INSTITUTE OF MARINE RESEARCH
BERGEN, NORWAY

CRUISE REPORT

CRUISE NUMBER: JH1996210

VESSEL: R/V "JOHAN HJORT"

DEPARTURE: Tromsø, Norway on 20th July 1996

ARRIVAL: Tromsø, Norway on 5th August 1996

PARTICIPANTS:

Name	Affiliation	Responsability
Francisco Rey	Institute of Marine Research, Bergen	Chief scientist
Thomas Noji	Institute of Marine Research, Bergen	Sediment traps
Marianne Holm	Institute of Marine Research, Bergen	Salmon research
Jane Strømstad	Institute of Marine Research, Bergen	Nutrients, oxygen
Julio Erices	Institute of Marine Research, Bergen	Technician, sampling
Øyvind Tangen	Institute of Marine Research, Bergen	Technician, fisheries
Magnar Mjanger	Institute of Marine Research, Bergen	Instrument chief
Harald Helness	Institute of Marine Research, Bergen	Instrument operator
Knut Yngve Børsheim	University of Trondheim	Microbiology, DOC
Svein Kristiansen	University of Oslo	Nitrogen uptake
Tove Farbrot	University of Oslo	Nitrogen uptake
Liv Marit Hansen	University of Oslo	Phytoplankton
Craig Neill	Brookhaven Nat. Lab., USA	CFC
Krister Steinsvik	University of Bergen	Assistent, nutrients

SCIENTIFIC OBJECTIVES

The cruise had several major objectives:

1) To carry out physical, chemical and biological investigations in the Greenland Sea and northern Norwegian Sea in connection with the following research projects:

• "Mixed layer dynamics, nutrient supply and primary production in the Nordic Seas". The project is supported by a grant from the Norwegian Research Council and is part of IMR´s research program "Mare Cognitum".

• " Biogenic carbon production in the upper layers of the Greenland Sea as a function of vertical nutrient fluxes". The project is supported by a grant from the European Commission through its MAST-III program MAS3-CT95-0015 " European Subpolar Ocean Programme-2: Thermohaline circulation in the Greenland Sea" and it is also part of IMR´s research program "Mare Cognitum".

• "Dissolved Organic Carbon in the Greenland Sea". The project is supported by a grant from the European Commission through its MAST-III program MAS3-CT95-0015 " European Subpolar Ocean Programme-2: Thermohaline circulation in the Greenland Sea" and is run by the Laboratory of Biotechnology, The Norwegian University of Science and Technology, Trondheim.

• "New production in the Norwegian Sea". The project is supported by a grant from the Norwegian Research Council to the Biological Institute, Department of Marine Botany, University of Oslo.

2) To map the distribution of pelagic fish, including herring and salmon, in the Norwegian Sea. This task is related to different research projects in the context of IMR´s research program "Mare Cognitum".

3) To carry out hydrographic observations at the Norwegian standard hydrographic section Gimsøy-NW as part of IMR´s ocean monitoring program.

4) To collect samples for chlorofluorcarbons (CFC) and transient tracers at selected stations in the Greenland Sea as part of a routine cooperative observation program between IMR and Brookhaven National Laboratory, USA.

5) To collect water samples for determinations of the tracer sulfur hexafluoride previous to the release experiment by the " European Subpolar Ocean Programme-2: Thermohaline circulation in the Greenland Sea" in August 1996.

6) To collect water samples and sediment samples at the site of the sunken Russian submarine "Kommsomolets" for monitoring of eventual radioactive leakages.

CRUISE TRACK

Figure 1 shows the cruise track and the positions of the stations where sampling was carried out.

SAMPLING METHODOLOGY

HYDROGRAPHY

The hydrographic work was carried out with two independent CTD-water sampling packages from SeaBird Inc. with data being collected both during up- and downcast. The first package consisted of a SBE 911plus CTD with a 12 position SBE 32 Caroussel (CTD-12) equipped with 10 liter Niskin bottles and was used preferentially for deep water work. The other package comprised of a SBE 19 Seacat with a 24 position SBE 32 Caroussel (CTD-24) equipped with 23 pcs. 2.5 liters Niskin water samplers and was used for shallow water work. In the remaining place of the 24 positions Caroussel, a Biospherical QSP-200L irradiance meter was mounted. A SeaTech fluorometer was also attached to the system. Both the irradiance meter and the fluorometer were coupled to the SBE 19 for powering and data transmission. At all stations water samples were collected from the deepest sampling level from both CTD packs for calibration of the conductivity sensors.

CHEMISTRY

• Oxygen

Oxygen concentration was measured using the Winkler method with visual determination of the titration end-point. Titration was done on whole samples (about 120 ml) using a 1 ml automatic burette (Metrohn) with a dispensing precision of 0.001 ml. Calibration of the thiosulfate (about 0.1 N) was as done on each run. The reproducibility of the method estimated as the standard deviation of ten replicates drawn from one 10 l Niskin bottle is $\pm$ 0.011 ml l^{-1} at an oxygen concentration of 6 ml l^{-1}. Sampling procedures, reagents preparation and analyses were done following WOCE recommendations as stated in Culberson (1991). Conversion of volumetric to weight concentrations were done as recommended by WOCE using potential temperature.

•**Nutrients (NS)**

• Sampling and analysis procedure for nitrate, nitrite, phosphate and silicic acid.

Seawater samples were collected just after the sampling for trace gases and oxygen. After rinsing three times , samples were drawn into 15 ml high-density polyethylene test tubes with pressure caps and kept dark and refrigerated at 4 °C without preservative. All samples were analyzed directly in the test tubes within 24 hours after sampling. Tests done for effects of analysis delay showed variations for all nutrients not significantly different to the precision for each analysis.

The nutrient analyses were performed using a system build up by the following items:

- Pump system from Ismatec, Switzerland.
- Reaction units of own fabrication
- Autosampling , detection and computing units from SAN^{plus} Segmented Flow Analyzer, Skalar Analytical B.V., The Netherlands.

The methods used were adaptations of standard methods (Strickland and Parsons, 1972) slightly modified to the autoanalyzer system (Føyn et al., 1981). The precision for the different analyses at full scale was less than 0.2% for nitrite, nitrate and silicic acid and less than 2 % for phosphate. The reproducibility was less than 1% for nitrite, nitrate and silicic acid and less than 3% for phosphate.

• Sampling and analysis procedure for ammonia.

Seawater samples were collected directly into the analyses flasks, usually in relation to the ^{15}N uptake experiments. The analysis was done manually following the method described by Solorzano (1969).

• **CFC and transient tracers.**

• Samples for CFCs, Helium and Tritium were collected following closely the reccomendations given by WOCE (Bullister, 1991; Jenkins et al., 1991). All samples will be analyzed ashore.

• Samples for determination of background levels of the tracer sulfur hexafluoride (SF6) before the release experiment by the R/V "James Clark Ross" were collected at six stations.

BIOLOGY

• **Water sampling.** Samples for biological analyses were obtained either from the Niskin bottles on the caroussels or from a 30 liter Goflow water sampler lowered to discrete depths.

• **Biomass (BIOM)**

• **Chlorophyll**

Samples for chlorophyll analyses were collected in 263 ml plastic bottles and filtered through glassfiber type F filters. The filters were inmediately frozen and kept until their analyses ashore. In the laboratory the pigments were extracted during overnigth with 90% acetone at 4°C and in the dark. Thereafter the extracts were centrifugated at 500 g and measured fluorometrically with a Turner Designs AU-10 filter fluorometer both before and after the addition of 5% v/v hydrochloric acid.The fluorometer was calibrated against comercial chlorophyll *a* (Sigma Inc.).

- **Particulate organic carbon and nirogen.**

Samples were collected in 529 ml plastic bottles and filtered through pre-combusted glassfiber filters of type F. The filters were frozen inmediately after filtration and will be analyzed in the laboratory ashore using a Carlo Erba model 106 Elemental analyzer.

- **Particulate biogenic silica.**

Water samples were collected in 529 ml plastic bottles and filtered through polycarbonate filters with 0.6 μm pore size. The filters were then inmediately frozen and will be analyze ashore.

- **Phytoplankton taxonomy**

Samples for quantitative analysis of phytoplankton were drawn from the Niskin bottles into 100 ml brown glass bottles and added glutaraldehyde for conservation. Samples for qualitative analysis were collected by towing a 20 μm mesh size phytoplankton net for 10 minutes at 2 knots at the end of selected stations. A part of these samples was preserved with glutaraldehyde or formaldehyde for later observation and another part was observed alive in a light/epifluorescent microscope for determination of main components of phytoplankton.

- **Productivity**

- **Radioactive carbon uptake (14C)**

Uptake of radioactive carbon by phytoplankton was done by means of two incubation schemes. The first with a P vs I incubator equipped with a metal halide daylight lamp (OSRAM HQI-T 400/DH) providing 16 different irradiances from 0 to 700 μmol m^{-2} $s^{-1}$by means of neutral filters. The incubator was cooled with subsurface seawater from the ship's water intake. Incubation time lasted about 2 hours. After incubation the samples were filtered through membrane filters of 0.45 μm pore size and frozen inmediately for later analysis ashore. This sheme was applied to samples from four depths, usually above at and below the pycnocline, from selected stations. The second scheme was based on incubations together with the ^{15}N uptake experiments under natural daylight. For all incubations comercially available radioactive carbon was used (DuPont NEN Sodium bicarbonate NEC-086S, 20 μCi)

- **DCMU measurements**

The variable chlorophyll *in vivo* fluorescence obtained by measuring chlorophyll fluorescence before and after the addition of DCMU, a blocking agent for electron transport in the photosynthesis process, provides an index of the photosynthetic activity of phytoplankton. The measurements were done in discrete samples from the Niskin bottles with a Turner Designs 10000R filter fluorometer after preconditioning of the samples in the dark for about 30 minutes.

- ***In situ* phytoplankton productivity**

In situ phytoplankton photosynthetic rate was measured by means of a PNF-300 Profiling Natural Fluorometer (Biospherical Instruments Inc., USA) . The instrument records in addition depth profiles of irradiance, natural fluorescence, cholorophyll concentration and temperature. Profiles were usually acquired to a depth of 75 meters.

- **^{15}N uptake (15N).**

Uptake of different nitrogen forms (nitrate, ammonia and urea) was done by injecting the samples with non radioactive isotopes and incubating them at different natural daylight intensities on a deck incubator cooled by running seawater (Kristiansen and Paasche 1989).

• **^{32}Si uptake (32Si).**

Silicon uptake rates were measured using ^{32}Si. The incubation procedure was similar to that of the 15N samples. The method is modified from Tréguer et al. (1991).

• **Microbiology**

• **Bacterial production and biomass (BACT)**

Bacterial production was measured using incorporation rates of tritiated thymidin. Bacterial biomass was measured by epifluorescence microscopy after staining with DAPI (diamidinophenylindole).

• **Dissolved organic carbon (DOC)**

Concentration of dissolved organic carbon was measured using high temperature catalytic oxidation (HTOC).

• Degradation rates of DOC was measured in incubation experiments after removal of grazers by selective filtration.

• **Zooplankton**

Samples for zooplankton biomass and species composition were obtained by vertical tows from 100 meters to surface by means of a 56 cm opening WP-2 plankton net with a 180 µm mesh size. The samples were splitted into two, one part being preserved with formaldehyde for later determination of species composition. The other part was passed through three different meshsize nets, 2000, 1000 and 180 µm, and the fractions collected into preweighted aluminium containers, dried at 60 ° C and then frozen, for later determination of dried weight ashore.

• **Underway measurements**

Chlorophyll *in vivo* fluorescence (Turner Designs 10000-R fluorometer), temperature and salinity (ME CTD, Hamburg) were continously monitored on water from the ship´s water intake at 5 meters depth. Incoming irradiance (Li-Cor PAR cosine sensor) was continously logged during the whole cruise.

SEDIMENTATION

• **Recovery of a long term deployment**

On the 27th of July a sediment trap (Aquatec GmbH, 0.5 m2 , 21 samples) rig deployed in May 1995 at location 75°N, 0°E, was succesfully recovered.

• **Drifting traps experiments.**

On two occassions, on the 31th of July at location 74°30´N, 006° 58´E and on the 2th of August at location 72° 46´N, 007°29´E, 24 hours drifting experiments were carried out with a trap (Aquatec GmbH, 0.5 m2 , 4 samples) placed at 70 meter depth well below the pycnocline. The rig was connected to an ARGOS satellite buoy and left to drift freely. Sampling was carried out at fixed time intervals at the buoy site down to 500 meters depth obtaining in this way a 24 hours time series observation of the water column.

FISHERIES

- **Acoustics**

A Simrad EK 500/38 kHz echosounder was used for fish recordings. All recordings were logged with the Bergen Echo Integrator (BEI) program. For determination of bottom depth an EK 500/18 kHz echosounder was used. The configuration of the echosounder is presented in table 1.

- **Pelagic trawling**

Trawling activities were done either at fixed locations or according to fish registrations on the echosounder. A large pelagic trawl, Åkratrawl was used for this purpose.

- **Drifting nets and longline**

These gears were mainly used for catching salmon and were deployed in connection with the deep water hydrographic stations. The gear was deployed before the station work started and recovered after the station was finished. Usually the deployment time was between 2 and 3 hours.

SUMMARY OF STATION WORK

Table 2 shows an overview of the work carried out at each oceanographic station. Table 3 shows an overview of the fishing stations.

PRELIMINARY RESULTS

The investigated area was characterized by large amounts of upper layer watermasses of low salinity over most of the southern part of the Greenland Sea (fig. 2a) . This was obviuosly the product of the melting of the ice present in the western part of the area. Ice observations from the Norwegian and Danish Meteorological Institutes showed that the ice extended much farther east than in the previous year (fig.2b) just north of Jan Mayen island. The maximun ice extension observed in April 1996 showed the formation of the wellknown "Odden" a feature in the ice distribution in the area that had not been clearly observed in the past years. Most of the increased ice extension seems to have been taken place in the area between 76 °N and Jan Mayen Island, since small differences in ice extension were observed north of 76°N between 1995 and 1996.

In the area with low salinity waters a strong and shallow pycnocline was observed, given origin to a well defined mixed upper layer of about 15-20 meters depth. The formation of this shallow mixed upper layer seems also to have originated a strong spring bloom of diatoms as suggested by the low silicic acid values observed in the area (fig 3a). Onboard microscopical observations confirmed this by showing that the phytoplankton composition in the area was completely dominated by diatoms although the total phyhtoplankton biomass was only of moderate levels, usually less than 1 mg chlorophyll *a* m^{-3}.Nitrate concentrations in the upper layer (fig. 3b), on the other hand, were still relatively high indicating that the diatom grothw was being limited by the low concentrations of silicic acid. Previous observations in the Greenland Sea has shown that this surplus of nitrate after the diatom spring bloom usually is being utilized by phytoplankton without demand for silicic acid, especially the prymnesiophyte *Phaeocystis pouchetii* . During the cruise no observations were made of this species in the low salinity area indicating that probably it is mainly brouht to the area by watermasses of Atlantic origin. Most of the nitrate left then will probably be consumed by the diatoms.

The acoustic fisheries survey showed that the herring was mainly present in the Norwegian Sea with larger individuals being more common in the northern part (fig. 4)

REFERENCES

Bullister, J.(1991) Chlorofluorcarbons, ^{3}He-Tritium and small volume radiocarbon. In: WOCE Operations Manual. Vol.3, Section 3.1, Part 3.1.3: WHP Operations and Methods. WOCE Report No. 68/91, Woods Hole.

Culberson, C.H. (1991) Dissolved Oxygen. In: WOCE Operations Manual. Vol.3, Section 3.1, Part 3.1.3: WHP Operations and Methods. WOCE Report No. 68/91, Woods Hole.

Føyn, L., M. Magnussen and K. Seglem, 1981. Automatic analysis of nutrients with an on-line dataprocessing. A presentation of the building and functioning of the system used at the Institute of Marine Research. Fisken Hav., Serie B, 1981 (4) : 1-39.(In Norwegian).

Jenkins, W.J., Lott, D.E., Davis, M.W., Birdwhistell, S.P. and Matthewson, M.O. (1991). Measuring Helium isotopes and Tritium in seawater samples. In: WOCE Operations Manual. Vol.3, Section 3.1, Part 3.1.3: WHP Operations and Methods. WOCE Report No. 68/91, Woods Hole.

Kristiansen, S. and Paasche, E. 1989. An improved method for determining relative ^{15}N abundance in ammonium regeneration studies by direct difussion.Mar. Ecol. Prog. Ser. 54:203-207.

Solorzano, L.1969. A method for the determination of ammonia in seaweater. Limnol. Oceanogr. 14:799-801.

Strickland, J.D.H. and T.R. Parsons, 1972. A practical handbook of seawater analysys. Bull. Fish. Res. Bd. Canada. 167: 1-311.

Tréguer et al. (1991). Production of biogenic silica in the Weddell-Scotia Seas measured with ^{32}Si. Limnol. Oceanogr. 36(6):1217-1227.

Bergen, September 2, 1996

Francisco Rey
Chief Scientist

Table 1. Settings of the EK-500 Echosounder. IMR cruise JH1996210. 20 July to 5 August 1996.

Tranceiver	ES-38B-SK
Frecuency	38 kHz
Tranceiver menu	
Transducer depth	5 meter
Absorption coefficient	10 dB km
Pulse length	Medium
Bandwidth	Wide
Max. power	2000 W
Angle sensitivity	21.9
2-way beam angle	- 21.0 dB
Sv transducer gain	28.1 dB
TS transducer gain	27.8 dB
3 dB beamwidth	7.3 deg.
Alongship offset	- 0.06 deg.
Athw.ship offset	- 0.05 deg.
TS Detection Menu	
Min. value	-60 dB
Min. echo length	0.8
Max. echo length	1.8
Max. Gain compensation	6.0 dB
Max. Phase deviation	3.0

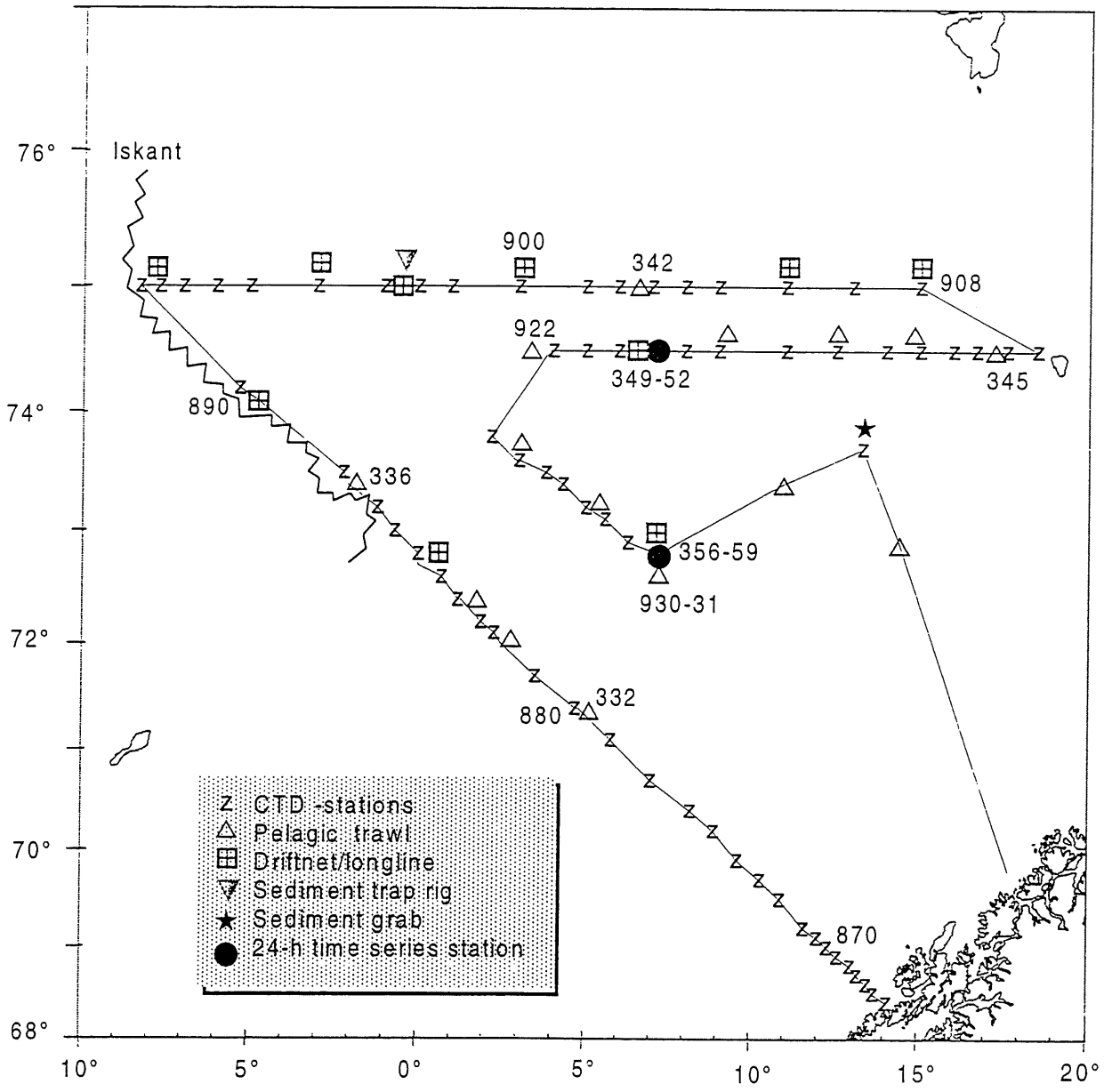
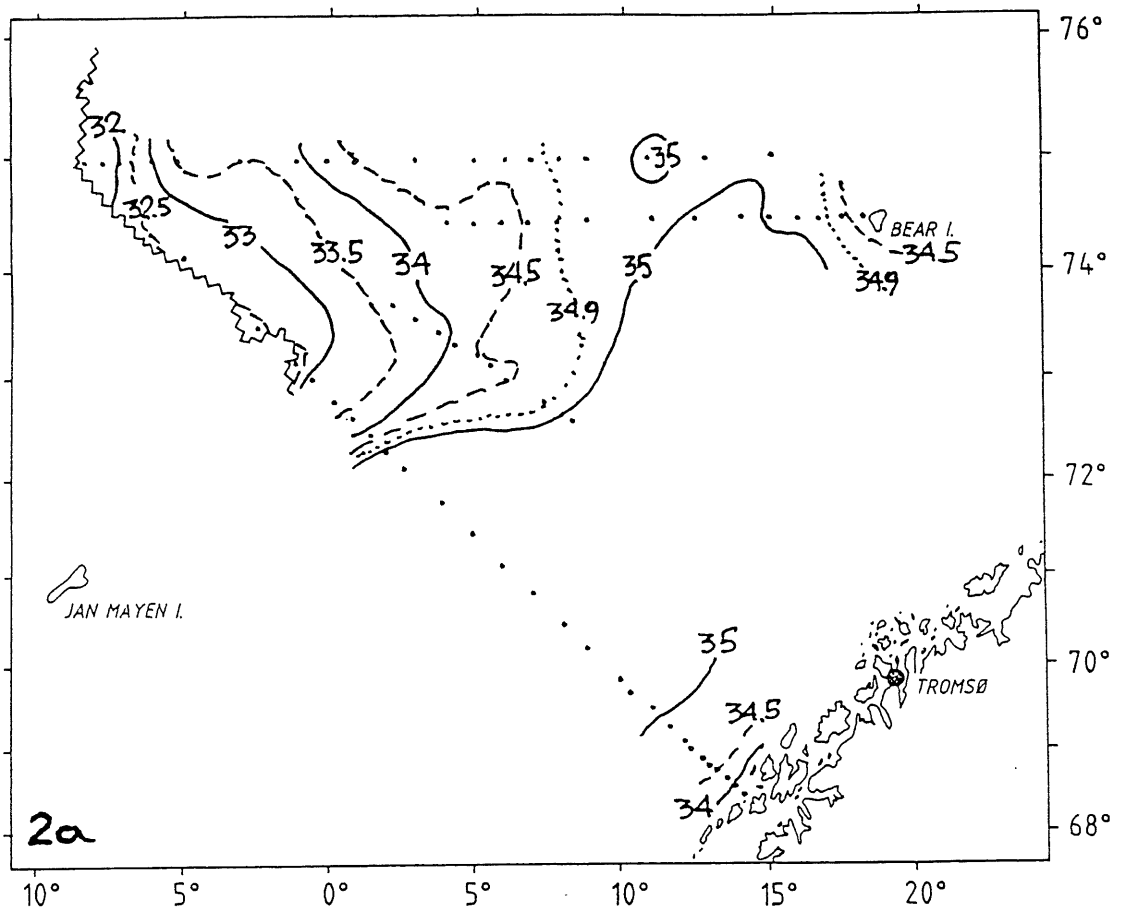


Figure 1. Cruise track and oceanographic stations locations for R/V "Johan Hjort" cruise JH1996210, July 20 to August 5 1996.



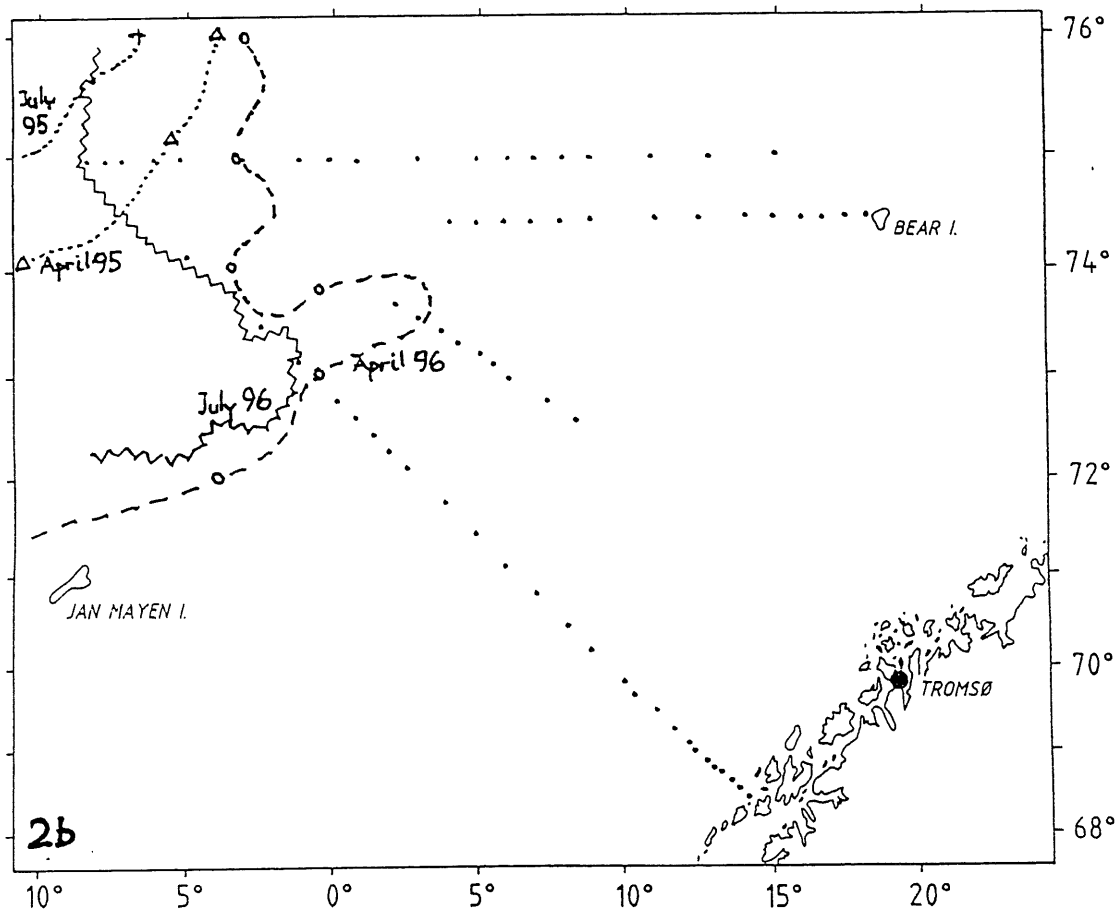


Figure 2. a) Salinity distribution at 10 meter depth in the investigated area.
b) Ice edge limits in 1995 and 1996 in the Greenland Sea.

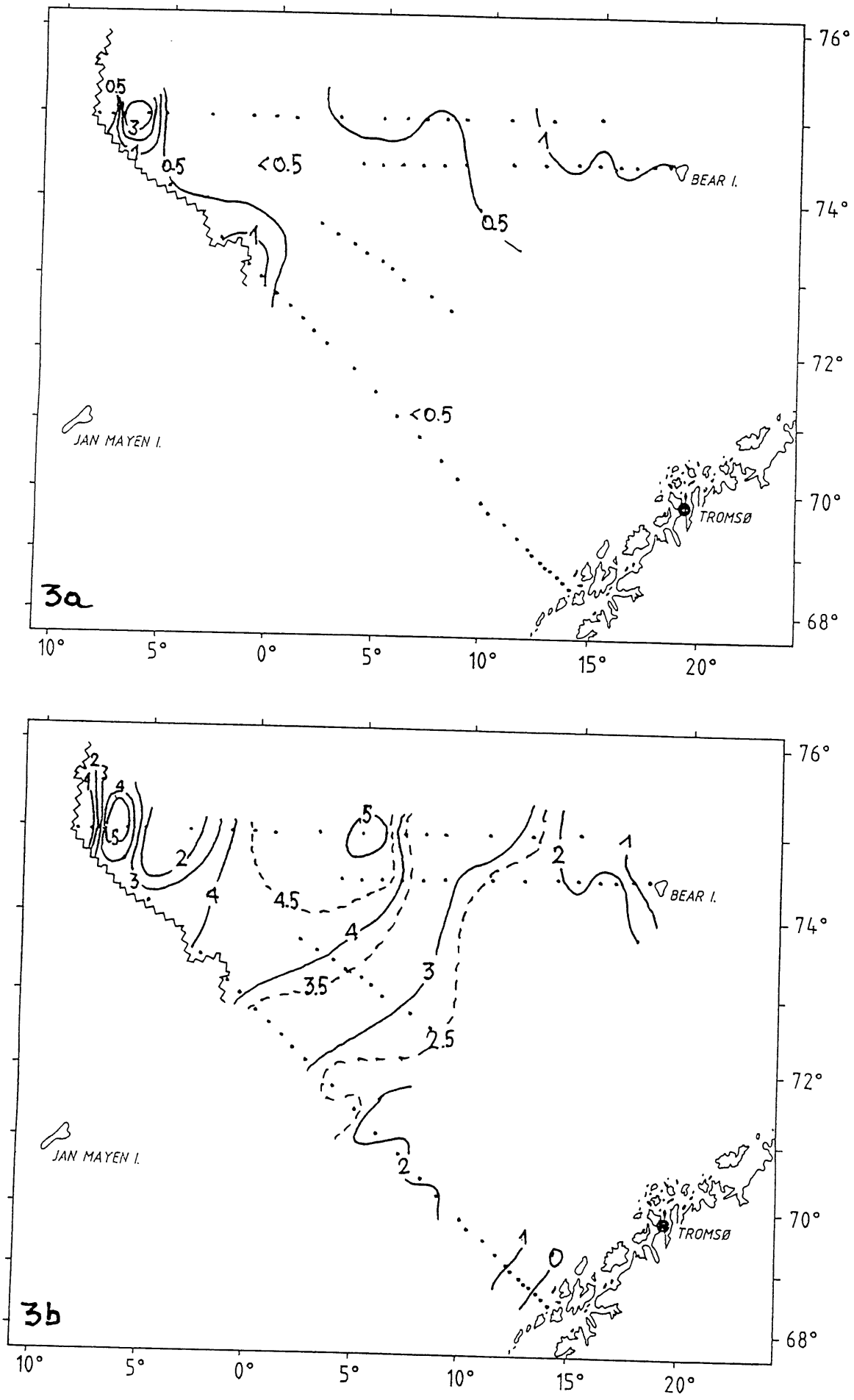


Figure 3. a) Silicic acid (µM) distribution at 10 meter depth in the investgated area.
b) Nitrate (µM) distribution at 10 meter depth in the investgated area.

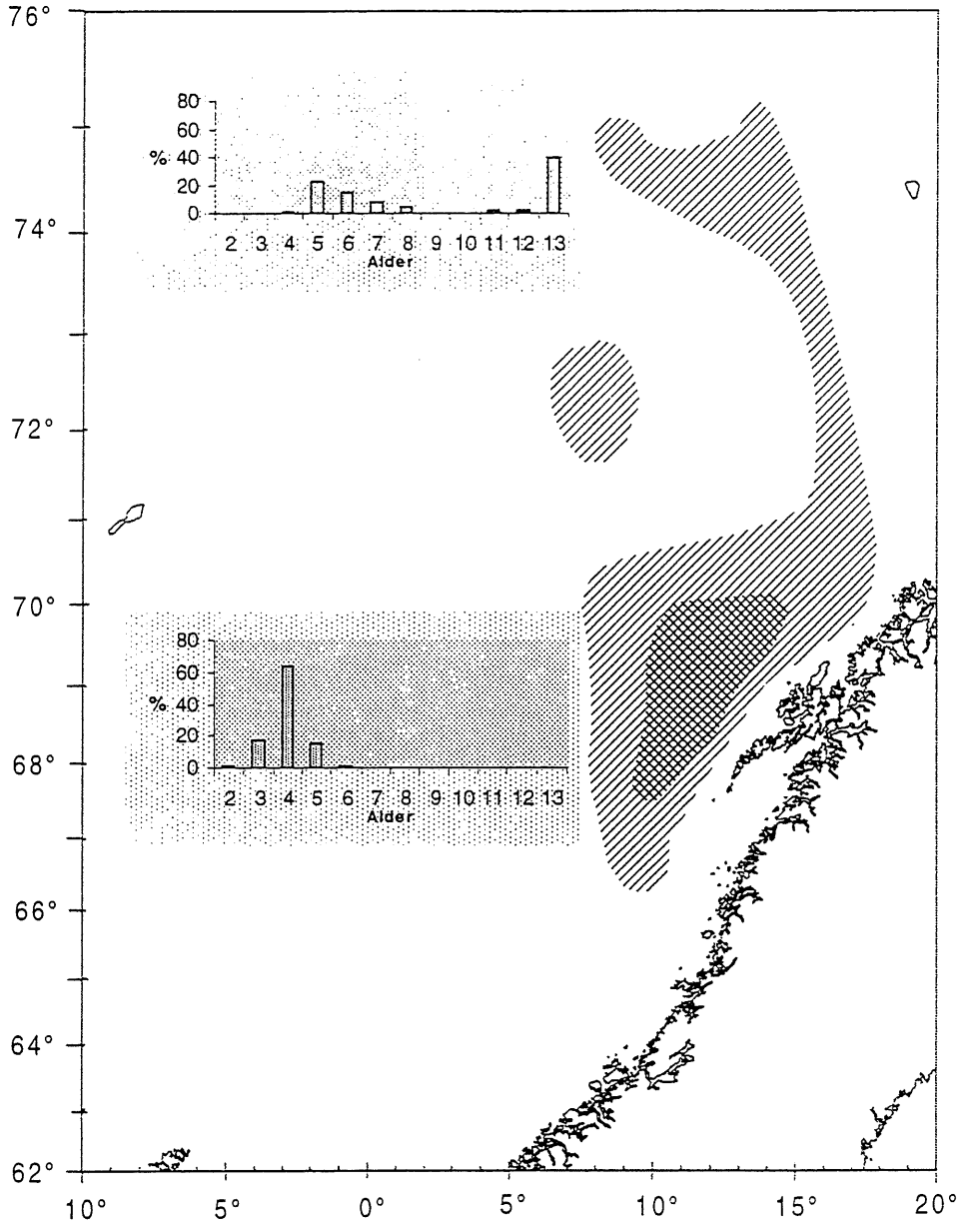


Figure 4. Herring distribution and age composition in the investigated area.

Table 2. Overview of the oceanographic station work carried out during R/V "Johan Hjort" cruise 1996210, July 20 to August 5 1996.

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32Si	BACT	DOC	OTHERS
864	CTD-12	68 24.45 N	014 04.49 E	20 07 1996	23.58	40	18	21	1	9	9	9	9	3	0 - 28	X	X							
865	CTD-12	68 30.68 N	013 36.71 E	21 07 1996	1.17	98	20	20	1	9	9	9	9	7	0 - 82	X	X							
866	CTD-12	68 37.06 N	013 28.64 E	21 07 1996	2.09	115	18	15	1	9	9	9	9	6	0 - 97	X	X							
867	CTD-12	68 43.98 N	013 09.70 E	21 07 1996	3.18	118	19	22	1	9	9	9	9	6	0 - 99	X	X							
868	CTD-12	68 47.09 N	012 57.93 E	21 07 1996	4.06	199	19	24	1	9	9	9	9	9	0 - 179	X	X							
869	CTD-12	68 54.34 N	012 37.60 E	21 07 1996	5.24	1398	19	24	1	9	9	9	9	12	0 - 1109	X	X							
870	CTD-12	69 01.84 N	012 17.03 E	21 07 1996	7.17	2660	20	21	1	9	9	9	9	12	0 - 2562	X	X							
870	PNF-300	69 01.84 N	012 17.03 E	21 07 1996	7.31	2660	20	21	1	9	9	9	9		0-75									
871	CTD-12	69 07.70 N	011 56.79 E	21 07 1996	9.50	2896	21	20	1	2	8	3	0	12	0 - 2848	X	X							
872	CTD-12	69 14.04 N	011 36.65 E	21 07 1996	12.26	2955	21	17	0	2	8	3	0	12	0 - 2913	X	X							
873	CTD-12	69 29.28 N	010 57.03 E	21 07 1996	16.05	2972	18	12	0	2	8	3	0	12	0 - 2921	X	X							
874	CTD-12	69 41.89 N	010 16.04 E	21 07 1996	19.50	2933	16	9	0	2	8	3	0	12	0 - 2901	X	X							
875	CTD-12	69 56.96 N	009 35.45 E	22 07 1996	0.23	2877	15	8	9	2	8	3	0	12	0 - 2811	X	X							
876	CTD-12	70 10.03 N	008 53.12 E	22 07 1996	3.57	2900	4	11	9	2	8	3	0	12	0 - 2874	X	X							
877	CTD-12	70 24.09 N	008 11.61 E	22 07 1996	7.51	2925	2	9	8	2	8	3	0	12	0 - 2900	X	X							
877	PNF-300	70 24.09 N	008 11.61 E	22 07 1996	7.53	2925	2	9	8	2	8	3	0		0-75									
878	CTD-12	70 45.04 N	007 00.15 E	22 07 1996	12.29	3028	11	2	9	2	8	3	0	12	0 - 1000	X	X					X	X	
879	CTD-12	71 05.19 N	005 49.42 E	22 07 1996	15.56	3083	9	5	9	2	8	3	0	12	0 - 3031	X	X						X	
879	PNF-300	71 05.19 N	005 49.42 E	22 07 1996	16.01	3083	9	5	9	2	8	3	0		0-75									
879	GOFLOW	71 05.19 N	005 49.42 E	22 07 1996	16.10	3083	9	5	9	2	8	3	0	3	10,25,50	X	X			X	X			

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32Si	BACT	DOC	OTHERS
879	WP2	71 05.19 N	005 49.42 E	22 07 1996	16.30	3083	9	5	9	2	8	3	0	1	100-0									
879	CTD-24	71 06.45 N	005 47.99 E	22 07 1996	17.55	3083	9	5	9	2	8	3	0	24	0 - 502	X	X		X				X	
879	PhytoNet	71 06.45 N	005 47.99 E	22 07 1996	18.30	3083	9	5	9	2	8	3	0	1	0									
880	CTD-12	71 25.00 N	004 40.31 E	22 07 1996	21.52	3060	6	6	8	2	8	3	0	12	0 - 998	X	X							
881	CTD-12	71 45.03 N	003 29.98 E	23 07 1996	1.09	2953	7	13	8	2	8	3	0	12	0 - 1002	X	X							
882	CTD-12	72 04.55 N	002 19.50 E	23 07 1996	5.11	2473	4	14	7	2	8	3	0	12	0 - 2390	X	X							
882	GOFLOW	72 04.55 N	002 19.50 E	23 07 1996	5.15	2473	4	14	7	2	8	3	0	3	10,25,50	X	X			X	X			
882	WP2	72 04.55 N	002 19.50 E	23 07 1996	5.30	2473	4	14	7	2	8	3	0	1	100-0									
882	PNF-300	72 04.55 N	002 19.50 E	23 07 1996	5.51	2473	4	14	7	2	8	3	0		0 - 75									
882	CTD-24	72 04.68 N	002 14.75 E	23 07 1996	7.08	2473	4	14	7	2	8	3	0	24	0 - 502	X	X	X	X			X	X	
882	PhytoNet	72 04.68 N	002 14.75 E	23 07 1996	7.30	2473	4	14	7	2	8	3	0	1	0									
883	CTD-12	72 15.00 N	001 54.75 E	23 07 1996	8.51	2416	3	18	7	2	8	3	0	12	0 - 1001	X	X							
884	CTD-12	72 25.02 N	001 10.08 E	23 07 1996	11.44	2080	0	20	6	2	8	3	0	12	0 - 2019	X	X							
884	PNF-300	72 25.02 N	001 10.08 E	23 07 1996	11.59	2080	0	20	6	2	8	3	0		0 - 75									
884	WP2	72 25.02 N	001 10.08 E	23 07 1996	12.15	2080	0	20	6	2	8	3	0	1	100-0									
884	CTD-24	72 23.80 N	001 08.69 E	23 07 1996	13.25	2150	0	20	6	2	8	3	0	23	0 - 399	X	X					X	X	
885	CTD-12	72 35.08 N	000 39.26 E	23 07 1996	15.34	2710	35	19	6	2	8	3	0	12	0 - 1001	X	X							
886	CTD-12	72 44.46 N	000 00.35 W	23 07 1996	18.04	2692	34	19	6	2	8	3	0	12	0 - 2571	X	X							
886	WP2	72 44.46 N	000 00.35 W	23 07 1996	18.10	2692	34	19	6	2	8	3	0	1	100-0									
886	PNF-300	72 44.46 N	000 00.35 W	23 07 1996	18.25	2692	34	19	6	2	8	3	0		0 - 75									
886	CTD-24	72 44.30 N	000 01.30 W	23 07 1996	20.38	2692	34	19	6	2	8	3	0	23	0 - 500	X	X		X					
887	CTD-12	73 00.12 N	000 45.29 W	23 07 1996	23.00	2981	32	19	4	2	8	3	0	12	0 - 1000	X	X							
888	CTD-12	73 10.01 N	001 13.41 W	24 07 1996	1.18	2474	32	13	2	2	8	3	0	12	0 - 1000	X	X							
889	CTD-24	73 26.21 N	002 13.14 W	24 07 1996	10.44	2938	27	11	1	2	8	3	0	22	0 - 498	X	X		X			X	X	
889	GOFLOW	73 26.21 N	002 13.14 W	24 07 1996	11.00	2938	27	11	1	2	8	3	0	3	1,10,30	X	X			X	X			

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32SI	BACT	DOC	OTHERS
889	CTD-12	73 26.08 N	002 13.39 W	24 07 1996	11.29	2974	27	11	1	2	8	3	0	12	0 - 2921	X	X							SF6
889	PNF-300	73 26.08 N	002 13.39 W	24 07 1996	11.41	2974	27	11	1	2	8	3	0		0 - 75									
889	WP2	73 26.08 N	002 13.39 W	24 07 1996	11.50	2974	27	11	1	2	8	3	0	1	100-0									
889	PhytoNet	73 26.00 N	002.13.40 W	24 07 1996	13.00	2974	27	11	1	2	8	3	0	1	0									
890	CTD-12	74 09.85 N	005 15.70 W	25 07 1996	1.37	3428	16	17	1	2	8	3	3	12	0 - 3274	X	X							SF6
891	CTD-12	74 59.76 N	008 15.76 W	25 07 1996	10.31	3318	15	17	2	2	8	3	3	12	0 - 1000	X	X					X		SF6, CFC,O2
891	WP2	74 59.76 N	008 15.76 W	25 07 1996	10.35	3318	15	17	2	2	8	3	3	1	100-0									
891	PNF-300	74 59.76 N	008 15.76 W	25 07 1996	10.50	3318	15	17	2	2	8	3	3		0 - 75									
891	CTD-24	74 59.54 N	008 13.65 W	25 07 1996	11.21	3318	15	17	2	2	8	3	3	23	0 - 501	X	X	X	X				X	
891	GOFLOW	74 59.54 N	008 13.65 W	25 07 1996	12.00	3318	15	17	2	2	8	3	3	3	1,10,30	X	X	X		X	X			
891	CTD-12	74 59.28 N	008 11.59 W	25 07 1996	12.22	3310	15	17	2	2	8	3	3	12	0 - 3262	X	X							SF6, CFC,O2
891	PhytoNet	74 59.10 N	008 12.00 W	25 07 1996	14.30	3310	15	17	2	2	8	3	3	1	0									
892	CTD-12	75 01.25 N	007 40.23 W	25 07 1996	21.04	3356	14	19	3	2	8	3	3	12	0 - 1000	X	X							
892	PNF-300	75 01.25 N	007 40.23 W	25 07 1996	21.15	3356	14	19	3	2	8	3	3		0 - 75									
892	GOFLOW	75 01.25 N	007 40.23 W	25 07 1996	21.30	3356	14	19	3	2	8	3	3	3	1,10,30	X	X	X		X	X			
892	PhytoNet	75 01.25 N	007 40.23 W	25 07 1996	21.40	3356	14	19	3	2	8	3	3	1	0									
893	CTD-12	74 59.87 N	006 59.42 W	25 07 1996	22.55	3403	13	20	4	2	8	3	3	12	0 - 1000	X	X							SF6, CFC, He, O2
893	CTD-12	74 59.90 N	006 54.82 W	26 07 1996	1.09	3408	13	20	4	2	8	3	3	12	0 - 3356	X	X							SF6, CFC, He, O2
893	GOFLOW	74 59.90 N	006 54.82 W	26 07 1996	1.15	3408	13	20	4	2	8	3	3	3	1,10,30	X	X			X	X			
894	CTD-12	75 00.52 N	005 57.90 W	26 07 1996	5.01	3462	13	19	4	9	9	9	9	12	0 - 1001	X	X							
895	CTD-12	74 59.90 N	004 58.79 W	26 07 1996	7.05	3532	13	21	4	9	9	9	9	12	0 - 999	X	X						X	
895	GOFLOW	74 59.90 N	004 58.79 W	26 07 1996	7.10	3532	13	21	4	9	9	9	9	3	1,10,30	X	X	X		X	X			
895	PhytoNet	74 59.90 N	004 58.79 W	26 07 1996	8.00	3532	13	21	4	9	9	9	9	1	0									
896	CTD-12	75 00.12 N	002 57.50 W	26 07 1996	10.57	3616	13	18	5	9	9	9	9	12	0 - 1000	X	X						X	SF6, CFC,O2
896	PNF-300	75 00.12 N	002 57.50 W	26 07 1996	11.01	3616	13	18	5	9	9	9	9		0 - 75									
896	WP2	75 00.12 N	002 57.50 W	26 07 1996	11.15	3616	13	18	5	9	9	9	9	1	100-0									
896	CTD-24	74 59.77 N	002 56.21 W	26 07 1996	11.50	3616	13	18	5	9	9	9	9	23	0 - 500	X	X	X	X	X	X			
896	CTD-12	75 00.21 N	002 57.38 W	26 07 1996	12.56	3617	13	18	5	9	9	9	9	12	0 - 3573	X	X							SF6, CFC,O2

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32Si	BACT	DOC	OTHERS
897	CTD-12	74 59.99 N	000 08.79 W	26 07 1996	18.28	3595	12	14	4	9	9	9	9	12	0 - 1001	X	X					X	X	
898	CTD-12	75 00.01 N	000 00.08 E	27 07 1996	5.08	3693	9	17	5	9	9	9	9	12	0 - 1000	X	X							SF6, CFC, He, O2
898	CTD-24	75 00.51 N	000 02.57 W	27 07 1996	6.05	3693	9	17	5	9	9	9	9	22	0 - 502	X	X	X	X	X		X		
898	WP2	75 00.51 N	000 02.57 W	27 07 1996	6.20	3693	9	17	5	9	9	9	9	1	100-0									
898	GOFLOW	75 00.51 N	000 02.57 W	27 07 1996	7.00	3693	9	17	5	9	9	9	9	3	1,10,30	X	X			X	X			
898	PNF-300	75 00.51 N	000 02.57 W	27 07 1996	7.15	3693	9	17	5	9	9	9	9		0 - 75									
898	CTD-12	75 00.87 N	000 03.65 E	27 07 1996	7.29	3693	9	17	5	9	9	9	9	12	0 - 3642	X	X						X	SF6, CFC, He, O2
898	PNF-300	75 00.87 N	000 03.65 E	27 07 1996	9.01	3693	9	17	5	9	9	9	9		0 - 75									
899	CTD-12	75 00.29 N	000 59.90 E	27 07 1996	11.42	3700	7	15	5	9	9	9	9	12	0 - 1000	X	X							
900	CTD-12	75 00.60 N	003 00.19 E	27 07 1996	15.23	2439	3	9	5	2	8	2	0	12	0 - 1000	X	X							SF6, CFC,O2
900	PNF-300	75 00.60 N	003 00.19 E	27 07 1996	15.25	2439	3	9	5	2	8	2	0		0 - 75									
900	WP2	75 00.60 N	003 00.19 E	27 07 1996	15.35	2439	3	9	5	2	8	2	0	1	100-0									
900	CTD-24	75 00.92 N	002 58.66 E	27 07 1996	16.06	2426	3	9	5	2	8	2	0	23	0 - 501	X	X	X	X	X		X		
900	CTD-12	75 01.03 N	002 57.35 E	27 07 1996	17.12	2360	3	9	5	2	8	2	0	12	0 - 2321	X	X							SF6, CFC,O2
901	CTD-12	75 00.26 N	005 00.53 E	27 07 1996	22.02	3030	8	7	6	2	8	2	0	12	0 - 2992	X	X							
902	CTD-12	75 00.00 N	006 00.08 E	28 07 1996	1.07	2834	15	6	6	2	8	2	0	12	0 - 2774	X	X							SF6, CFC,O2
903	CTD-12	74 59.96 N	007 00.45 E	28 07 1996	4.54	1750	9	11	7	2	8	2	0	12	0 - 1720	X	X							
903	PNF-300	74 59.96 N	007 00.45 E	28 07 1996	5.00	1750	9	11	7	2	8	2	0		0 - 75									
903	WP2	74 59.96 N	007 00.45 E	28 07 1996	5.15	1750	9	11	7	2	8	2	0	1	100-0									
903	CTD-24	75 00.25 N	006 59.58 E	28 07 1996	6.11	1722	9	11	7	2	8	2	0	23	0 - 501	X	X	X	X	X		X		
904	CTD-12	75 00.04 N	008 00.35 E	28 07 1996	8.07	3194	8	10	7	2	8	2	0	12	0 - 3120	X	X							
905	CTD-12	74 59.99 N	009 01.68 E	28 07 1996	11.35	2629	5	8	6	2	8	2	0	12	0 - 1000	X	X					X		
906	CTD-12	74 59.89 N	010 59.96 E	28 07 1996	15.11	2454	5	6	5	2	8	2	0	12	0 - 2394	X	X							
906	GOFLOW	74 59.89 N	010 59.96 E	28 07 1996	15.15	2454	5	6	5	2	8	2	0	3	1,10,30	X	X			X	X			
906	WP2	74 59.89 N	010 59.96 E	28 07 1996	15.25	2454	5	6	5	2	8	2	0	1	100-0									

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32Si	BACT	DOC	OTHERS
906	PNF-300	74 59.70 N	010 59.46 E	28 07 1996	15.45	2454	5	6	5	2	8	2	0		0 - 75									
906	CTD-24	74 59.53 N	010 58.94 E	28 07 1996	16.34	2454	5	6	5	2	8	2	0	23	0 - 502	X	X	X	X	X		X		
906	PhytoNet	74 59.53 N	010 58.94 E	28 07 1996	17.00	2454	5	6	5	2	8	2	0	1	0									
907	CTD-12	75 00.04 N	013 00.71 E	28 07 1996	21.38	2034	7	6	4	2	8	2	0	12	0 - 999	X	X							
908	CTD-12	75 00.32 N	014 55.65 E	29 07 1996	5.59	1154	3	11	4	2	8	2	0	12	0 - 1099	X	X							
908	GOFLOW	75 00.32 N	014 55.65 E	29 07 1996	6.00	1154	3	11	4	2	8	2	0	3	1,10,25	X	X				X			
908	PNF-300	75 00.32 N	014 55.65 E	29 07 1996	6.10	1154	3	11	4	2	8	2	0		0 - 75									
908	WP2	75 00.32 N	014 55.65 E	29 07 1996	6.20	1154	3	11	4	2	8	2	0	1	100-0									
908	CTD-24	75 00.48 N	014 53.64 E	29 07 1996	6.42	1161	3	11	4	2	8	2	0	23	0 - 501	X	X	X	X	X		X		
908	PhytoNet	75 00.48 N	014 53.64 E	29 07 1996	7.10	1161	3	11	4	2	8	2	0	1	0									
909	CTD-12	74 29.92 N	018 30.32 E	29 07 1996	14.53	58	2	12	3	2	8	2	0	12	0 - 50	X	X							
910	CTD-12	74 30.06 N	017 35.32 E	29 07 1996	17.28	128	1	10	5	2	8	2	0	12	0 - 119	X	X							
911	CTD-12	74 29.99 N	016 39.58 E	29 07 1996	18.52	198	4	11	6	2	8	2	0	12	0 - 180	X	X							
912	CTD-12	74 30.07 N	015 60.00 E	29 07 1996	19.59	908	2	6	7	2	8	2	0	12	0 - 870	X	X							
913	CTD-12	74 30.01 N	014 59.09 E	29 07 1996	22.03	1786	34	6	5	2	8	2	0	12	0 - 1718	X	X							
913	CTD-24	74 30.14 N	014 57.28 E	29 07 1996	23.20	1789	34	6	5	2	8	2	0	23	0 - 499	X	X							
914	CTD-12	74 29.82 N	013 59.19 E	30 07 1996	2.54	2105	34	8	5	2	8	2	0	12	0 - 2070	X	X							
915	CTD-12	74 30.01 N	012 29.39 E	30 07 1996	6.16	2280	33	5	5	2	8	2	0	12	0 - 2231	X	X							
915	PNF-300	74 30.01 N	012 29.39 E	30 07 1996	6.20	2280	33	5	5	2	8	2	0		0 - 75									
915	WP2	74 30.01 N	012 29.39 E	30 07 1996	6.30	2280	33	5	5	2	8	2	0	1	100-0									
915	CTD-24	74 29.74 N	012 28.24 E	30 07 1996	7.33	2280	33	5	5	2	8	2	0	23	0 - 502	X	X	X	X	X				
916	CTD-12	74 29.96 N	010 59.64 E	30 07 1996	10.51	2390	28	4	6	2	8	2	0	12	0 - 2343	X	X							
917	CTD-12	74 30.10 N	009 00.39 E	30 07 1996	15.42	2598	29	6	6	2	8	2	0	12	0 - 2567	X	X							
917	PNF-300	74 30.10 N	009 00.39 E	30 07 1996	16.00	2598	29	6	6	2	8	2	0		0 - 75									

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32SI	BACT	DOC	OTHERS
917	WP2	74 30.10 N	009 00.39 E	30 07 1996	16.10	2598	29	6	6	2	8	2	0	1	100-0									
917	PNF-300	74 30.50 N	009 00.50 E	30 07 1996	16.47	2598	29	6	6	2	8	2	0		0 - 75									
917	CTD-24	74 30.73 N	009 00.71 E	30 07 1996	17.10	2598	29	6	6	2	8	2	0	23	0 - 501	X	X							
918	CTD-12	74 29.87 N	007 59.03 E	30 07 1996	19.13	2480	34	5	6	2	8	2	0	12	0 - 2419	X	X							
919	CTD-12	74 29.95 N	006 58.23 E	30 07 1996	23.19	2457	35	9	6	2	8	2	0	12	0 - 2413	X	X							
919	PNF-300	74 29.95 N	006 58.23 E	30 07 1996	23.30	2457	35	9	6	2	8	2	0		0 - 75									
919	WP2	74 29.95 N	006 58.23 E	30 07 1996	23.45	2457	35	9	6	2	8	2	0	1	100-0									
919	GOFLOW	74 30.28 N	006 58.58 E	31 07 1996	1.00	2457	35	9	6	2	8	2	0	1	10	X	X			X	X			
919	CTD-24	74 30.28 N	006 58.58 E	31 07 1996	1.30	2457	35	9	6	2	8	2	0	23	0 - 499	X	X					X		
919	CTD-24	74 30.57 N	006 58.76 E	31 07 1996	4.05	2456	36	6	7.7	1	5	2	0	23	0 - 501	X	X	X	X	X		X		
919	PNF-300	74 30.57 N	006 58.76 E	31 07 1996	4.06	2456	36	6	7.7	1	5	2	0		0 - 75									
919	CTD-24	74 30.25 N	006 58.44 E	31 07 1996	7.00	2455	36	6	7.8	1	6	2	0	23	0 - 502	X	X			X				
919	PNF-300	74 30.25 N	006 58.44 E	31 07 1996	7.00	2455	36	6	7.8	1	6	2	0		0 - 75									
919	GOFLOW	74 30.25 N	006 58.44 E	31 07 1996	7.10	2455	36	6	7.8	1	6	2	0	1	10	X	X			X	X			
919	CTD-24	74 30.63 N	006 57.87 E	31 07 1996	10.00	2462	0	0	7.5	1	5	2	0	23	0 - 500	X	X					X		
919	PNF-300	74 30.63 N	006 57.87 E	31 07 1996	10.00	2462	0	0	7.5	1	5	2	0		0 - 75									
919	WP2	74 30.63 N	006 57.87 E	31 07 1996	10.15	2462	0	0	7.5	1	5	2	0	1	100-0									
919	CTD-24	74 31.03 N	006 57.87 E	31 07 1996	13.03	2477	0	0	8.8	1	5	2	0	23	0 - 500	X	X					X	X	
919	PNF-300	74 31.03 N	006 57.87 E	31 07 1996	13.05	2477	0	0	8.8	1	5	2	0		0 - 75									
919	GOFLOW	74 31.03 N	006 57.87 E	31 07 1996	13.15	2477	0	0	8.8	1	5	2	0	1	10	X	X			X	X			
919	CTD-24	74 31.30 N	006 58.10 E	31 07 1996	16.01	2439	2	8	6.6	2	8	2	0	23	0 - 501	X	X	X	X	X		X		
919	PNF-300	74 31.30 N	006 58.10 E	31 07 1996	16.02	2439	2	8	6.6	2	8	2	0		0 - 75									
919	CTD-24	74 31.19 N	006 57.03 E	31 07 1996	18.56	2514	36	10	7.7	1	8	2	0	23	0 - 500	X	X					X		
919	PNF-300	74 31.19 N	006 57.03 E	31 07 1996	19.00	2514	36	10	7.7	1	8	2	0		0 - 75									
919	GOFLOW	74 31.19 N	006 57.03 E	31 07 1996	19.10	2514	36	10	7.7	1	8	2	0	1	10	X	X			X	X			
919	PhytoNet	74 31.19 N	006 57.03 E	31 07 1996	19.30	2514	36	10	7.7	1	8	2	0	1	0									
919	CTD-24	74 31.36 N	006 56.70 E	31 07 1996	21.59	2552	36	10	7	1	4	2	0	23	0 - 500	X	X							
919	CTD-24	74 31.73 N	006 56.63 E	01 08 1996	0.59	2543	6	8	6.3	1	5	2	0	23	0 - 499	X	X							
920	CTD-12	74 30.03 N	005 59.62 E	01 08 1996	3.17	2927	5	11	6	2	8	2	0	12	0 - 2763	X	X							
920	PhytoNet	74 30.03 N	005 59.62 E	01 08 1996	5.00	2927	5	11	6	2	8	2	0	1	0									
921	CTD-12	74 29.98 N	004 59.32 E	01 08 1996	6.25	3162	8	11	6	2	8	2	0	12	0 - 3100	X	X							

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DCMU	15N	32Si	BACT	DOC	OTHERS
921	PNF-300	74 29.98 N	004 59.32 E	01 08 1996	6.30	3162	8	11	6	2	8	2	0		0 - 75									
921	CTD-24	74 29.96 N	004 55.56 E	01 08 1996	8.09	3096	8	11	6	2	8	2	0	23	0 - 500	X	X					X		
922	CTD-12	74 30.04 N	003 59.17 E	01 08 1996	9.52	3121	9	11	7	2	8	2	0	12	0 - 3032	X	X							
922	PNF-300	74 30.05 N	003 56.00 E	01 08 1996	10.30	3121	9	11	7	2	8	2	0		0 - 75									
922	CTD-24	74 30.07 N	003 55.74 E	01 08 1996	11.41	3122	9	11	7	2	8	2	0	23	0 - 500	X	X					X	X	
922	PhytoNet	74 30.07 N	003 55.74 E	01 08 1996	12.10	3122	9	11	7	2	8	2	0	1	0									
923	CTD-12	73 44.79 N	002 14.65 E	01 08 1996	17.18	3177	6	5	8	2	8	2	0	12	0 - 3121	X	X							
923	PNF-300	73 44.79 N	002 14.65 E	01 08 1996	17.30	3177	6	5	8	2	8	2	0		0 - 75									
923	CTD-24	73 44.43 N	002 13.08 E	01 08 1996	19.03	3172	6	5	8	2	8	2	0	23	0 - 500	X	X				X			
924	CTD-12	73 36.89 N	003 00.76 E	01 08 1996	21.47	2760	10	4	6	2	8	2	0	12	0 - 999	X	X				X			
925	CTD-12	73 30.01 N	003 45.50 E	01 08 1996	23.40	2990	2	6	7	2	8	2	0	12	0 - 2896	X	X							
925	CTD-24	73 29.78 N	003 43.36 E	02 08 1996	1.22	2992	2	6	8	2	8	2	0	23	0 - 500	X	X				X			
926	CTD-12	73 23.00 N	004 20.17 E	02 08 1996	2.58	2073	2	6	6	2	8	2	0	12	0 - 1001	X	X				X			
927	CTD-12	73 14.74 N	005 00.84 E	02 08 1996	4.49	2424	10	11	6	2	8	2	0	12	0 - 2370	X	X							
927	PNF-300	73 14.74 N	005 00.84 E	02 08 1996	4.55	2424	10	11	6	2	8	2	0		0 - 75									
927	WP2	73 14.74 N	005 00.84 E	02 08 1996	5.10	2424	10	11	6	2	8	2	0	1	100-0									
927	CTD-24	73 15.20 N	004 58.34 E	02 08 1996	6.28	2433	10	11	6	2	8	2	0	23	0 - 501	X	X				X			
928	CTD-12	73 04.90 N	005 35.14 E	02 08 1996	9.01	3109	15	3	8	2	8	2	0	12	0 - 999	X	X				X			
929	CTD-12	72 54.93 N	006 10.15 E	02 08 1996	10.57	2320	4	6	8	2	8	2	0	12	0 - 500	X	X				X			
930	CTD-24	72 45.00 N	007 29.90 E	02 08 1996	13.19	2498	3	13	8	2	8	2	0	0	0	X	X							
931	CTD-12	72 45.53 N	007 28.26 E	02 08 1996	14 21	2500	3	13	8	2	8	2	0	12	0 - 2455	X	X							
931	PNF-300	72 45.53 N	007 28.26 E	02 08 1996	14 30	2500	3	13	8	2	8	2	0		0 - 75									
931	WP2	72 45.53 N	007 28.26 E	02 08 1996	14 45	2500	3	13	8	2	8	2	0	1	100-0									
931	CTD-24	72 46.23 N	007 26.89 E	02 08 1996	15 51	2500	3	13	8	2	8	2	0	23	0 - 502	X	X	X	X			X		
931	CTD-24	72 47.06 N	007 23.83 E	02 08 1996	19.02	2492	2	13	7.1	2	8	2	0	23	0 - 500	X	X					X		

Table 2. Continuation

STNBR	OPERATION	POSITION Latitude	Longitude	DATE	TIME (UTC)	BOTTOM DEPTH	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE	NBR	SAMPLING RANGE	PARAMETERS NS	BIOM	14C	DOM/U	15N	32Si	BACT	DOC	OTHERS
931	PNF-300	72 47.06 N	007 23.83 E	02 08 1996	19.03	2492	2	13	7.1	2	8	2	0		0 - 75									
931	GOFLOW	72 47.06 N	007 23.83 E	02 08 1996	19.10	2492	2	13	7.1	2	8	2	0	1	10	X	X			X	X			
931	PhytoNet	72 47.06 N	007 23.83 E	02 08 1996	19.20	2492	2	13	7.1	2	8	2	0	1	0									
931	CTD-24	72 47.03 N	007 17.51 E	03 08 1996	1.00	2499	0	12	6.1	2	8	2	0	23	0 - 500	X	X							
931	GOFLOW	72 47.03 N	007 17.51 E	03 08 1996	1.05	2499	0	12	6.1	2	8	2	0	1	10					X	X			
931	CTD-24	72 46.93 N	007 15.99 E	03 08 1996	7.00	2502	35	10	6.1	2	7	2	0	23	0 - 501	X	X					X		
931	PNF-300	72 46.93 N	007 15.99 E	03 08 1996	7.01	2502	35	10	6.1	2	7	2	0		0 - 75									
931	GOFLOW	72 46.93 N	007 15.99 E	03 08 1996	7.15	2502	35	10	6.1	2	7	2	0	1	10	X	X			X	X			
931	CTD-24	72 47.10 N	007 16.34 E	03 08 1996	13.00	2502	33	6	6.6	2	8	2	0	23	0 - 501	X	X							
931	PNF-300	72 47.10 N	007 16.34 E	03 08 1996	13.00	2502	33	6	6.6	2	8	2	0		0 - 75									
931	GOFLOW	72 47.10 N	007 16.34 E	03 08 1996	13.15	2502	33	6	6.6	2	8	2	0	1	10	X	X			X	X			
931	CTD-24	72 48.12 N	007 16.14 E	03 08 1996	15.59	2503	0	7	6.8	1	5	2	0	23	0 - 502	X	X					X		
931	PNF-300	72 48.12 N	007 16.14 E	03 08 1996	16.00	2503	0	7	6.8	1	5	2	0		0 - 75									
932	GRAB	73 43.45 N	013 16.11 E	04 08 1996	3.39	1685	12	24	8.5	2	8	2	0	1	1685									Sediment 137Cs
932	GRAB	73 43.45 N	013 16.11 E	04 08 1996	4.20	1685	12	24	8.5	2	8	2	0	1	1685									Sediment 137Cs
932	GRAB	73 43.45 N	013 16.11 E	04 08 1996	5.05	1685	12	24	8.5	2	8	2	0	1	1685									Sediment 137Cs
932	CTD-12	73 43.45 N	013 16.11 E	04 08 1996	6.21	1685	12	24	8.5	2	8	2	0	12	1672									137Cs
932	CTD-12	73 43.45 N	013 16.11 E	04 08 1996	7.15	1685	12	24	8.5	2	8	2	0	12	1672									137Cs
932	CTD-12	73 43.45 N	013 16.11 E	04 08 1996	8.10	1685	12	24	8.5	2	8	2	0	12	1672									137Cs

Table 3. Overview of the fishing stations during R/V "Johan Hjort" cruise 1996210, July 20 to August 5 1996

FISHING STNBR	GEAR TYPE	POSITION Latitude	Longitude	LOGG	DATE	TIME (UTC)	WIND Dir	Speed	AIR Temp	W	C	SEA	ICE
332	PT	71 22.80 N	004 46.20 E	867	22 07 1996	20.5	13	9	8.4	2	8	3	0
333	PT	72 02.70 N	002 27.20 E	926	23 07 1996	4.08	5	14	7.4	2	8	3	0
334	PT	72 22.70 N	001 18.50 E	954	23 07 1996	10.5	0	19	6.3	2	8	3	0
335	GR	72 44.20 N	000 01.80 E	986	23 07 1996	17.3	35	16	5.6	2	8	3	0
336	PT	73 26.70 N	002 07.10 W	63.8	24 07 1996	6.54	27	7	0.4	2	8	3	0
337	GR	74 08.30 N	004 49.50 W	150	24 07 1996	21.2	17	15	1.5	2	8	3	0
338	LI	74 57.70 N	007 50.50 W	242	25 07 1996	16.2	13	17	3.2	2	8	3	3
339	GR	75 00.00 N	002 59.80 W	318	26 07 1996	10.4	13	19	4.7	9	9	9	9
340	GR	75 00.10 N	000 04.50 W	367	27 07 1996	0.19	10	8	4.3	9	9	9	9
341	GR	75 00.10 N	002 58.70 E	422	27 07 1996	15.1	4	5	4.9	9	9	9	9
342	PT	75 00.40 N	006 47.60 E	482	28 07 1996	3.52	2	7	6.6	2	8	2	0
343	GR	74 59.90 N	010 58.70 E	548	28 07 1996	14.6	9	6	4.9	2	8	2	0
344	GR	74 59.40 N	014 56.1 E	610	29 07 1996	0.58	1	9	4.1	2	8	2	0
345	PT	74 29.20 N	017 40.40 E	698	29 07 1996	16.3	1	11	5.2	2	8	2	0
346	PT	74 30.00 N	014 52.20 E	744	30 07 1996	0.03	33	8	5.6	2	8	2	0
347	PT	74 29.50 N	012 22.40 E	783	30 07 1996	8.16	34	8	5.9	2	8	2	0
348	PT	74 30.40 N	009 12.40 E	832	30 07 1996	14.5	29	9	6.1	2	8	2	0
349	GR	74 29.90 N	006 57.40 E	868	30 07 1996	22.6	34	8	6.6	2	8	2	0
350	GR	74 31.10 N	006 57.30 E	875	31 07 1996	6	0	4	8.7	2	8	2	0
351	GR	74 31.40 N	006 55.00 E	876	31 07 1996	12.2	0	5	9.3	2	8	2	0
352	GR	74 30.6 N	006 59.50 E	883	31 07 1996	20.3	5	14	6.7	2	8	2	0
353	PT	74 29.50 N	003 51.90 E	932	1 08 1996	12.3	11	8	7.5	2	8	2	0
354	PT	73 37.50 N	002 51.90 E	996	1 08 1996	20.5	5	5	6.2	2	8	2	0
355	PT	73 14.70 N	005 00.10 E	40.2	2 08 1996	7.08	10	13	6.5	2	8	2	0
356	LI	72 47.30 N	007 24.40 E	98	2 08 1996	19.5	0	14	7.3	2	8	2	0
357	PT	72 46.90 N	007 15.40 E	104	3 08 1996	3.06	2	10	6.6	2	8	2	0
358	PT	72 46.80 N	007 18.60 E	113	3 08 1996	8.37	3	10	7.9	2	8	2	0
359	PT	72 46.90 N	007 16.10 E	125	3 08 1996	11.3	4	10	7.5	2	8	2	0
360	PT	73 22.50 N	010 546.60 E	203	3 08 1996	23.1	10	21	7.9	2	8	2	0
361	PT	72 55.50 N	014 22.00 E	304	4 08 1996	14.2	12	24	8.5	2	8	2	0