146°00.051' E | 06082518EDT | 404.5 | 17:31 | 20:30 | Fair | 0 | 1015.9 | 12.5 | 93 | 352 | 2.5 | 12.8 | 9522 | 188.1 | 29.863 | 12.9 | 82 | 95 |
| 41 | 2006/8/26/0000 | 49°29.963'N | 145°28.865' E | 06082600EDT | 404.5 | 23:37 | 2:10 | Fair | 6 | 1016.6 | 14.0 | 89 | 177 | 4.7 | 12.9 | 8022 | 229.4 | 30.680 | 11.4 | 60 | 110 |
| 42 | 2006/8/26/0600 | 49°31.100'N | 144°59.850' E | 06082606EDT | 404.5 | 6:00 | 8:28 | Fair | 10 | 1014.1 | 12.8 | 91 | 171 | 9.4 | 13.0 | 8884 | 203.2 | 30.090 | 12.5 | 60.5 | 116 |
| 43 | 2006/8/26/1200 | 49°41.292'N | 144°27.141' E | 06082612EDT | 404.5 | 11:30 | 13:35 | Fog | Unknown | 1013.9 | 6.5 | 99 | 163 | 9.0 | 6.4 | 7470 | 225.7 | 28.104 | 16.8 | 63 | 101 |
| 44 | 2006/8/26/1800 | 50°47.989'N | 144°02.822' E | 06082618EDT | 404.5 | 17:36 | 19:53 | Fair | 0 | 1011.4 | 9.6 | 94 | 174 | 6.5 | 10.4 | 8204 | 218.0 | 29.815 | 12.9 | 63 | 122 |
| 45 | 2006/8/27/0000 | 51°48.980'N | 143°39.963' E | 06082700EDT | 404.5 | 23:32 | 1:20 | Fair | 0 | 1010.8 | 14.5 | 91 | 172 | 5.4 | 6.8 | 6314 | 238.4 | 25.091 | 26.3 | 73 | 100 |
| 46 | 2006/8/27/0600 | 52°15.497'N | 143°30.361' E | 06082706EDT | 404.5 | 5:40 | 8:46 | Fair | 0 | 1010.2 | 17.6 | 71 | 221 | 5.2 | 8.6 | 11165 | 107.1 | 19.935 | 58.7 | 160.2 | 105 |
| 47 | 2006/8/27/1200 | 52°15.000'N | 143°59.670' E | 06082712EDT | 404.5 | 11:30 | 14:43 | Fair | 0 | 1013.3 | 15.5 | 95 | 335 | 2.3 | 10.7 | 11476 | 164.7 | 31.507 | 10.0 | 113.1 | 112 |
| 48 | 2006/8/27/1800 | 52°14.833'N | 144°33.976' E | 06082718EDT | 404.5 | 17:37 | 19:32 | Fog | Unknown | 1014.0 | 13.9 | 99 | 44 | 6.9 | 11.6 | 6870 | 246.0 | 28.171 | 16.4 | 66.8 | 107 |
| 49 | 2006/8/28/0000 | 52°14.915'N | 144°55.636' E | 06082800EDT | 404.5 | 23:30 | 1:25 | Cloudy | 9 | 1014.3 | 15.6 | 93 | 57 | 6.3 | 16.1 | 6900 | 243.8 | 28.046 | 16.8 | 55 | 99 |
| 50 | 2006/8/28/0600 | 52°13.983'N | 145°19.019' E | 06082806EDT | 404.5 | 5:32 | 7:26 | Cloudy | 10 | 1013.7 | 16.0 | 91 | 83 | 7.0 | 15.8 | 6864 | 227.5 | 26.027 | 22.8 | 65 | 96 |
| 51 | 2006/8/28/1200 | 52°14.941'N | 145°32.416' E | 06082812EDT | 404.5 | 11:30 | 13:55 | Unknown | Unknown | 1013.1 | 15.6 | 92 | 107 | 8.4 | 15.8 | 8692 | 211.8 | 30.684 | 11.3 | 56.6 | 89 |
| 52 | 2006/8/28/1800 | 52°16.302'N | 145°59.171' E | 06082818EDT | 404.5 | 17:43 | 18:45 | Fog | Unknown | 1012.4 | 15.5 | 98 | 128 | 7.5 | 16.1 | 7240 | 223.2 | 26.938 | 19.8 | 49.3 | 67 |
| 53 | 2006/8/29/0000 | 52°27.062'N | 145°45.208' E | 06082900EDT | 404.5 | 23:32 | 1:21 | Cloudy | 10 | 1012.9 | 16.5 | 91 | 134 | 8.6 | 15.9 | 6828 | 258.5 | 29.420 | 13.6 | 50.6 | 31 |
| 54 | 2006/8/29/0600 | 53°22.728'N | 144°40.790' E | 06082906EDT | 404.5 | 5:41 | 7:43 | Rain | 10 | 1010.0 | 16.1 | 87 | 125 | 9.7 | 15.5 | 7196 | 241.2 | 28.931 | 14.7 | 71.2 | 23 |
| 55 | 2006/8/29/1200 | 54°17.873'N | 143°20.690' E | 06082912EDT | 404.5 | 12:20 | 12:57 | Unknown | Unknown | 1009.3 | 14.6 | 80 | 161 | 10.0 | 14.3 | 2214 | 227.3 | 8.393 | 345.8 | 28.2 | 22 |
| 56 | 2006/8/29/1800 | 54°26.056'N | 142°53.715' E | 06082918EDT | 404.5 | 17:45 | 19:58 | Unknown | Unknown | 1009.3 | 13.1 | 98 | 172 | 7.8 | 12.2 | 7840 | 229.9 | 30.050 | 12.3 | 87.4 | 30 |
| 57 | 2006/8/30/0000 | 54°29.813'N | 143°01.951' E | 06083000EDT | 404.5 | 0:21 | 3:03 | Fair | 5 | 1011.7 | 13.2 | 92 | 184 | 5.0 | 12.5 | 9730 | 189.0 | 30.661 | 11.3 | 123.3 | 34 |
| 58 | 2006/8/30/0600 | 54°43.113'N | 143°28.772' E | 06083006EDT | 404.5 | 5:42 | 7:52 | Cloudy | 10 | 1012.4 | 15.0 | 87 | 235 | 3.9 | 12.7 | 7650 | 197.9 | 25.238 | 25.5 | 105.9 | 36 |
| 59 | 2006/8/30/1200 | 54°50.159'N | 143°43.059' E | 06083012EDT | 404.5 | 11:30 | 1:33 | Fair | 0 | 1013.7 | 13.9 | 93 | 193 | 1.8 | 13.9 | 7372 | 247.9 | 30.466 | 11.6 | 74.6 | 28 |
| 60 | 2006/8/30/1800 | 54°56.275'N | 143°55.079' E | 06083018EDT | 404.5 | 17:32 | 19:51 | Unknown | Unknown | 1013.6 | 13.3 | 98 | 310 | 2.6 | 12.6 | 8022 | 228.7 | 30.580 | 11.3 | 78.3 | 20 |
| 61 | 2006/8/31/0000 | 55°01.688'N | 144°11.216' E | 06083100EDT | 404.5 | 23:30 | 1:45 | Cloudy | 10 | 1014.5 | 11.4 | 99 | 93 | 3.0 | 9.6 | 8078 | 226.1 | 30.445 | 11.6 | 84.1 | 12 |
| 62 | 2006/8/31/0600 | 55°02.109'N | 144°10.718' E | 06083106EDT | 404.5 | 5:39 | 7:33 | Rain | 10 | 1013.4 | 12.1 | 99 | 154 | 5.2 | 9.6 | 6840 | 242.9 | 27.695 | 17.5 | 71.7 | 14 |
| 63 | 2006/8/31/1200 | 55°06.216'N | 144°07.815' E | 06083112EDT | 404.5 | 11:30 | 1:47 | Fog | 10 | 1012.8 | 11.9 | 98 | 106 | 4.5 | 9.2 | 8214 | 201.8 | 27.630 | 17.6 | 68.2 | 27 |

Table C-7. Aerosol Samplings Logs

| Sample name | date | | time (local) | | flow rate [m3/h] | | volume[0.01m3] | weather condition | Location at Start | | Air Temperature |
|-------------|------------|----------|--------------|----------|------------------|---------------|----------------|------------------------------|-------------------|---------------|-----------------|
| | start date | end date | start time | end time | start flow rate | end flow rate | | | latitude (N) | longitude (E) | |
| Kh-06-01 | Aug.13 | | 12:40 | | 10.9 | | 73001 | fine | 43 14.0 | 141 04.0 | 23.9 |
| | Aug.13 | | 19:30 | | 10.4 | | | | | | |
| Kh-06-02 | Aug.13 | | 19:35 | | 10.6 | | 12148 | fine (cloudy in the morning) | 44 22.275 | 141 10.142 | 23 |
| | Aug. 14 | | 7:00 | | 10.6 | | | | | | |
| Kh-06-03 | Aug. 14 | | 19:00 | | 10.9 | | 12739 | cloudy | 46 26.141 | 142 49.348 | 18 |
| | Aug. 15 | | 7:00 | | 10.5 | | | | | | |
| Kh-06-04 | Aug. 15 | | 7:02 | | 10.7 | | 12735 | cloudy / fog | 45 48.954 | 145 24.359 | |
| | Aug. 15 | | 19:00 | | 10.7 | | | | | | |
| Kh-06-05 | Aug. 15 | | 19:02 | | 11.1 | | 9582 | cloudy / fog | 45 45.679 | 148 30.677 | |
| | Aug. 16 | | 7:00 | | 0.0 | | | | | | |
| Kh-06-06 | Aug. 16 | | 7:02 | | 11.0 | | 6292 | cloudy / fog | 45 09.953 | 149 24.245 | 10.2 |
| | Aug. 16 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-07 | Aug. 16 | | 19:50 | | 11.3 | | 5630 | cloudy / fog | 45 10.050 | 149 22.039 | 13.6 |
| | Aug. 17 | | 7:50 | | 0.0 | | | | | | |
| Kh-06-08 | Aug. 17 | | 9:00 | | 11.0 | | 7651 | cloudy / fog | 45 17.880 | 149 34.203 | 10.9 |
| | Aug. 17 | | 19:00 | | 10.9 | | | | | | |
| Kh-06-09 | Aug. 17 | | 19:02 | | 11.5 | | 2920 | cloudy / fog | 46 21.094 | 150 30.885 | 11 |
| | Aug. 18 | | 7:02 | | 11.3 | | | | | | |
| Kh-06-10 | Aug. 18 | | 7:00 | | 11.6 | | 5598 | cloudy / fog | 46 21.956 | 150 39.146 | 8.8 |
| | Aug. 18 | | 19:00 | | 11.2 | | | | | | |
| Kh-06-11 | Aug. 18 | | 19:02 | | 11.2 | | 2429 | cloudy / fog | 46 23.253 | 151 38.980 | 10.8 |
| | Aug. 19 | | 7:06 | | 0.0 | | | | | | |
| Kh-06-12 | Aug. 19 | | 7:07 | | 0.0 | | 2684 | cloudy / fog | 46 26.781 | 151 02.315 | 9 |
| | Aug. 19 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-13 | Aug. 19 | | 19:03 | | 11.5 | | 4573 | cloudy / fog, rain | 46 20.664 | 151 05.780 | 9.9 |
| | Aug.20 | | 7:00 | | 11.4 | | | | | | |
| Kh-06-14 | Aug. 20 | | 7:02 | | 13.2 | | 4457 | cloudy / fog | 46 25.551 | 151 05.460 | 9.9 |
| | Aug. 20 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-15 | Aug. 20 | | 19:03 | | 0.0 | | 7117 | fine / fog | 46 20.091 | 151 20.091 | 8.4 |
| | Aug. 21 | | 7:12 | | 11.5 | | | | | | |

| Sample name | date | | time (local) | | flow rate [m3/h] | | volume[0.01m3] | weather condition | Location at Start | | Air Temperature |
|-------------|------------|----------|--------------|----------|------------------|---------------|----------------|---------------------|-------------------|------------|-----------------|
| | start date | end date | start time | end time | start flow rate | end flow rate | | | latitude | longitude | |
| Kh-06-16 | Aug. 21 | | 7:14 | | 11.4 | | 6654 | cloudy / fog | 46 33.980 | 151 29.639 | 8.8 |
| | Aug. 21 | | 19:00 | | 11.1 | | | | | | |
| Kh-06-17 | Aug. 21 | | 19:02 | | 11.3 | | 9383 | cloudy / fog | 46 41.498 | 151 41.156 | 10.3 |
| | Aug. 22 | | 7:06 | | 10.9 | | | | | | |
| Kh-06-18 | Aug. 22 | | 7:08 | | 11.1 | | 5095 | cloudy / fog / fine | 46 12.767 | 152 16.261 | 15.3 |
| | Aug. 22 | | 19:00 | | 11.0 | | | | | | |
| Kh-06-19 | Aug. 22 | | 19:03 | | 11.1 | | 5964 | fine | 46 00.949 | 152 29.556 | 16 |
| | Aug. 23 | | 7:00 | | 11.2 | | | | | | |
| Kh-06-20 | Aug. 23 | | 7:02 | | 11.5 | | 5787 | cloudy / fog | 46 30.445 | 151 26.337 | 7.1 |
| | Aug. 23 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-21 | Aug. 23 | | 19:03 | | 0.0 | | 4899/10687 | cloudy / rain | 47 36.267 | 150 22.630 | 10.2 |
| | Aug. 24 | | 7:30 | | 11.0 | | | | | | |
| Kh-06-22 | Aug. 24 | | 7:31 | | 12.2 | | 4587 | cloudy / rain | 48 17.228 | 149 32.180 | 14 |
| | Aug. 24 | | 19:03 | | 10.8 | | | | | | |
| Kh-06-23 | Aug. 25 | | 19:05 | | 10.9 | | 2752 | cloudy | 48 30.526 | 149 08.776 | 14.2 |
| | Aug. 25 | | 7:09 | | 0.0 | | | | | | |
| Kh-06-24 | Aug. 25 | | 7:10 | | 0.0 | | 8194 | cloudy | 49 39.018 | 140 15.002 | 14.3 |
| | Aug. 25 | | 19:04 | | 10.1 | | | | | | |
| Kh-06-25 | Aug. 25 | | 19:05 | | 10.9 | | 8476 | fog / cloudy | 49 30.120 | 146 49.737 | 12.9 |
| | Aug. 26 | | 7:00 | | 0.0 | | | | | | |
| Kh-06-26 | Aug. 26 | | 7:02 | | 0.0 | | 6492 | fine | 49 29.874 | 145 29.799 | 12.8 |
| | Aug. 26 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-27 | Aug. 26 | | 19:02 | | 0.0 | | 4265 | fine | 49 30.408 | 144 31.180 | 12.2 |
| | Aug. 27 | | 7:32 | | 11.0 | | | | | | |
| Kh-06-28 | Aug. 27 | | 7:34 | | 11.4 | | 2964 | fine | 51 32.448 | 143 46.377 | 10.8 |
| | Aug. 27 | | 20:00 | | 10.9 | | | | | | |
| Kh-06-29 | Aug. 27 | | 20:03 | | 11.7 | | 6402 | fine | 52 15.260 | 143 47.722 | |
| | Aug. 28 | | 9:00 | | 10.7 | | | | | | |
| Kh-06-30 | Aug. 28 | | 9:02 | | 11.1 | | 3011 | cloudy | 52 14.986 | 144 47.372 | 14.7 |
| | Aug. 28 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-31 | Aug. 28 | | 19:03 | | 0.0 | | 6168 | cloudy | 52 15.236 | 145 17.197 | 16.1 |
| | Aug. 29 | | 7:00 | | 0.0 | | | | | | |

| Sample name | date | | time (local) | | flow rate [m3/h] | | volume[0.01m3] | weather condition | Location at Start | | Air Temperature |
|-------------|------------|----------|--------------|----------|------------------|---------------|----------------|-------------------|-------------------|------------|-----------------|
| | start date | end date | start time | end time | start flow rate | end flow rate | | | latitude | longitude | |
| Kh-06-32 | Aug. 29 | | 7:02 | | 0.0 | | 326 | cloudy | 52 15.691 | 145 50.916 | |
| | Aug. 29 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-33 | Aug. 29 | | 19:02 | | 0.0 | | 489 | cloudy | 53 49.112 | 144 09.233 | 16.2 |
| | Aug. 30 | | 7:00 | | 0.0 | | | | | | |
| Kh-06-34 | Aug. 30 | | 7:02 | | 0.0 | | 4320 | fine / cloudy | 54 30.083 | 143 03.858 | 13.3 |
| | Aug. 30 | | 19:02 | | 0.0 | | | | | | |
| Kh-06-35 | Aug. 30 | | 19:04 | | 0.0 | | 7357 | fine | 54 46.309 | 143 34.022 | 14.1 |
| | Aug. 31 | | 7:06 | | 11.3 | | | | | | |
| Kh-06-36 | Aug. 31 | | 7:08 | | 0.0 | | 5766 | fog / cloudy | 54 56.100 | 143 55.796 | 12.6 |
| | Aug. 31 | | 19:05 | | 10.9 | | | | | | |
| Kh-06-37 | Aug. 31 | | 19:10 | | 11.4 | | 4479 | rain / fog | 54 04.53 | 144 09.734 | |
| | Sep. 1 | | 7:07 | | 0.0 | | | | | | |
| Kh-06-38 | Sep. 1 | | 7:10 | | 0.0 | | 6809 | cloudy / fine | 55 04.687 | 144 02.139 | 12.2 |
| | Sep. 1 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-39 | Sep. 1 | | 19:02 | | 0.0 | | 6422 | cloudy | 55 01.885 | 143 57.533 | 13.6 |
| | Sep. 2 | | 7:05 | | 11.4 | | | | | | |
| Kh-06-40 | Sep. 2 | | 7:08 | | 10.8 | | 3756 | cloudy | 55 30.076 | 143 41.144 | 11.5 |
| | Sep. 2 | | 19:06 | | 0.0 | | | | | | |
| Kh-06-41 | Sep. 2 | | 19:09 | | 0.0 | | 6482 | cloudy / fog | 55 30.013 | 142 29.966 | 12 |
| | Sep. 3 | | 7:03 | | 10.1 | | | | | | |
| Kh-06-42 | Sep. 3 | | 7:05 | | 10.8 | | 4851 | fine | 55 30.014 | 141 12.034 | 12.9 |
| | Sep. 3 | | 19:19 | | 0.0 | | | | | | |
| Kh-06-43 | Sep. 3 | | 19:21 | | 0.0 | | 3130 | fine | 55 00.034 | 141 04.135 | |
| | Sep. 4 | | 7:07 | | 10.1 | | | | | | |
| Kh-06-44 | Sep. 4 | | 7:10 | | 10.9 | | 5816 | fine | 55 00.499 | 141 00.935 | 13.4 |
| | Sep. 4 | | 19:04 | | 10.7 | | | | | | |
| Kh-06-45 | Sep. 4 | | 19:05 | | 10.1 | | 788 | fine | 55 21.267 | 140 59.976 | 13 |
| | Sep. 5 | | 7:23 | | 0.0 | | | | | | |
| Kh-06-46 | Sep. 5 | | 7:25 | | 0.0 | | 2849 | cloudy | 53 44.367 | 141 35.628 | 13.2 |
| | Sep. 5 | | 19:00 | | 0.0 | | | | | | |
| Kh-06-47 | Sep. 6 | | 19:03 | | 0.0 | | 1075 | fine | 53 49.866 | 141 58.298 | 14.7 |
| | Sep. 6 | | 7:30 | | 10.4 | | | | | | |

| Sample name | date | | time (local) | | flow rate [m3/h] | | volume[0.01m3] | weather condition | Location at Start | | Air Temperature |
|-------------|------------|----------|--------------|----------|------------------|---------------|----------------|-------------------|-------------------|-------------|--------------------|
| | start date | end date | start time | end time | start flow rate | end flow rate | | | latitude | longitude | |
| Kh-06-48 | Sep. 6 | | 7:32 | | 10.4 | | 5959 | fine | 53 45.589 | 142 022.205 | 15.5 |
| | Sep. 6 | | 19:12 | | 0.0 | | | | | | AI contamination ? |
| Kh-06-49 | Sep. 6 | | 19:14 | | 10.4 | | 6306 | fine | 54 14.563 | 141 58.988 | 14.3 |
| | Sep. 7 | | 7:00 | | 0.0 | | | | | | AI contamination ? |
| Kh-06-50 | Sep. 7 | | 7:02 | | 0.0 | | 7410 | fine | 54 40.020 | 142 40.279 | 13 |
| | Sep. 7 | | 19:02 | | 0.0 | | | | | | |
| Kh-06-51 | Sep. 7 | | 19:05 | | 0.0 | | 8171 | fine | 54 34.783 | 142 51.861 | 15.7 |
| | Sep. 8 | | 7:00 | | 0.0 | | | | | | |
| Kh-06-52 | Sep. 8 | | 7:03 | | 0.0 | | 3971 | fine | 54 02.607 | 143 50.628 | 10.6 |
| | Sep. 8 | | 19:05 | | 0.0 | | | | | | |
| Kh-06-53 | Sep. 8 | | 19:07 | | 0.0 | | 3480 | cloudy | 54 00.169 | 144 09.330 | 11.2 |
| | Sep. 9 | | 7:00 | | 11.0 | | | | | | |
| Kh-06-54 | Sep. 9 | | 7:02 | | 11.1 | | 5391 | fog / cloudy | 53 59.958 | 144 41.268 | 11 |
| | Sep. 9 | | 19:20 | | 10.8 | | | | | | |
| Kh-06-55 | Sep. 9 | | 19:22 | | 10.9 | | 12451 | cloudy | 53 40.779 | 145 03.998 | 12.3 |
| | Sep. 10 | | 7:00 | | 10.6 | | | | | | |
| Kh-06-56 | Sep. 10 | | 7:02 | | 10.5 | | 12750 | cloudy | 52 25.492 | 145 49.541 | 14.6 |
| | Sep. 10 | | 19:25 | | 10.0 | | | | | | |
| Kh-06-57 | Sep. 10 | | 19:30 | | 10.9 | | 10387 | cloudy / rain | 51 17.044 | 145 44.303 | 14.4 |
| | Sep. 11 | | 7:07 | | 11.1 | | | | | | |
| Kh-06-58 | Sep. 11 | | 7:10 | | 11.0 | | 13317 | fine | 49 42.077 | 145 20.507 | 12.3 |
| | Sep. 11 | | 19:30 | | 10.6 | | | | | | |
| Kh-06-59 | Sep. 11 | | 19:31 | | 11.3 | | 13130 | fine | 47 15.226 | 144 27.039 | 16.3 |
| | Sep. 12 | | 7:15 | | 11.1 | | | | | | |
| | Sep. 12 | | 7:17 | | 10.9 | | | fine | 45 31.130 | 142 44.129 | 17.4 |

Appendix D

DATA EXCHANGE SCHEDULE

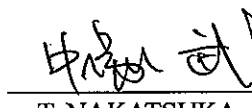
(Research Expedition in the Sea of Okhotsk, R/V "Professor Khromov", Aug-Sep 2006)

| Data type | Data quantity | Remarks |
|--|-------------------|---|
| Meteorological data | 1 diskette (3.5") | Data have been already shared |
| CTD data | 1 CD-ROM | |
| DO, Salinity, Chl.a | | |
| LADCP data | | |
| Shear probe data | | |
| Air sounding data | | |
| Optical measurement data | | |
| Nutrients | --- | Results will be shared after analysis in shore laboratories within 6 months after cruise |
| Other kinds of water chemistry and biogeochemistry (Including iron, carbonate species, dissolved organic carbon, primary productivity etc.) | --- | Results will be shared after analysis in shore laboratories in about 2 years after cruise |
| Sediment chemistry | --- | Results will be shared after analysis in shore laboratories in about 2 years after cruise |
| Aerosol chemistry | --- | Results will be shared after analysis in shore laboratories in about 2 years after cruise |
| Plankton species | --- | Results will be shared after analysis in shore laboratories in about 2 years after cruise |

All the data originating from this expedition is the joint property of the participants. Data will be shared according to this schedule, and the results will be not given to any other party without mutual consent.



A. SCHERBININ



T. NAKATSUKA

18 September, 2006

CONFIRMED

by Director of FERHRI



Dr. Yu. N. Volkov

Vladivostok, Russia

September 19, 2006

STATEMENT

on completion of the Joint Japanese-Russian Expedition in the Sea of Okhotsk (August-September 2006)

This document is to confirm that the joint Japanese-Russian expedition aboard FERHRI R/V «Professor Khromov» in accordance with the Contract on June 23, 2006 between the Inter-University Research Institute Corporation, National Institute for Humanities and Nature (RIHN) and Far Eastern Regional Hydrometeorological Research Institute (FERHRI) started from Vladivostok on August 8, 2006 and successfully completed.

Duration of expedition is 42 days.

According to the Contract, both parties implemented their obligations and don't have any claims to each other.

On behalf of FERHRI,

Mr. A. Scherbinin,
Head of Expedition

On behalf of RIHN,

Dr. T. Nakatsuka,
Principal Investigator