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During the period 1970-1996, a number of current measurements were carried out in the Barents Sea by different institutions. The observations include measurements from fixed mooring buoys and data from drifting satellite tracked buoys. Parts of the data were published previously in technical reports with rather limited distribution. The aim of the present report is to summarise the results from both Eularian and Lagrangian current measurements with the main focus on the mean conditions. The current variability is discussed in relation to the longest time series.

The results show that, with only a few exceptions, the current direction is almost the same through the whole water column. The current velocities are low in general, except along the Norwegian coast and some localities around the Svalbard Bank. In most locations, the current shows great temporal variability. In the longest time series, there is a weak seasonal signal showing stronger currents during winter than summer.

Emneord - norsk:
1. Strømmålinger
2. Strømforhold
3. Barentshavet

Emneord - engelsk:
1. Current measurements
2. Current conditions
3. Barents Sea

Prosjektleder

Seksjonsleder

INTRODUCTION

The Barents Sea is a relatively shallow continental shelf sea with an average depth of 230 m. The main features of the bottom topography are shown in Fig. 1. The bottom topography strongly influences the current conditions, especially in the most shallow areas. There are three main water masses in the Barents Sea (Loeng, 1991); the Coastal Water, the Atlantic Water and the Arctic Water. The Coastal Water and the Atlantic Water enter the Barents Sea through the area between Norway and the Bear Island (Fig. 1), and both of these water masses are flowing east and northeastwards into the Barents Sea. In the inflow area, the temperature varies from 3.5° to 6.5°C for both water masses, depending on both seasonal and interannual variations. The Atlantic Water is defined with a salinity higher than 35.0 (Helland-Hansen and Nansen, 1909), while the coastal water has a salinity below 34.7. The Arctic Water is characterised by temperatures below zero and salinity between 34.3-34.8 (Loeng, 1991). The Arctic Water enters the Barents Sea through the northern border between Spitsbergen and Franz Josef Land, and through the eastern boundary between Novaya Zemlya and Franz Josef Land as well. The Arctic Water is mainly flowing towards the west and southwest. In some areas, like the Svalbard Bank, water masses are formed locally (Loeng, 1991).

Earlier, the circulation pattern of the Barents Sea was based mainly on hydrographic observations and geostrophical calculations of the current field. Very few current measurements were available before the 1970s. Tantsiura (1959) presented a detailed current map for the whole Barents Sea based on hydrographical observation and dynamic calculations. Novitskiy (1961) presented two maps, one for the surface layer and the other for the bottom layer. Later, these maps were used as the basis for new ones. Loeng (1989) introduced a more simplified map in which some more recent observations of current and hydrography were included. This map was later modified and improved by Loeng *et al.* (1993b, 1997)

In connection with petroleum activity in the Barents Sea, an environmental data observation programme that included current measurements was initiated. The River and Harbour Laboratory in Trondheim was responsible for the observations from the beginning in 1976, but from autumn 1984 the Oceanic Company of Norway A/S (Oceanor) assumed responsibility for most of the measurement related to petroleum activity in the marine environment. The environmental programme has been funded mainly by the Norwegian Petroleum Directorate (NPD) and the oil companies through their umbrella organisation, OperatørKomité Nord (OKN). OKN has also given financial support to current measurements carried out by other Norwegian research institutes, such as the Institute of Marine Research (IMR) and the Norwegian Hydrographic Service.

A number of satellite-tracked Argos buoys have been released in the Barents Sea by IMR in order to study the upper layer circulation and follow the drift and dispersal of pelagic fish larvae and juveniles. Also, the SACLANT Undersea Research Centre, La Spezia, Italy, released drifter in the Nordic Seas and some of these drifted into the Barents Sea (Poulain *et al.,* 1996).

The results from the different measurement programmes have mainly been published in data reports; not all of them easy available. The aim of the present report is to summarise the results from both the Eularian and Lagrangian current measurements carried out in the Barents Sea since the early 1970s up to 1996. The main focus is to study the monthly to seasonal and interannual fluctuation in the current systems, while variability of shorter duration has not fallen within the scope of this report.

MATERIAL AND METHODS

Current measurements from fixed moorings have been carried out from more than 70 locations in the Barents Sea, most of these located in the southwestern part (Fig. 2 and Table 1). The measurements have taken place since the early 1970s, but most of the measurements have been carried out during the last 15 years. Oceanor and the Institute of Marine Research have been responsible for most of the measurements, but some have also been carried out by the Norwegian Hydrographic Service and the River and Harbour Laboratory (presently called Norwegian Hydrodynamical Laboratory). Most of the measurements have previously been presented in data reports, partly with limited distribution. The data used in the present report is mainly extracted from these works (e.g. Johansen *et al.,* 1988, Kvamme and Mildal,1991, Loeng *et al.,*1993a, see Table 1). Oceanor has contributed with some current meters statistics collected especially for this report. A few results are taken from scientific publications (Aagaard *et al.,*1983, Schauer, 1995).

All measurements below 30 m have been carried out by Aanderaa current meters (RCM-4/RCM-7) (Aanderaa Instruments, 1978, 1987). In the surface layer, or, more precisely, the wave zone, Oceanor have partly used a vector averaging current meter (UCM-30). The length of the measuring periods has varied from 2 days to 8 years (Table 1). 70 % of the deployments lasted for less than 100 days while 22 % lasted more than 300 days. To draw horizontal maps of the current field, mean values from the entire measuring period have been used independent of length. Horizontal maps are drawn for two different levels. The upper layer circulation map is an average of the upper 100 m, while the lower layer includes measurements close to the bottom. In order to study long-term variability in the current conditions, monthly mean values for some of the longer time series have been worked out (Table 2).

Since 1981 the Institute of Marine Research has deployed more than 200 drifting satellite-tracked Argos buoys. The experiments have been carried out in the North Sea, along the Norwegian coast and in the Barents Sea. The buoy system is described by Loeng *et al.,* (1989) together with some results from the Barents Sea. An 11 m^2 window-blind drogue is attached to the buoys, usually by a 30 m tether.

The buoys deployed in, or drifting into, the geographical area 67°-77° N, 5°-39° E were used in the present study. The buoys were positioned an average of 12-15 times per day. The accuracy of the positions is variable. The whole data set was manually inspected and quality controlled; "spikes" and obvious erroneous data were deleted. By interpolation, the position of the buoy at 1200 H each day was determined and a daily mean velocity calculated. No attempt has been made to correct the drifters for the possible influence of wind, i.e., the direct effect on the surface buoy or the indirect effect by setting up an Ekman current. Studies from other drift experiments, however, indicate that the direct wind effect on such buoy systems is of minor consequence (Booth and Meldrum, 1987, Pistek and Johnson,1992).

The drift data were organised in bins of 1° latitude by 2° longitude. Only drifters passing through the bin were included, i.e., drifters deployed or recovered in the bin were deleted.

Sometimes a drifter passed in and out of a bin several times. In such cases the different parameters for the drifter were averaged. Bins with 5 or less passages were not considered. The residence time was calculated as the number of hours the drifter stayed within the bin. The mean drift speed for each bin was calculated by averaging the drift speed for the individual drifters through the bin. The stability of the current, *B*, is defined as the ratio of the average vectorial velocity and the averaged arithmetic velocity within each bin and is expressed in percent (Neumann and Pierson, 1966). Consequently, *B* is a directional stability parameter for the drifters which will be 100 % for a complete linear drift. This parameter was also calculated for the current meter observations as the ratio between the mean current speed and the mean velocity multiplied by 100%.

During the period 1991-1993, SACLANT released 107 Argos-tracked drifters in the Nordic Seas (Poulain *et al.*,1996); we were permitted to use these data. The drifters were equipped with a large holey sock drogue centred at 15 m depth. The deployments are spread throughout the year, with most of them being released during autumn. A considerable number of these buoys were drifting into the area of this study as defined above and some results from these are included in the present report.

RESULTS

The current measurements indicate a rather strong barotrophic current component in the Barents Sea (Table 1) where the current direction in most areas changed very little with depth. Calculating the ratio between the highest and the lowest mean velocity at each deployment of Table 1 will give some indications of the ratio of the barotrophic (BT) to baroclinic (BC) component of the current; BT/BC. Fig. 3 shows the most conspicuous feature of the circulation of the Barents Sea as well as the area where BT/BC< 0.5, i.e., the baroclinic structure dominates the current pattern. As seen, this is in the area influenced by the Norwegian Coastal Current, over the Central Bank, and in the area between Svalbard Bank and the Great Bank that is mostly covered by Arctic water masses. The dominance of the barotrophic current component seems to be especially related to the inflow routes of Atlantic water. The mean residual current velocity in the Barents Sea, as seen from Table 1, is rather low. In the upper 100 m, 55 % of the measurements are below 5 cm s^{-1} and only 15 % more than 10 cm s^{-1}. Below 100 m depth, the similar figures are 72 % and 6 % respectively.

Monthly mean values for some key parameters at some of the longer time series appear in Table 2. Similar values for the deployments in the northeastern Barents Sea (Sts. 31-34) can be found in Loeng *et al.* (1993a) The maximum current speed in the upper 100 m varied between 30 and 100 cm s^{-1} and, below 100 m, between 30 and 70 cm s^{-1} with the lowest values in the northeastern Barents Sea (Sts. 31-34). Table 2 confirms the impression from Table 1 with the majority of the monthly mean velocities falling below 5 cm s^{-1} and only 5 -15 % of the values higher than 10 cm s^{-1}.

The directional stability of the current within a time scale of a month is characterised by the Neumann parameter *B* (Table 2). As can be seen, it varies quite a lot, both between months and localities. There is a clear tendency for *B* to increase with both depth and increasing current speed. In most of the Barents Sea, *B* is low; more than half of the monthly mean stability factors of Table 2 are below 25 and only 13 % of the values above 50. In the northeastern Barents Sea (Sts. 31-34), however, the directional stability is much higher with more than sixty per cent of the monthly mean values above 50 and where stability factors of 80-100 are frequently observed (Loeng *et al.,* 1993a).

The intermonthly variability in mean current direction, as seen from Table 2, varies from deployments where more than 50% of the values are found within a quadrant (e.g. Sts. 44 and 54), to mooring stations, where the monthly mean directions are more or less distributed evenly around the compass (St. 50). This variability could also be demonstrated by figures, such as Fig. 4 and Table 2, showing monthly mean values of the current velocity from the longest time series from Tromsøflaket (St. 44 - Fig. 2), where the measurements started in September 1976 and ended in December 1984. The figure confirms that there are small changes in direction with depth, and, as expected, there is usually a decreasing velocity towards the bottom. During most of the period the current direction was towards the northeast, but, in some months, the current's direction was quite the opposite. This indicates that there is some variability in the current, but it is not possible to detect any systematic seasonal or interannual variability at this location. The highest intermonthly stability of the current is found in the northeastern part of the Barents Sea (Loeng *et al.,* 1993a).

Even though the general impression is that there is little change in current direction with depth, some measuring sites showed deviation from this, on both shorter and longer time scales. Fig. 5 shows the current components through a section going southeastwards from the Svalbard Bank (Fig. 2, Sts. 63, 65-68) from November 1987 to April 1988. The figure reveals some seasonal changes. First, the southwestern current component at the shallowest area decreases both in speed and extent from November to April. This is Arctic water from the Bear Island current (Loeng, 1991). In November, the maximum speed was almost 10 cm s^{-1} at the most shallow part, and the width of the southbound current was between 150-200 m. Later, both speed and width of the current decreased to a minimum in February. At location S4 (St. 67, Fig. 2), a rather stable northeast flowing current from surface to bottom was observed but with a core at the upper 50 m. This branch is defined as the "warm core jet" by Li (1995). The volume flux of this core jet is calculated to be as high as 1.4 Sv (Li, 1995). At the deepest location, S5 (St. 68, Fig.2), there was a southwesterly component which also varied from one month to the next. This component was observed during all months except March, and it was found at both the intermediate and bottom layers, with an increasing southwesterly component toward the bottom. In summary, the measurements from this section showed highly variable current conditions throughout the period, both in speed and extent of the different components.

Fig. 6 shows the current conditions in a section along 31°E from September to November 1989. There is a strong easterly current close to the Norwegian coast. This current is rather narrow. The speed decreases from more than 20 cm s^{-1} to almost zero close to the bottom. Another area with a strong and stable current is situated around 73°N (Fig. 2, St. 52) where the core of Atlantic water is flowing eastwards. This core is seen in the standard hydrographic section along 31° E (Fig. 7) from September 1989 as having water with a salinity higher than 35. Between the east flowing Coastal water and the main Atlantic branch, the results indicate a westward flowing current between 71° and 72° N. This is probably recirculated Atlantic water following the bottom topography around the Tidley Bank which then turns eastward again and merges with the Coastal current.

The results from all the Norwegian drifters deployed or drifting into the Barents Sea region are presented as a trajectory plot in Fig. 8. As can be seen, the current off the Norwegian coast is, to a large degree, governed by the bottom topography. The influence of the bank Tromsøflaket can clearly be seen. At the Svalbardbanken, there are a lot of small eddies, and a rather large one seems to go around the Bear Island. Also, along the Norwegian coast, there are a lot of eddies linked to a small bank area. Figs. 9 and 10 show the parts of the trajectories where the daily mean drift speeds exceed 30 cm s^{-1} and 40 cm s^{-1} respectively. The highest current speeds are mainly found at the shelf and over the shelf break between 68° and 70°N, close to the Norwegian coast between 20° and 30°E and in the core of the eastward flowing Atlantic water around 73° N.

Fig. 11 shows two examples of individual trajectories. One of the buoys drifted for 80 days, circulated around the Bear Island and thereafter on the Svalbardbank during the period July-September 1989. The other buoy shows a frequently observed drift pattern in the Atlantic inflow area during 65 days in July-September. As seen, there is no persistent and well-defined current in the surface layer as that characterising the Atlantic inflow along the Norwegian continental shelf break. In a number of trajectories from this area, the same feature may be observed. However, all of these trajectories are from the summer period when the water masses are stratified and may reflect a seasonal phenomenon.

All the SACLANT drifters have been deployed in different positions in the Nordic Seas outside the actual area, but a considerable number of these have drifted into the Barents Sea region. Trajectory plots of these appear in Fig. 12. Fig. 13 shows where the daily mean current speeds exceeds 40 cm s^{-1}. These figures confirm the general impression from the Norwegian material as explained above, but there are also significant differences. In the Norwegian data, nearly all the drifters are confined to the shelf area of the Norwegian coast and the Barents Sea. The SACLANT data, however, show a significant part of the drifters over the deep ocean west of the shelf break between Norway and Svalbard. Most likely, this is an effect of the deployment position: all the Norwegian deployments have been along the Norwegian coast and in the Barents Sea proper while the SACLANT buoys have been dropped in the Fram Strait and in the Jan Mayen-Iceland-Faeroes area. The current system along the Norwegian coast acts as a great retention area with very little cross-current transport west of the shelf break

Fig. 14 shows the mean drift speed and directional stability, *B*, in bins of 1° latitude and 2° longitude based on Norwegian drifters. Only bins with more than 5 passages are considered. The highest mean drift speeds (more than 60 cm s^{-1}) are found along the shelf break between 69° and 71° N just before the water masses enter the Barents Sea. In the Barents Sea itself, the highest speed in the surface layer is found close to the coast with a speed above 30 cm s^{-1}. The highest directional stability (more than 50 %) is observed at the shelf and the shelf break west of 19° E and south of 71° N and between 71° and 72° N from 19° to 25° E.

Fig. 15 shows mean and maximum residence time in hours of the drifters in the bins. As expected, the lowest mean residence time (less than 150 hours) is found at the shelf and over the shelf break west of 19° E and south of 71°N where the highest values of the mean drift speed and the current directional stability are also observed. The highest mean residence time is observed between 71° and 74° N and between 25° and 33° E. The maximum residence time indicates areas where some of the drifters are caught by topographical features, such as bank areas. In several bins, some of the drifters may stay for more than one month (720 h).

DISCUSSION

The present report briefly summarises all available Norwegian current measurements in the Barents Sea before 1996. More detailed information on some of the time series is found in the reports given in Table 1. The same Table also gives an overview on mean velocity and direction at more than 70 positions. In order to systematise these numbers, we have updated and modified the surface current map prepared by Loeng *et al.* (1997) (Fig. 16), and, in addition, we have prepared a new map for current conditions close to the bottom (Fig. 17). Since the current field is rather barotrophic in most of the Barents Sea (Fig. 3), the differences between the two maps are minor. Just a few moorings showed major shifts in current direction with depths.

The barotophic conditions have been pointed out earlier in several reports. At most localities, the current direction is almost the same through the whole water column (Table 1). At some localities, however, there is a stronger baroclinic component, e.g., stations 10, 25, 26 and 36. At a few localities, the current may even have an opposite direction at the surface layer from the bottom, e.g., stations 33, 35, 60 and 68. Fig. 3 is an attempt to illustrate areas that are dominated by barotrophic current conditions, and this feature is clearly associated with the inflow of Atlantic water.

The current shows great temporal variability. This is documented by low current directional stability, *B,* at most of the moorings (Table 2). For most locations and periods, the directional stability is less than 50%. There are exceptions, however, such as station 54 (74°32'N, 30°58'E) where the directional stability was higher than 80% close to the bottom during the period June-October 1986. Not only was the directional stability high during each single month, but the direction was approximately the same during the whole measuring period. The only other place with such high stability was observed at the outflowing area north of Novaya Zemlya (Loeng *et al.*, 1993 a), where the directional stability was higher than 90% close to the bottom where the dense bottom water was leaving the Barents Sea. However, looking at the other depths at station 54, we see that not only is the directional stability much lower, but there were also some dramatic shifts in the current direction from one month to the next, especially at 50 m. If we look at the other long-term moorings in Table 2, we also see that the directional variability between months is usually large. The illustration from the longest time series at Tromsøflaket (Fig. 4) illustrates the intermonthly variability rather clearly. Stable current directions over a long period seem to occur only in the rather few localities where there is a strong topographic steering.

Loeng *et al.* (1997) showed a clear seasonal signal in the outflowing current from the Barents Sea with a maximum outflow during late autumn and winter and a minimum during summer. The same seasonality is found by several Russian scientists based on calculations of the geostrophical flow of the Atlantic current in the Barents Sea (Uralov, 1960; Timofeev, 1963; Moretskiy and Stepanov, 1974; Orlov and Poroshin, 1988; Potanin and Korotov, 1988). However, from the long time series in Table 2, a rather weak seasonal signal is seen. Both the mean and maximum monthly current velocities indicate higher velocity during winter than summer. At Tromsøflaket (station 44), we can see that the maximum usually occurred during the months December-March. This is, however, in contrast to more recent current measurements in the inflowing area between Norway and Bear Island where no seasonal signal was found in the transport of Atlantic water into the Barents Sea during the period August 1997 to August 1998. (Ingvaldsen *et al.* (submitted). However, as trey indicate in their paper, it is difficult to make a firm conclusion based on only one year of current measurements. The measurements along the eastern slope of the Svalbard Bank (Fig. 5) support that there is some seasonal signal in the southwest flowing Arctic water while the northeast flowing current was rather stable.

The drifters confirm that the current conditions in the Barents Sea are rather complicated. There are a lot of eddies with limited extension over all bank and trough areas; most of them also rather limited in time. Figs. 8, 14 and 15 illustrate this in different manners. While Fig. 8 shows areas where individual buoys have been trapped by eddies, Figs. 14 and 15 show bins with low directional stability and long residence time respectively. Bins with low directional stability usually also have a long residence time. The drifting buoys also show the areas with strong surface current (Figs. 9, 10 and 13). The strong current along the continental shelf outside Vesterålen is well known (e.g. Poulain *et al.*, 1996) as is the strong current along the coast of Troms and Finmark (Blindheim, 1989). The relatively strong current in the branch of the Atlantic current situated between 72°30'N and 73°00'N (Figs. 9, 10 and 13) has not been reported earlier. This is the core area for the Alantic water flowing towards to the eastern Barents Sea.

The drifters (Fig. 8) also indicate the Svalbard Bank area as a location with high short-term variability where semidiurnal tidal or inertial oscillation dominates. At this latitude, these are very close in frequency which makes it difficult to distinguish between them. The drift in this rather shallow area is very confined by the bottom topography. In the Atlantic inflow route south of the Bear Island, the summer seems to be characterised by the lack of a persistent and well-defined current in the upper layer (Fig. 11).

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Table 1. Deployments of current meter moorings in the Barents Sea, 1970-1995. *) Measurements by vector overaging current meter (UCM-30). For all other measurements, Anderaa RCM-4/RCM-7 have been used.

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
										Norwegian Hydrographic Service
1	74° 59'	20° 04'	44	15	22.07.1988	10.08.1988	19	12.3	330	Kvamme and Mildal (1991)
				25			19	5.8	272	
2	74° 57'	25° 04'	191	50	10.08.1988	10.09.1988	31	3.4	005	Kvamme and Mildal (1991)
				100			31	3.5	354	
				150			31	3.7	003	
3	75° 00'	30° 01'	383	50	19.09.1988	26.10.1988	37	6.4	350	Kvamme and Mildal (1991)
				150			37	5.8	002	
				300			37	3.2	349	
4	73° 01'	22° 20'	433	50	10.08.1988	10.09.1988	31	8.2	061	Kvamme and Mildal (1991)
				150			31	6.2	055	
				300			31	3.9	059	
5	76° 31'	22° 34'	216	50	23.07.1988	09.08.1988	17	4.4	330	Kvamme and Mildal (1991)
				100			17	4.7	331	
				150			17	7.8	356	
6	76° 24'	34° 49'	294	40	07.08.1985	13.09.1985	37	1.1	056	Kvamme and Mildal (1991)
				90			37	0.6	060	
				165			37	0.3	077	
7	77° 24'	30° 04'	200	30	08.08.1985	27.08.1985	19	5.7	149	Kvamme and Mildal (1991)
				60			19	2.4	158	
				125			19	2.5	144	
8	73° 01'	15° 00'	554	100	17.07.1989	21.08.1989	35	12.9	014	Kvamme and Mildal (1991)
				300			35	9.1	008	
				500			35	5.8	002	
9	72° 00'	31° 00'	326	50	03.04.1989	20.06.1989	78	5.2	128	Kvamme and Mildal (1991)
				100			78	4.4	121	
				276			78	2.9	145	
10	75° 00'	34° 57'	193	50	18.09.1988	28.10.1988	40	1.9	307	Kvamme and Mildal (1991)
				100			40	1.3	353	
				150			40	3.0	086	

Table 1. Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
11	75° 00'	15° 36'	575	300	16.07.1989	27.07.1989	11	8.5	358	Kvamme and Mildal (1991)
				500			11	10.7	003	
12	71° 53'	19° 54'	300	30	24.08.1970	11.09.1970	18	11.1	135	**Institute of Marine Research**
				290			18	4.5	120	Blindheim and Loeng (1978)
13	71° 53'	19° 54'	300	290	24.08.1971	09.09.1971	16	6.0	095	
14	72° 57'	15° 02'	600	30	24.08.1970	10.09.1970	17	11.7	014	Blindheim and Loeng (1978)
				590			17	4.0	357	
15	73° 28'	18° 42'	450	30	25.08.1970	10.09.1970	16	5.9	290	Blindheim and Loeng (1978)
16	73° 28'	18° 42'		440	24.08.1971	09.09.1971	16	4.5	241	Blindheim and Loeng (1978)
17	73°16'	19° 22'	450	30	21.08.1975	07.10.1975	47	12.2	073	
				440			47	4.5	076	Blindheim and Loeng (1978)
18	70° 32'	19° 59'		30	18.06.1978	28.08.1978	71	10.5	031	Loeng (1979)
										Loeng (1979)
19	72° 19'	19° 27'	310	150	18.10.1978	10.01.1979	84	6.9	084	
				300			84	2.1	077	
20	73° 06'	19° 07'	420	30	19.06.1978	13.09.1978	86	3.1	073	Loeng (1979)
				300			86	1.9	064	
				410			86	1.4	048	
				40	18.10.1978	07.03.1979	140	8.2	070	
21	73° 32'	19° 16'	450	30	21.06.1978	14.07.1978	23	7.6	270	Loeng (1979)
				150			23	10.3	222	
				440	21.06.1978	25.06.1978	4	19.8	221	
				30	19.10.1978	11.01.1979	84	6.8	220	
				150	19.10.1978	01.12.1978	43	4.9	217	
				440	19.10.1978	11.01.1979	84	9.7	223	
22	75° 15'	31° 59'	318	15	11.07.1979	19.07.1979	8	7.1	028	Loeng (1983)
				45			8	7.5	027	
				140			8	6.1	009	
				308			8	8.5	359	
23	74° 00'	31° 11'	280	25	25.06.1981	07.07.1981	12	4.1	360	Loeng (1983)
				50			12	2.7	333	

Table 1, Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
				100			12	2.6	335	
				270			12	4.8	337	
24	75° 29'	32° 10'	285	25	05.07.1981	08.08.1981	34	4.8	034	Loeng (1983)
				100			34	No obs.	023	
				275	05.07.1981	20.07.1981	15	6.8	007	
25	76° 59'	33° 23'	158	25	09.08.1981	12.08.1981	3	3.9	246	Loeng (1983)
				50			3	2.6	228	
				100			3	1.9	230	
				148			3	2.6	187	
26	74° 19'	21° 38'	190	30	27.05.1982	01.06.1982	5	4.6	341	Loeng (1983)
				55			5	5.1	326	
				105			5	3.9	292	
				180			5	4.0	263	
27	76° 35'	35° 30'	220	30	26.08.1982	01.11.1982	66	5.1	055	Loeng (1983)
				100	26.08.1982	03.11.1982	68	4.0	071	
28	73° 05'	40°.01'	315	25	25.08.1989	21.10.1989	56	1.3	159	Loeng (1990)
				50	25.08.1989	17.10.1989	52	2.0	162	
				150	25.08.1989	07.10.1989	42	0.3	068	
				305	25.08.1989	28.10.1989	63	1.1	170	
29	74° 30'	39° 58'	186	20	26.08.1989	21.10.1989	56	0.7	229	Loeng (1990)
				45	26.08.1989	10.10.1989	45	0.8	238	
				150	26.08.1989	26.09.1989	31	1.9	251	
30	74° 30'	43° 01'	285	20	26.08.1989	24.10.1989	59	3.0	201	Loeng (1990)
				45	26.08.1989	07.10.1989	42	0.9	218	
				150	26.08.1989	03.10.1989	38	0.1	033	
				275	26.08.1989	29.10.1989	63	1.7	005	
31	77° 19'	62° 56'	154	60	01.10.1991	10.07.1992	282	4.9	039	Loeng *et al.* (1993)
				100	01.10.1991	14.07.1992	286	5.2	045	
				144	01.10.1991	19.07.1992	291	4.3	049	
32	77° 45'	61° 49'	343	65	01.10.1991	25.07.1992	297	5.2	024	Loeng *et al.* (1993)
				105	01.10.1991	07.08.1992	310	5.1	024	

Table 1. Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
				240	01.10.1991	08.09.1992	342	8.9	026	
				333	01.10.1991	06.09.1992	340	8.5	024	
33	78° 10'	60° 27'	353	65	01.10.1991	18.07.1992	290	1.6	208	Loeng *et al.* (1993)
				170	01.10.1991	08.09.1992	342	0.9	227	
				270			342	0.6	090	
				343			342	2.7	054	
34	78° 50'	58° 39'	241	75	24.09.1991	13.08.1992	323	1.4	072	Loeng *et al.* (1993)
				115	24.09.1991	09.09.1992	350	2.0	084	
				180			350	2.5	081	
				230			350	3.1	096	
35	70° 39'	30° 51'	248	198	23.03.1993	25.03.1993	2	7.1	136	Loeng et al. (1993)
				246			2	5.6	144	
36	73° 43'	13° 16'	1697	667	03.05.1993		92	1.0	238	Blindheim (1994)
				1567			92	2.7	169	
				1642			56	2.8	197	
37	76° 00'	34° 60'	250	60	13.09.1992	30.09.1993	382	1.9	044	Loeng *et al.*(1994)
				100			382	2.4	048	
				190			382	2.9	052	
				240			382	3.0	053	
38	76° 26'	34° 59'	278	60	13.09.1992	30.09.1993	382	2.4	045	Loeng *et al.*(1994)
				110			382	3.1	046	
				210			382	3.0	044	
				268			382	1.5	031	
39	80° 00'	30° 00'	260	75	30.07.1980	25.08.1981	381	1.8	045	**Norwegian Polar Research Institute**
				255			381	0.5	045	Aagaard *et al.* (1983) (Position is uncertain)
										Instrument failure last 20 weeks
40	70° 28'	20° 02'	151	30	31.08.1978	17.10.1978	47	20.3	064	**Norwegian Hydrodynamic Laboratory**
				60			47	16.6	059	Helle (1979)
				120			47	2.1	077	

Table 1, Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
41	70° 42'	19° 48'	169	30	31.08.1978	26.09.1978	26	5.7	022	**Norwegian Hydrodynamic Laboratory**
				60			26	4.9	011	Helle (1979)
				150			26	1.7	030	
42	70° 54'	19° 35'	184	30	31.08.1978	26.09.1978	26			Compass error
				60			26	2.3	107	Helle (1979)
				150			26	0.7	011	
43	71° 19'	19° 09'	233	30	01.09.1978	26.09.1978	25	1.8	088	Helle (1979)
				60			25	2.7	077	
				130			25	2.2	036	
44	71° 30'	19° 00'	228	25	01.09.1976	31.12.1984	3012			**Oceanor,** private communication
				50			3012			
				100			3012			See Table 2
				175			3012			
				225			3012			
45	72° 15'	19° 37'	323	30	01.09.1978	17.10.1978	46	9.9	086	Helle (1979)
				150			46	6.3	091	
				300			46	3.2	080	
46	73° 10'	19° 23'	422	30	01.09.1978	18.10.1978	47	4.3	038	Helle (1979)
				300			47	2.6	013	
				410			47	2.0	001	
47	74° 09'	19° 05'	75	30	12.09.1978	19.10.1978	37	8.2	259	**Oceanor,** private communication
				65			37	4.9	247	
48	70° 40'	31° 00'	340	3*)	20.09.1989	16.11.1989	56	22.6	106	**Oceanor,** private communication
				50	20.09.1989	08.11.1989	49	27.0	121	
				100			49	21.1	123	
				200			49	13.5	128	
				335			49	1.1	145	
49	71° 04'	31°.00'	286	25	19.09.1989	18.10.1989	28	2.5	143	**Oceanor,** private communication
				50		09.11.1989	50	4.7	138	
				100		14.11.1989	56	3.5	151	
				200		07.11.1989	48	0.7	024	

Table1. Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
				281		08.11.1989	49	1.1	091	
50	72° 00'	31° 00'	326	25	02.09.1988	20.06.1989	290			**Oceanor**, private communication
				50	25.04.1988	20.06.1989	421			
				100		20.06.1989	421			See Table 2
				276		20.06.1989	421			
				323		20.06.1989	421			
51	72° 30 '	31° 00'	300	100	19.09.1989	22.11.1989	64	4.8	046	**Oceanor**, private communication
				200			64	4.1	038	
52	73° 00'	31° 00'	260	3*)	18.09.1989	22.11.1989	65	4.9	082	**Oceanor**, private communication
				50			65	6.6	104	
				100			65	7.3	066	
				200			65	9.2	095	
				255			65	5.5	066	
53	73° 30'	31° 01'	355	100	18.09.1989	22.11.1989	65	4.9	054	**Oceanor**, private communication
				200			65	4.0	058	
				350			65	2.7	305	
54	74° 32'	30°.58'	310	25	28.01.1985	03.02.1987	735			**Oceanor**, private communication
				50			735			
				100			735			See Table 2
				200			735			
				307			735			
55	71° 42'	20° 36'	320	50	26.01.1985	03.04.1985	67	4.4	125	**Oceanor**, private communication
				100			67			
				270			67			
				317			67			
56	72° 20'	24° 20'	260	50	22.05.1987	02.06.1988	376			**Oceanor**, private communication
				100			376			See Table 2
				257			376			
57	73° 30'	21° 30'	473	50	25.04.1987	24.03.1988	333			**Oceanor**, private communication
				100	02.04.1987	24.03.1988	356			See Table 2
				470			356			

Table 1. Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
58	73° 02'	26° 33'	400	3*)	29.01.1985	30.03.1985	60	10.8	042	**Oceanor**, private communication
				25*)			20	7.8	051	Last 20 days of the period
				50			60	8.8	048	
				100			60	8.5	053	
				350			60	5.6	051	
				397		26.03.1985	56	8.9	040	Last 20 days of the period
59	73° 45'	19° 50'	400	3*)	27.01.1985	03.03.1985	35	10.6	023	Last 20 days of the period
				50			35	4.4	053	
				100			35	4.2	045	**Oceanor**, private communication
				230			35	2.1	046	
60	73° 50'	20° 01'	298	10*)	24.04.1987	06.09.1987	107	13.5	037	Last 20 days of the period
				50			135	5.7	073	
				100		31.08.1987	129	2.9	031	**Oceanor**, private communication
				295		06.09.1987	135	4.1	237	
62	74° 21'	29° 47'	346	3*)	09.02.1987	21.02.1987	12	13.7	013	Last 20 days of the period
				25*)			12	9.6	016	
				50			12	11.0	025	**Oceanor**, private communication
				296			12	9.5	012	
				343			12	8.3	359	
63	75° 40'	21° 57'	38	10*)	11.11.1987	08.01.1988	33	8.7	218	Johansen *et al.* (1988)
				33			33	4.9	229	
64	74° 59'	21° 15'	68	10	17.01.1988	02.06.1988	6	8.1	276	Johansen *et al.* (1988)
				25			67	3.2	266	
				63			120	4.1	236	
65	75° 34'	23° 26'	87	10*)	11.11.1987	13.07.1988	244	2.7	194	Johansen *et al.* (1988)
				25*)			244	1.9	178	
				50			37	5.9	192	
				82			197	2.1	168	
66	75° 20'	24° 59'	157	10*)	12.11.1987	03.06.1988	204	3.8	261	Johansen *et al.* (1988)
				25*)			151	2.7	275	
				50			193	2.0	253	

Table 1. Continued

Deployment No.	Position N°	Position E°	Bottom depth m	Measuring depth m	Start	Stop	Days	Mean velocity cm/s	Mean velocity Direction (°)	Originator/References/Comments
				100			157	1.8	249	
				152			204	0.9	253	
67	75° 02'	27° 07'	281	10*)	12.11.1987	23.04.1988	150	7.4	039	Johansen *et al.* (1988)
				25*)			138	8.4	038	
				50			52	7.0	051	
				100			163	5.8	055	
				200			163	4.8	054	
				276			163	4.0	040	
68	74° 51'	28° 43'	366	10*)	12.11.1987	11.04.1988	82	2.8	040	Johansen *et al. (1988)*
				25*)			148	4.1	053	
				50			148	0.9	127	
				100			148	0.7	135	
				200			148	1.4	191	
				300			148	2.2	203	
69	70° 57'	41° 00'	201	75	14.09.1994	15.09.1995	365	3.5	120	**Oceanor**, private communication
				115			365	3.8	119	
				165			365	3.4	117	
				187			365	3.2	123	
70	76° 00'	39° 58'	281	75	14.09.1994	15.09.1995	365	2.6	214	**Oceanor**, private communication
				205			365	1.6	232	
				270			365	1.2	216	
71	73° 51'	19° 55'	400	3*)	03.03.2985	02.04.1985	30	23.4	053	**Oceanor,** private communication
				25*)			26	15.8	050	
				50			30	4.4	047	
				100			30	4.2	047	
72	76° 57'	41° 00'	201	75	14.09.94	15.05.95	366	3.5	120	**Institute of Marine Research,** Unpublished
				115				3.8	119	
				165				3.4	117	
				187				3.2	123	
73	76° 00'	39° 58'	281	76	14.09.94	15.09.95	366	2.6	214	**Institute of Marine Research,** Unpublished
				206				1.6	232	
				270				1.2	216	
74	77° 09'	29° 52'	201	85	03.10.93	10.09.94	345	1.8	34	**Institute of Marine Research,** Unpublished, See Table 2
				135				3.7	44	
				185				3.5	28	
75	76° 35'	35° 30'	220	20	26.08.82	31.10.92	66	5.2	55	Loeng *et al.* (1994)
				95				4.0	71	

Table 2. Monthly values from long time series. Deployment no. 44 (N 71° 30', E 19° 00') Tromsøflaket

		Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional
Year	Month	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)
		25 m					50 m					100 m					175 m					225 m				
1976	9	56.6	27.1	3.2	021	11.7	51.3	23.0	2.7	014	12.0	44.7	21.0	2.5	015	12.0	35.7	15.1	2.4	337	15.9	26.6	7.4	1.3	289	17.2
	10						49.6	24.6	5.1	135	20.8	42.2	18.9	2.5	115	13.2	40.2	17.6	1.3	202	7.3	29.5	9.2	0.8	288	8.8
	11						54.2	29.4	3.0	037	10.1	49.6	20.4	3.9	021	19.0	32.8	17.7	6.3	048	35.9					
	12						52.1	28.1	3.7	188	13.3	39.0	18.5	0.5	200	2.9	36.1	15.5	0.6	281	3.8	26.2	9.0	0.4	065	4.0
1977	1						53.8	25.7	7.2	059	28.0	50.5	20.1	6.9	067	34.5	47.6	16.8	4.2	059	25.2	33.6	11.4	2.2	037	18.9
	2						56.2	28.7	10.2	102	35.4	47.4	19.8	6.4	100	32.2	39.8	16.7	5.4	109	32.3	38.5	11.0	3.4	114	30.9
	3						67.8	30.0	8.5	072	28.5	46.3	19.6	6.8	069	34.6	49.1	17.2	5.8	058	33.6	32.6	11.1	4.1	038	37.0
	4	49.6	30.2	5.4	057	17.8	64.9	24.5	6.5	061	26.6	43.5	18.3	5.2	071	28.5	41.4	15.1	3.9	054	25.7	29.5	10.2	1.8	053	17.9
	5	67.3	26.4	1.6	220	6.0	50.5	26.1	3.0	238	11.3	39.4	17.8	2.2	238	12.3	29.5	12.0	1.7	254	14.2	21.7	7.0	1.4	263	20.6
	6	49.9	25.8	2.8	123	10.9						32.4	15.0	1.7	050	11.3	29.9	12.8	2.6	018	20.1	18.0	7.0	1.8	039	25.3
	7	42.2	23.4	5.7	048	24.2	43.1	22.1	5.7	092	25.7	35.3	7.5	1.1	202	15.1	36.9	17.2	2.2	072	12.7	26.7	9.4	1.8	043	19.5
	8	59.7	33.5	5.9	041	17.5	52.5	25.4	7.1	036	27.9	41.0	19.6	4.1	036	21.1	36.1	17.4	1.6	077	9.1	22.5	8.6	2.3	112	26.3
	9	58.9	39.0	9.4	116	24.0	62.0	31.0	2.4	028	7.9	38.5	20.2	1.4	014	6.9	37.3	14.3	1.1	350	7.6	26.6	8.2	1.3	347	15.9
	10	52.5	24.8	4.6	168	18.4	62.4	31.7	4.6	035	14.6	46.4	21.6	4.0	057	18.5	40.1	16.3	3.6	053	22.1	25.9	9.1	3.4	27	37.9
	11	54.2	26.7	7.5	086	28.0	57.2	31.3	8.5	089	27.2	46.3	20.0	4.2	090	20.9	39.6	9.3	0.9	036	9.9	24.5	9.3	1.1	279	11.6
	12	64.9	28.1	3.4	144	12.1	51.7	22.5	2.9	127	13.0						43.6	15.9	1.3	328	8.2					
1978	1	55.9	27.6	2.7	029	10.0	63.2	26.1	7.4	089	28.2	51.4	23.4	2.3	181	9.7	58.4	17.6	2.6	063	14.6	47.8	11.1	5.0	348	44.7
	2	61.7	33.9	17.2	203	50.7	66.9	34.4	17.1	205	49.7	43.5	22.5	11.4	199	50.8	44.4	16.4	5.3	188	32.3	38.8	10.0	3.9	207	39.2
	3	51.1	29.0	10.9	100	37.7	50.8	29.5	10.9	091	37.0	49.5	20.3	7.1	083	35.1	47.4	17.2	6.0	077	35.2	36.6	10.6	3.7	057	35.1
	4	55.3	28.6	2.8	353	9.9	52.8	23.9	2.3	336	9.5	41.1	19.8	2.0	289	10.1	34.9	14.4	1.0	300	7.1	17.1	7.2	5.8	092	80.9
	5						48.5	20.0	7.4	045	36.8	43.8	17.6	6.8	074	38.5	43.3	16.2	5.1	080	31.3	26.2	8.3	2.7	053	32.4
	6	48.6	22.0	3.8	083	17.2	46.9	22.7	3.9	070	17.0	40.1	19.6	3.2	052	16.6	29.9	14.5	1.3	026	8.8					
	7	57.6	24.2	1.3	326	5.3	46.8	22.5	2.4	327	10.8	39.0	16.6	2.5	323	14.8	32.0	13.3	0.7	350	5.5	36.8	10.0	1.6	349	16.1
	8	57.8	27.5	2.8	012	10.3	46.1	21.9	2.4	034	10.9	41.5	17.6	2.1	042	12.0	32.9	14.4	1.2	343	8.0	21.3	7.7	0.7	322	9.1
	9	53.4	28.8	1.9	046	6.7	46.7	25.1	3.2	055	12.8	44.4	19.0	2.7	090	14.0	30.8	13.8	2.1	044	15.0	22.9	7.4	1.7	019	23.3
	10	52.8	30.0	1.2	343	4.1	49.7	29.2	8.6	354	29.5	37.8	19.9	1.5	069	7.5	39.9	13.8	6.9	098	50.1	24.3	13.8	2.1	254	15.4
	11	55.8	30.5	6.2	156	20.2	46.7	28.9	4.8	160	16.7	43.9	20.8	1.0	110	5.0	42.7	19.2	3.2	016	16.5	33.5	11.6	2.6	017	22.7
	12	60.4	26.0	4.8	120	18.9	46.1	31.6	1.9	190	6.1	39.7	24.2	2.8	227	11.4	39.6	22.6	1.9	175	8.3	27.8	14.8	2.1	135	14.0
1979	1						52.3	29.5	1.6	199	5.3	52.5	20.5	0.8	249	4.1	54.1	20.6	6.4	355	31	43.9	11.0	1.4	282	12.8
	2						58.4	29.6	9.9	115	33.3	42.4	19.3	6.0	123	31.2						22.5	7.3	0.2	353	3.1
	3	54.7	25.9	8.2	031	31.7	46.4	25.4	4.2	052	16.5	42.7	16.8	3.4	036	20.1	44.1	14.3	3.0	060	20.7	29.0	8.5	2.4	060	28.7
	4	48.5	22.3	4.8	127	21.5	45.8	22.8	3.7	132	16.2	30.7	14.8	14.0	334	94.1						5.8	0.8	0.2	130	26.6
	5	48.9	21.3	1.3	187	5.9	44.3	22.0	2.5	180	11.6	36.8	17.4	1.6	169	9.1	34.5	13.9	0.8	162	6.0	21.4	7.6	0.9	105	12.0
	6	56.5	28.6	6.9	105	24.1																				
	7	52.5	24.5	6.6	058	26.8	48.0	20.3	6.4	067	31.5	41.8	19.2.	4.6	058	23.7	35.4	15.3	3.5	013	22.9	25.3	7.8	3.7	001	47.3
	8	64.3	27.8	5.3	084	19.0	59.2	27.6	6.9	090	25.0	45.5	19.4	5.6	078	29.1	39.0	17.6	3.2	055	18.0	28.1	8.9	2.1	025	23.1
	9	61.2	30.0	1.0	070	3.3	54.5	29.1	1.4	005	4.8	40.7	19.2	2.3	040	11.7	32.0	14.6	1.6	037	10.8	18.9	6.9	1.2	032	16.8
	10	47.6	30.0	5.3	120	17.5	51.3	26.5	6.2	101	23.4	36.6	12.8	3.9	340	30.7	32.9	11.6	0.4	288	3.8	22.8	7.3	0.5	326	6.2
	11	63.5	30.1	10.1	128	33.6	58.9	25.6	4.6	137	17.9	42.1	18.0	14.4	098	80.2	39.8	15.2	0.4	004	2.3	31.5	9.8	0.7	040	7.1
	12	60.8	37.2	7.3	106	19.5	51.4	25.1	1.5	110	6.0	45.5	20.2	1.4	107	6.9						26.2	8.0	0.9	203	11.2
1980	1	78.8	34.7	8.5	091	24.6	66.2	29.0	6.4	098	22.1	42.5	19.6	3.1	109	15.9	43.1	19.0	2.9	054	15.0	31.5	11.0	2.3	050	21.1
	2	42.3	22.2	2.9	273	13.3	55.5	25.8	5.1	098	19.8	48.9	19.5	2.2	074	11.4	40.5	16.3	2.1	057	12.8	28.1	9.4	2.4	038	26.0
	3	52.0	26.6	6.2	038	23.4	45.0	24.7	5.0	042	20.2	42.4	19.9	4.7	032	23.7	38.6	15.6	3.6	028	22.9	23.8	8.8	2.5	003	28.7
	4	53.7	21.8	4.1	064	18.6	47.5	23.6	3.6	033	15.3	45.6	18.6	2.9	041	15.7	40.7	14.2	1.7	016	12.0	28.6	8.4	1.8	011	21.2
	5	51.7	21.5	7.1	052	32.8	50.0	22.9	6.3	048	27.6	46.7	18.6	4.7	051	25.3	36.2	14.8	2.6	328	17.4	40.7	9.8	2.6	045	26.4
	6	48.6	21.4	3.6	092	16.6	41.6	20.9	3.1	098	14.8	41.1	19.3	1.1	357	5.8	36.2	14.5	0.7	332	5.1	26.8	7.6	1.2	293	15.0
	7	45.2	17.6	1.9	066	10.8	47.7	20.6	1.6	064	7.8	35.7	17.9	0.7	027	3.7	28.1	11.1	0.7	094	6.4	17.8	6.8	0.3	340	3.9
	8	46.7	21.6	2.9	095	13.4	42.8	21.5	2.2	092	10.1	35.2	16.8	0.9	044	5.5	25.8	11.4	6.0	093	52.3	17.5	4.7	0.4	205	9.2
	9	56.7	29.6	1.0	340	3.5	50.5	26.1	3.0	025	11.5	39.7	19.7	1.6	010	8.0	30.6	14.0	1.3	339	9.1	21.1	8.6	0.7	317	8.1

Year	Month	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional	Speed (m/s)		Mean Velocity		Directional
		Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)	Maximum	Mean	cm/s	Direction (°)	Stability(%)
		25 m					**50 m**					**100 m**					**175 m**					**225 m**				
1980	10						44.1	25.0	1.8	036	7.4	47.7	19.7	1.5	354	7.7	41.0	13.4	1.8	296	13.3	21.3	7.4	1.7	292	23.5
	11	34.8	17.3	9.9	314	56.9	48.2	25.6	1.8	095	7.1	40.3	18.3	2.3	012	12.5	37.3	14.5	2.5	358	17.5	27.5	9.1	1.7	351	18.8
	12	46.1	21.0	5.9	110	27.8						44.0	17.1	8.7	056	50.6	43.1	15.9	4.1	71	25.6	31.5	10.1	2.9	049	28.7
1981	1	69.9	24.3	6.8	200	27.9	43.2	26.6	6.4	210	23.9	51.8	18.8	3.9	221	20.5	49.2	15.3	2.7	260	17.4	35.5	8.8	2.1	241	23.6
	2	61.1	26.7	7.7	077	29.0	60.1	28.7	6.1	067	21.3	56.7	20.6	5.2	045	25.5						38.7	11.9	4.4	024	36.7
	3	59.7	27.2	3.2	054	11.8	50.2	26.0	0.9	118	3.6	50.2	19.6	0.8	146	3.9	45.0	14.2	1.4	238	9.7	32.8	10.1	3.6	214	35.6
	4	45.2	18.5	0.9	237	4.8	42.8	24.3	1.2	259	4.8						37.1	14.3	1.0	290	7.0	26.1	8.0	1.1	275	13.1
	5	44.6	18.1	4.9	138	27.1	46.1	21.0	6.1	139	29.1	45.7	17.8	4.1	127	22.8	38.2	14.9	3.7	122	25.0	27.5	9.5	3.6	102	38.4
	6	37.3	16.2	2.1	061	12.9	38.7	18.9	2.9	063	15.5	37.3	16.1	2.0	072	12.6	34.0	17.6	1.1	074	6.4	25.3	9.5	0.7	340	7.6
	7	54.5	18.2	4.5	047	24.8	41.2	19.5	5.9	066	30.1	41.8	18.2	2.3	026	12.6	35.3	15.9	0.5	285	3.2	20.8	8.3	0.5	295	5.5
	8	48.6	19.1	0.9	017	4.6	47.7	20.3	1.3	006	6.3	40.2	20.9	1.3	346	6.0	34.0	16.2	2.4	309	14.6	23.6	9.2	1.7	317	18.0
	9	49.2	20.1	0.4	348	1.9	46.0	24.1	2.0	091	8.3	44.7	18.7	1.6	021	8.5	39.7	15.3	1.9	321	12.2	25.3	8.8	1.2	317	13.1
	10						53.3	27.7	2.2	049	7.8	38.5	21.4	1.1	049	5.4	39.2	14.3	1.7	333	11.9	29.3	9.0	1.7	299	18.6
	11											49.5	20.9	1.4	298	6.8	41.7	15.2	2.4	304	15.5	29.5	8.9	2.4	317	26.8
	12	54.2	20.6	0.4	013	2.1	53.7	26.1	0.1	341	0.5	45.2	20.5	0.7	286	3.2	42.2	16.8	2.4	281	14.1					
1982	1						44.7	24.0	3.2	070	13.6	38.8	17.6	3.1	052	17.6	40.2	15.4	1.6	034	10.5	27.6	12.0	9.3	219	77.5
	2	27.1	1.3	0.3	128	23.2	55.1	27.5	6.8	072	24.6	27.3	18.1	9.1	164	50.3	42.7	15.7	7.2	109	46.0	30.1	9.8	3.4	016	34.6
	3	45.3	17.4	6.3	114	36.3	53.4	23.0	7.7	118	33.6	47.8	18.4	4.6	123	24.8	40.2	15.3	1.6	085	10.4	23.9	8.6	0.1	077	1.7
	4	59.3	23.4	8.4	118	35.7	46.7	23.2	6.3	110	27.2	43.1	17.5	4.8	099	27.6						32.7	9.3	2.6	072	28.1
	5	43.3	17.6	8.6	076	48.5	41.9	19.2	7.3	077	37.9	42.5	16.7	5.2	074	31.4	42.7	15.1	5.7	058	37.8	30.4	9.0	4.7	050	52.1
	6	48.1	17.1	5.7	078	33.5	41.6	19.0	5.5	072	28.8	38.3	17.2	3.9	081	22.4	34.1	13.7	3.3	056	24.1	21.2	7.1	2.5	046	34.5
	7	50.0	19.4	2.8	077	14.4	43.3	20.6	3.1	069	15.1	39.4	15.1	14.4	163	95.4	31.5	14.1	1.8	068	13.0	17.8	7.0	1.5	023	20.9
	8	41.1	15.0	2.4	053	15.8	46.7	20.2	2.4	027	11.9	50.3	19.4	3.1	006	15.9	32.5	12.7	1.6	345	12.4	18.7	6.0	1.1	316	18.5
	9	59.5	24.1	0.4	261	1.6	45.8	24.6	1.4	026	5.8	38.3	17.5	1.7	048	9.5	32.1	13.8	9.5	207	68.9	23.1	8.7	2.3	001	26.9
	10	35.2	18.4	8.4	248	45.6	46.9	21.9	3.0	081	13.5	36.9	17.2	1.7	057	9.8	34.1	13.7	1.0	304	7.2	23.1	7.3	1.4	339	18.6
	11						52.3	22.0	1.2	002	5.6	50.6	17.6	2.6	323	14.6	35.7	14.9	3.7	298	25.1	26.7	10.0	4.7	275	47.0
	12						60.7	27.4	5.9	084	21.5	47.8	19.5	4.1	065	21.2	32,7	19.2	8.6	315	45.0	36.3	8.9	2.5	036	28.2
1983	1						67.7	27.8	9.1	169	32.6	54.8	19.6	4.2	222	21.2	43.3	16.5	1.4	176	8.7	35.8	9.2	1.2	208	13.0
	2						47.2	27.2	8.5	140	31.3	55.7	24.4	5.4	129	22.2	34.6	13.8	1.9	109	13.5	24.3	6.2	0,8	092	13.6
	3						51.1	26.5	4.6	049	17.3	47.2	19.0	2.7	054	14.4	41.9	15.3	1.7	037	11.1	27.3	9.6	1.0	306	10.3
	4						38.3	20.2	3.0	052	14.8	34.6	14.6	2.1	069	14.4	33.0	13,8	1.7	004	12.6	21.7	7.9	1.9	312	23.5
	5						44.7	22.9	4.1	062	17.8	54.8	15.2	2.6	043	16.9	34.1	13.5	1.8	022	13.6	21.1	6.5	1.5	349	23.0
	6						40.5	20.0	5.1	078	25.5	59.0	15.4	3.6	057	23.4	34.6	14.5	1.8	041	12.6	22.3	7.6	1.3	022	17.2
	7						25.9	8.3	4.3	348	5.2	40.5	16.8	0.9	316	5.2	23.1	11.9	2.4	277	20.1	22.9	7.3	1.2	343	16.1
	8											37.1	17.0	2.6	061	15.0	37.7	16.7	2.8	046	16.7	27.9	7.9	3.1	041	39.4
	9						54.2	29.7	18.3	074	61.3	45.3	18.7	7.1	063	37.8	17.8	7.3	4.0	018	54.0	19.8	6.2	3.3	042	53.8
	10						59.5	27.6	6.5	083	23.6	63.2	21.7	3.4	078	15.8						26.8	8.3	1.3	281	16.0
	11						36.0	25.2	16.4	020	65.3	30.4	19.6	12.4	017	63.2						21.9	10.7	9.5	002	88.5
	12	59.8	43.1	33.7	096	78.1	66.5	31.5	13.5	077	42.8	51.1	20.9	6.8	079	32.6						34.9	11.7	6.5	041	55.6
1984	1	153.6	42.3	22.1	081	52.2	56.7	24.1	11.7	073	48.5	36.6	16.1	5.9	055	36.7						42.5	13.9	8.0	033	57.3
	2						59.0	32.9	13.5	105	41.1	42.7	19.2	6.2	105	32.3						32.4	9.2	4.5	048	49.1
	3						58.1	29.2	5.0	108	16.9	38.8	14.8	3.4	338	23.2						30.7	8.8	3.3	349	37.0
	4						44.6	23.4	4.1	056	17.7	34.1	15.3	2.5	034	16.2						35.9	11.0	5.6	044	51.3
	5						48.0	20.8	3.0	083	14.3	38.3	14.8	1.6	081	10.5						35.9	11.4	7.7	054	67.8
	6						39.1	19.7	2.6	108	13.2	38.3	15.8	1.4	105	9.2						19.5	7.0	1.3	005	18.6
	7						37.1	20.3	1.2	069	6.1	30.4	14.5	1.5	071	10.7						20.3	7.7	1.6	040	21.1
	8						42.2	21.6	0.3	048	1.3	41.9	16.0	1.4	069	8.8						33.2	9.0	3.1	043	33.8
	9						39.7	23.0	3.0	028	13.0	34.9	15.0	2.0	042	13.3						24.5	7.6	2.3	031	30.7
	10						51.7	23.8	4.0	057	16.7	34.3	16.7	2.8	062	16.8						12.5	7.5	7.4	359	
	11	34.9	9.9	4.2	051	41.9	42.2	23.3	1.8	076	7.7	38.5	16.1	1.7	079	10.7						14.2	7.0	4.2	020	60.4
	12	39.2	13.8	3.6	094	26.3	43.3	25.1	4.7	087	18.8	40.5	18.0	4.7	071	26.3						28.5	9.8	5.4	047	55.0

Table 2 (continued): Deployment no. 50 (N 72° 00', E 31° 00')

Year	Month	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage
		50 m						**100 m**						**276 m**						**323 m**					
1988	4	43.5	17.9	7.4	032	41.0	20%	40.8	17.6	8.5	026	48.2	25%	32.3	14.5	8.5	010	58.7	25%	28.06	10.06	06.09	340	68.2	25 %
	5	47.8	13.6	4.1	039	29.9		43.5	12.4	3.2	028	25.8		34.4	12.4	4.3	338	34.4		28.2	8.7	4.0	301	46.3	
	6	39.7	12.8	10.3	356	80.6		34.6	11.7	1.9	017	16.0		26.7	11.0	1.9	006	17.5		20.1	5.0	2.0	357	40.4	
	7	46.6	16.0	5.1	325	31.7		44.5	14.1	8.4	240	59.6	60%	34.8	12.4	3.3	225	26.3		24.5	10.1	4.8	219	47.1	
	8	34.2	12.0	3.9	313	32.9		34.6	11.5	3.5	317	30.2		33.8	10.9	1.5	313	13.5		19.5	4.7	1.0	302	22.2	
	9	49.0	16.2	6.1	014	37.5		28.2	12.0	6.5	351	54.1	60%	31.7	11.5	2.5	021	21.3		20.1	6.5	1.1	017	17.3	
	10	50.9	19.1	6.7	003	35.1								34.6	11.7	3.1	350	26.8		25.5	9.4	3.3	333	35.6	
	11	63.3	26.7	22.9	034	85.9	50%	61.0	23.2	10.5	080	45.2													
	12							63.5	17.3	3.3	169	19.1													
1989	1	78.5	28.4	6.6	047	23.1								59.3	20.3	16.7	300	81.9	30%	41.7	14.9	4.3	308	29.0	60%
	2	99.8	28.8	7.7	014	26.9								69.3	23.7	5.0	336	21.3		39.5	16.5	1.0	037	6.0	
	3	77.5	28.4	9.1	155	31.9								57.1	20.3	3.9	269	19.4		34.9	15.6	1.9	203	12.0	
	4	47.5	16.2	9.2	149	57.0		45.2	14.7	8.4	139	56.9		40.2	12.3	5.5	159	44.4		29.6	10.3	4.0	143	39.0	
	5	54.2	15.5	7.1	119	45.9		39.9	12.8	5.3	115	41.0		34.6	11.9	2.5	140	20.7		22.9	9.4	1.9	154	19.9	
	6	38.1	11.0	4.4	349	39.6		30.7	10.3	3.7	352	36.1		32.9	10.8	1.4	357	13.0	60%	28.6	6.6	1.1	004	16.2	60%

Table 2 (continued): Deployment no. 54 (N 74° 32', E 30° 58')

Year	Month	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage	Speed (cm/s) Maximum	Mean	Mean Velocity cm/s	Direction (°)	Directional stability(%)	Data coverage
		50 m						**100 m**						**200 m**						**307 m**					
1985	2	44.9	15.4	9.6	020	62.6		43.3	15.6	10.4	019	66.3								34.2	14.8	12.2	006	82.5	
	3	44.1	10.0	2.1	049	21.2		40.8	12.5	2.7	047	21.7								63.6	10.9	4.8	014	44.3	
	4	57.7	5.8	3.1	195	53.0		54.2	16.0	1.6	090	9.8		45.5	14.8	5.7	189	38.7		37.7	13.4	4.7	023	34.9	
	5	52.4	15.7	2.7	194	17.2		53.6	14.7	1.9	193	12.8		30.8	10.0	1.0	115	9.7		33.6	10.3	3.0	350	29.3	
	6	39.5	11.2	4.4	124	39.5		34.5	10.7	3.6	122	33.4		25.2	9.3	1.9	133	20.8		18.6	7.0	3.1	018	45.0	
	7	29.2	9.9	3.6	020	36.7		31.7	10.7	4.9	013	45.9		30.5	11.5	6.9	090	60.3		25.5	9.7	7.6	353	78.9	
	8	29.9	8.9	1.6	062	17.9		27.0	10.2	1.1	042	10.9		27.7	11.4	5.8	054	50.9		24.5	9.7	6.5	013	66.5	
	9	32.7	11.4	4.4	191	38.6		25.8	10.5	4.1	166	38.9		33.3	10.3	1.0	063	9.7		21.4	8.1	1.5	019	17.9	
	10	51.4	10.7	1.2	087	11.7		32.4	9.0	2.1	050	23.1		36.1	9.9	4.0	072	40.6		23.9	8.5	4.8	011	57.1	
	11	41.1	12.9	1.6	280	12.4		42.4	11.8	1.3	315	10.6		31.7	11.6	3.5	043	30.5		28.0	11.4	6.6	357	58.3	
	12	43.6	14.1	2.6	083	18.2		40.2	13.8	2.6	120	18.9		32.7	12.0	1.8	220	14.7		29.5	10.4	2.5	039	23.9	
1986	1	39.9	14.8	8.1	019	54.9		41.1	15.0	8.5	020	56.6		34.5	14.6	10.3	321	70.7		31.7	13.5	10.8	356	79.6	
	2	50.2	17.9	8.2	136	46.1		35.8	13.0	6.0	032	46.0		34.9	14.6	5.5	080	37.7		28.0	13.1	5.2	073	40.1	
	3	43.0	15.3	8.8	021	57.8		41.8	14.7	9.2	017	62.8		36.1	14.3	10.1	017	70.8		20.5	5.8	1.1	269	19.1	
	4	33.0	12.4	1.2	085	9.6		32.4	11.8	1.6	147	14.0		28.6	11.6	2.1	320	18.4		27.4	7.0	3.0	360	42.6	
	5	38.0	10.4	2.5	073	24.1		31.7	12.4	7.7	035	62.0		28.9	10.8	3.1	047	28.8		30.8	9.6	3.0	346	31.0	
	6	29.2	8.5	3.1	017	37.1		30.2	9.6	4.1	019	42.7		22.7	10.8	6.6	069	61.4		18.0	8.7	7.2	005	83.3	
	7	26.1	9.2	4.2	022	45.2		31.7	10.9	6.2	027	57.4		27.4	12.9	9.6	060	74.6		23.9	11.0	9.9	009	89.6	
	8	23.0	6.8	3.6	006	52.4		25.2	8.5	4.5	038	52.6		12.0	7.5	5.7	346	76.8		16.1	9.7	8.4	005	86.0	
	9	25.5	6.2	1.8	043	29.5		27.0	7.5	2.2	065	29.5		21.2	9.1	3.5	316	38.8		18.9	5.5	4.6	016	84.0	
	10	33.3	12.8	6.4	066	50.3	30%	33.6	11.5	7.7	034	66.8		28.7	13.3	9.3	058	69.5		29.9	12.2	10.5	009	86.6	
	11	29.9	10.5	2.4	040	22.7		30.5	10.8	3.5	073	32.6		27.7	12.1	4.1	069	34.1		22.0	10.3	4.1	040	39.8	
	12	59.1	19.8	8.9	009	45.1		53.6	19.7	3.0	320	16.0		43.6	17.0	8.2	217	48.4		29.5	14.6	8.5	002	58.1	
1987	1	43.9	15.2	7.2	007	47.2								50.7	16.1	11.7	309	72.8		30.5	14.5	11.7	358	80.5	

Table 2 (continued): Deployment no. 56 (N 72 20', E 24° 20')

Year	Month	Speed (cm/s)		Mean Velocity		Directional	Data	Speed (cm/s)		Mean Velocity		Directional	Data	Speed (cm/s)		Mean Velocity		Directional	Data
		Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage	Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage	Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage
		50 m						**100 m**						**257 m**					
1987	5	31.1	14.6	5.5	175	37.8		31.1	13.5	3.7	171	27.2	30%	23.3	8.6	0.2	080	2.6	
	6	32.7	11.2	1.5	092	12.9		31.4	12.0	0.6	166	4.8		16.7	6.6	1.3	226	20.0	
	7	32.7	11.9	1.3	295	11.1		27.0	11.1	1.6	255	14.7		22.5	6.2	1.4	261	22.6	
	8	36.1	10.6	1.0	215	9.1		33.0	11.8	1.7	210	14.2		17.2	6.7	0.2	359	2.5	
	9	34.9	14.3	4.1	198	28.5		33.6	12.5	2.3	168	18.7		18.8	7.6	1.9	183	25.0	
	10																		
	11	37.7	13.2	4.7	226	35.3		38.3	13.8	5.3	225	38.3	55%	24.5	8.5	3.7	215	44.0	
	12	35.1	12.7	2.7	232	21.5		38.9	12.1	2.9	224	23.7		27.8	9.3	2.1	201	22.2	
1988	1	56.9	16.1	5.3	145	32.7		51.2	14.8	4.5	143	30.3		30.5	12.3	2.9	157	23.3	
	2	64.6	18.6	10.2	148	54.7		46.3	16.3	8,3	141	51.1		34.5	12.0	5.9	120	49.3	
	3	55.2	14.3	1.6	014	11.3		41.7	13.6	3.5	313	26.0		35.5	10.8	1.0	186	8.8	
	4	60.9	14.8	2.6	048	15.8		45.7	13.2	2.9	046	22.1		26.8	10.2	1.7	037	16.1	
	5	43.8	17.2	2.2	010	12.8		36.7	15.2	8.3	044	54.7	40%	31.2	8.9	1.2	013	13.9	

Table 2 (continued): Deployment no. 57 (N 73° 30', E 21° 30')

Year	Month	Speed (cm/s)		Mean Velocity		Directional	Data	Speed (cm/s)		Mean Velocity		Directional	Data	Speed (cm/s)		Mean Velocity		Directional	Data
		Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage	Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage	Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage
		50 m						**100 m**						**470 m**					
1987	4	45.7	20.3	15.4	262	75.8	20%	41.7.	14.8	7.3	234	49.5		30.2	12.2	5.6	213	46.3	
	5	50.1	14.7	3.3	190	22.8		43.0	12.9	1.2	218	8.9		29.9	11.3	4.0	191	35.8	
	6	39.5	12.5	2.2	209	17.9		33.0	10.8	0.8	083	7.5		19.5	9.2	4.0	030	43.7	
	7	35.8	9.5	0.6	086	6.7		38.0	8.4	1.1	045	12.5		20.2	9.1	5.7	286	62.7	
	8	37.7	12.1	4.9	122	40.5		37.0	10.8	4.0	064	36.9		21.1	7.8	2.7	036	34.6	
	9	37.7	10.9	0.7	109	6.8		34.6	9.4	1.3	064	13.8		28.0	8.5	3.7	358	43.5	
	10	49.2	14.9	2.9	116	19.4		39.2	11.5	2.8	054	24.1		21.4	8.4	2.8	044	33.1	
	11	45.5	15.0	5.4	092	35.9		45.8	14.1	4.6	080	32.8		23.9	10.6	7.5	029	70.6	25%
	12	55.5	17.9	3.6	020	20.2		49.8	16.2	2.9	007	18.1		31.8	11.3	2.0	338	17.6	
1988	1	59.6	20.0	2.4	102	11.8		55.3	19.4	2.9	191	14.8		40.8	14.7	2.4	233	16.6	
	2	46.7	18.3	6.3	131	34.5		43.6	17.0	7.3	179	43.1		29.0	13.0	5.1	231	39.4	50%
	3	75.8	19.2	2.9	010	15.1		46.4	16.2	1.7	066	10.8		30.5	12.6	1.7	047	13.4	

Table 2. (continued) Deployment no. 74 (N 77° 09', E 29° 52')

Year	Month	Speed (cm/s)		Mean Velocity		Directional	Speed (cm/s)		Mean Velocity		Directional	Speed (cm/s)		Mean Velocity		Directional	Data
		Maximum	Mean	cm/s	Direction (°)	stability(%)	Maximum	Mean	cm/s	Direction (°)	stability(%)	Maximum	Mean	cm/s	Direction (°)	stability(%)	coverage
		85 m					**135 m**					**185 m**					
1993	10	65,9	15,5	4,6	236	29,7	56,9	15,0	3,8	230	25,3	45,6	12,5	3,9	222	31,2	
	11	36,8	14,8	7,3	70	49,3	33,6	15,2	8,5	64	55,9	32,8	13,4	7,9	51	59,0	
	12	63,9	14,7	5,9	226	40,1	60,4	15,7	5,1	226	32,5	58,1	14,3	4,8	226	33,6	
1994	1	44,7	11,5	1,6	216	13,9	49,3	13,1	0,8	325	6,0	46,4	11,9	0,8	327	6,8	
	2	38,6	11,3	0,8	346	7,1	36,6	12,6	2,9	54	23,0	34,2	10,8	2,2	50	20,3	
	3	32,5	11,5	4,3	53	37,4	31,6	11,6	7,1	55	61,2	24,9	9,5	7,7	41	81,1	
	4	23,8	9,8	4,3	40	43,8	25,8	10,3	5,7	41	55,3	22,9	7,6	5,6	21	73,7	
	5	25,8	11,4	5,2	33	45,6	27,0	12,6	7,4	38	58,7	24,6	10,5	7,1	26	67,6	
	6	35,4	11,4	3,9	60	34,2	35,1	12,7	6,6	66	52,0	28,1	9,9	5,8	56	58,6	
	7	38,3	14,5	8,6	24	59,3	40,0	17,1	11,5	28	67,3	29,9	14,0	10,0	19	71,4	
	8	24,1	7,9	2,0	281	25,3	32,5	9,8	1,3	33	13,3	27,3	7,6	2,0	353	26,3	
	9	30,1	10,1	3,1	295	30,7	27,5	9,2	3,3	352	35,9	19,7	7,3	4,4	339	60,3	

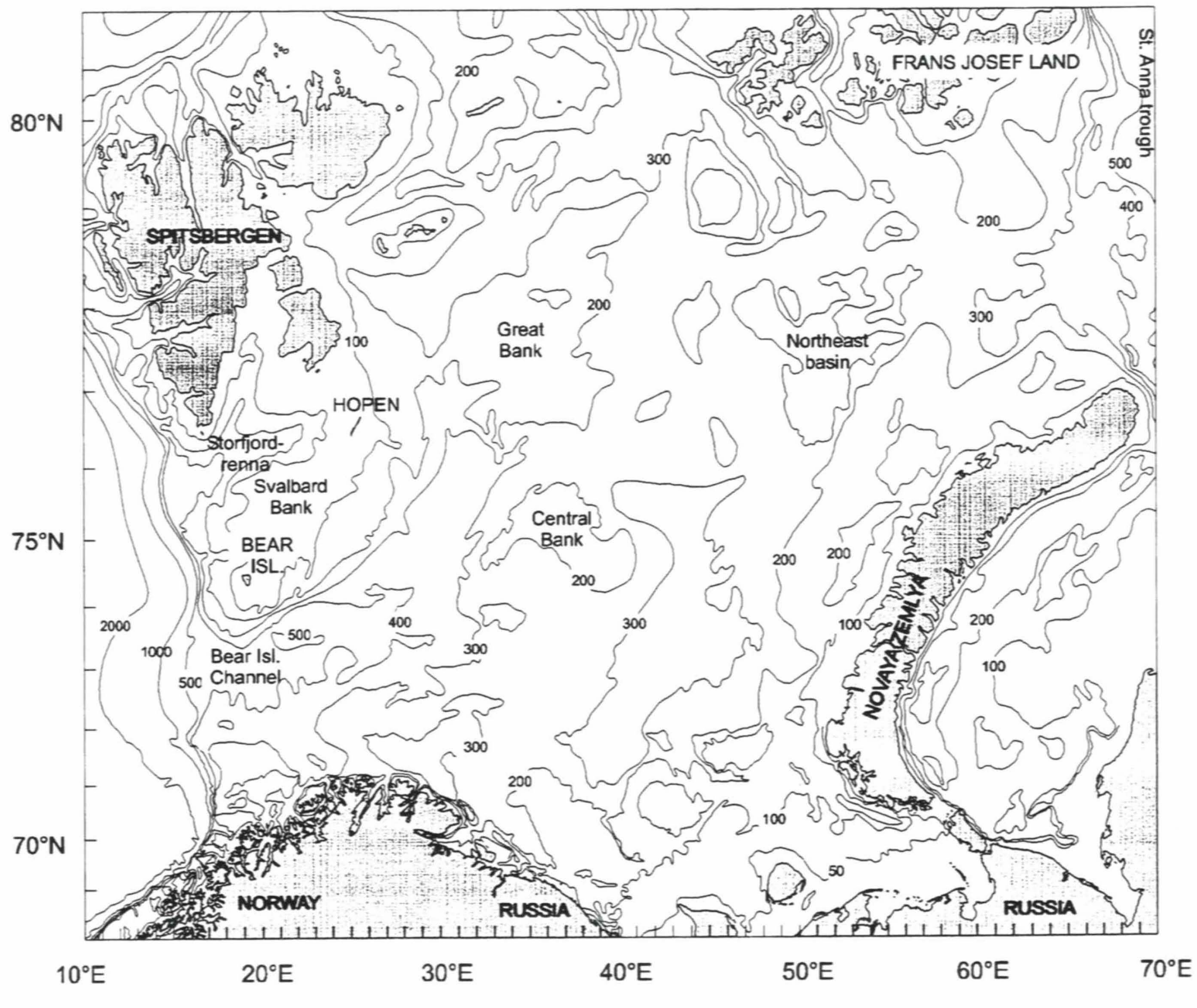

Fig. 1. Bathymetric map of the Barents Sea, depths in meters.

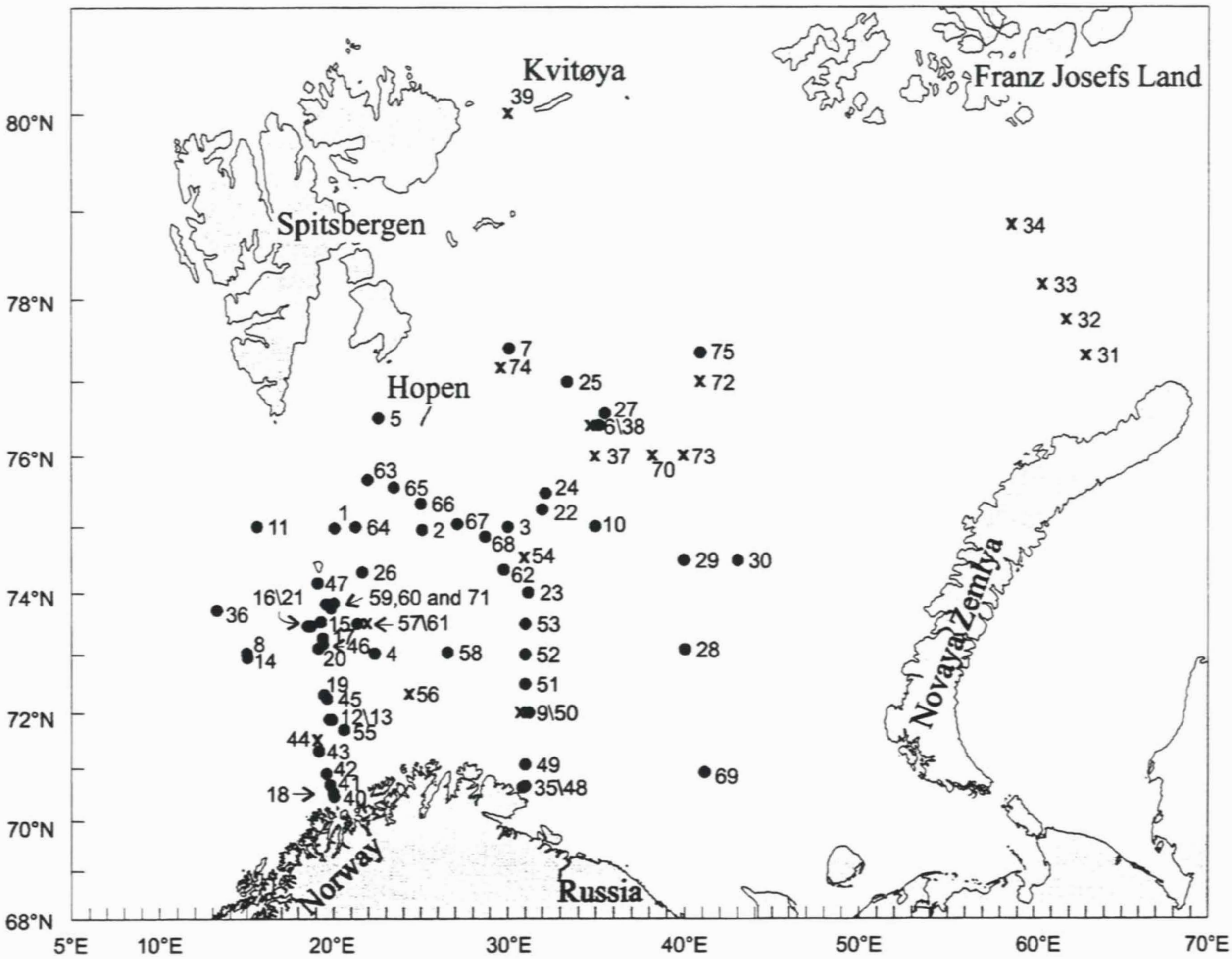

Fig. 2. Position of the current meter moorings. For details see Table 1. The crosses indicate deployments lasting more than 300 days.

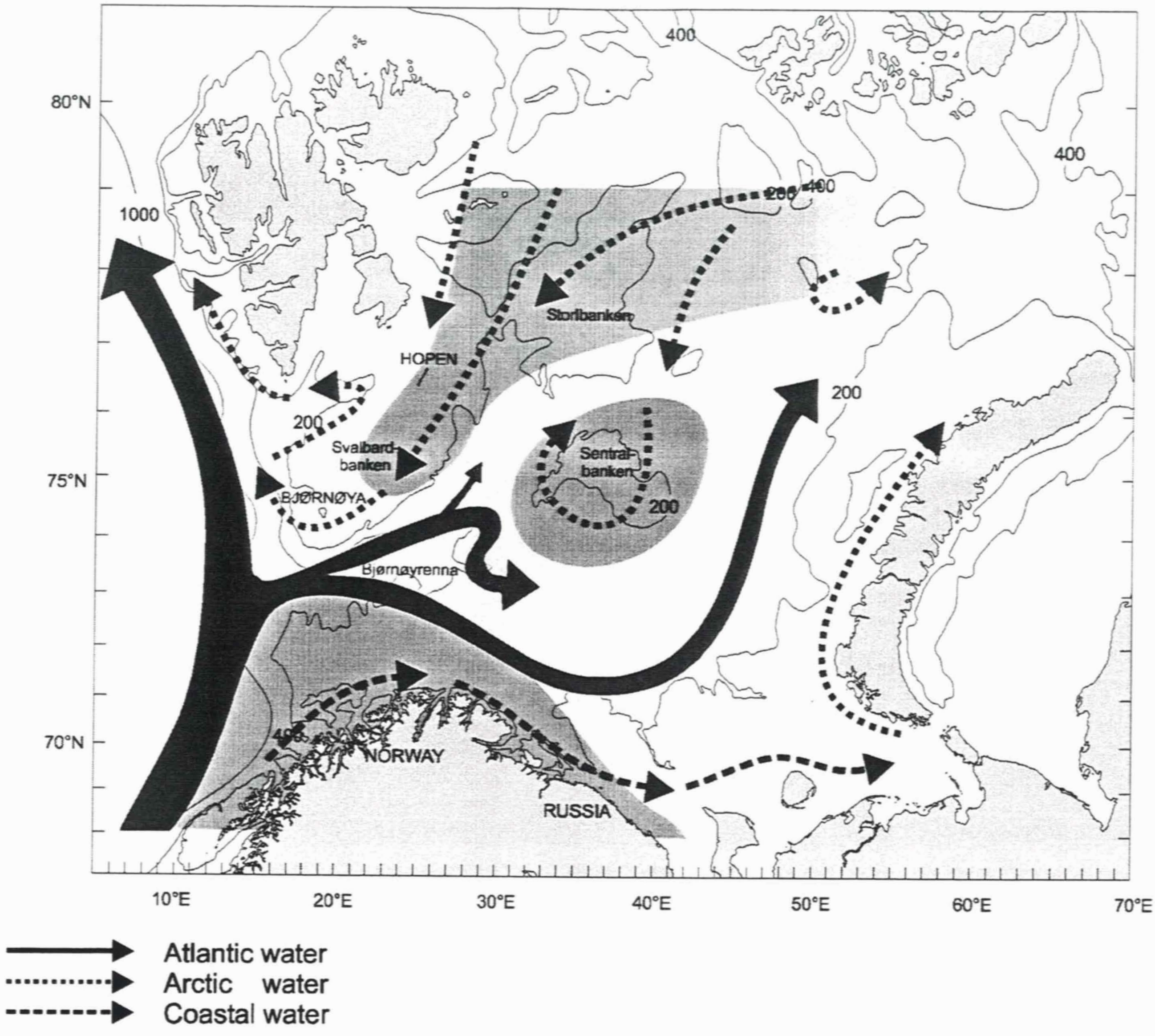

Fig. 3. The most conspicuous features of the circulation and bathymetry in the Barents Sea. The shaded areas indicate where the ratio barotrophic to baroclinic current component, BT/BC <0.5, i.e., the baroclinic structure dominates the current pattern.

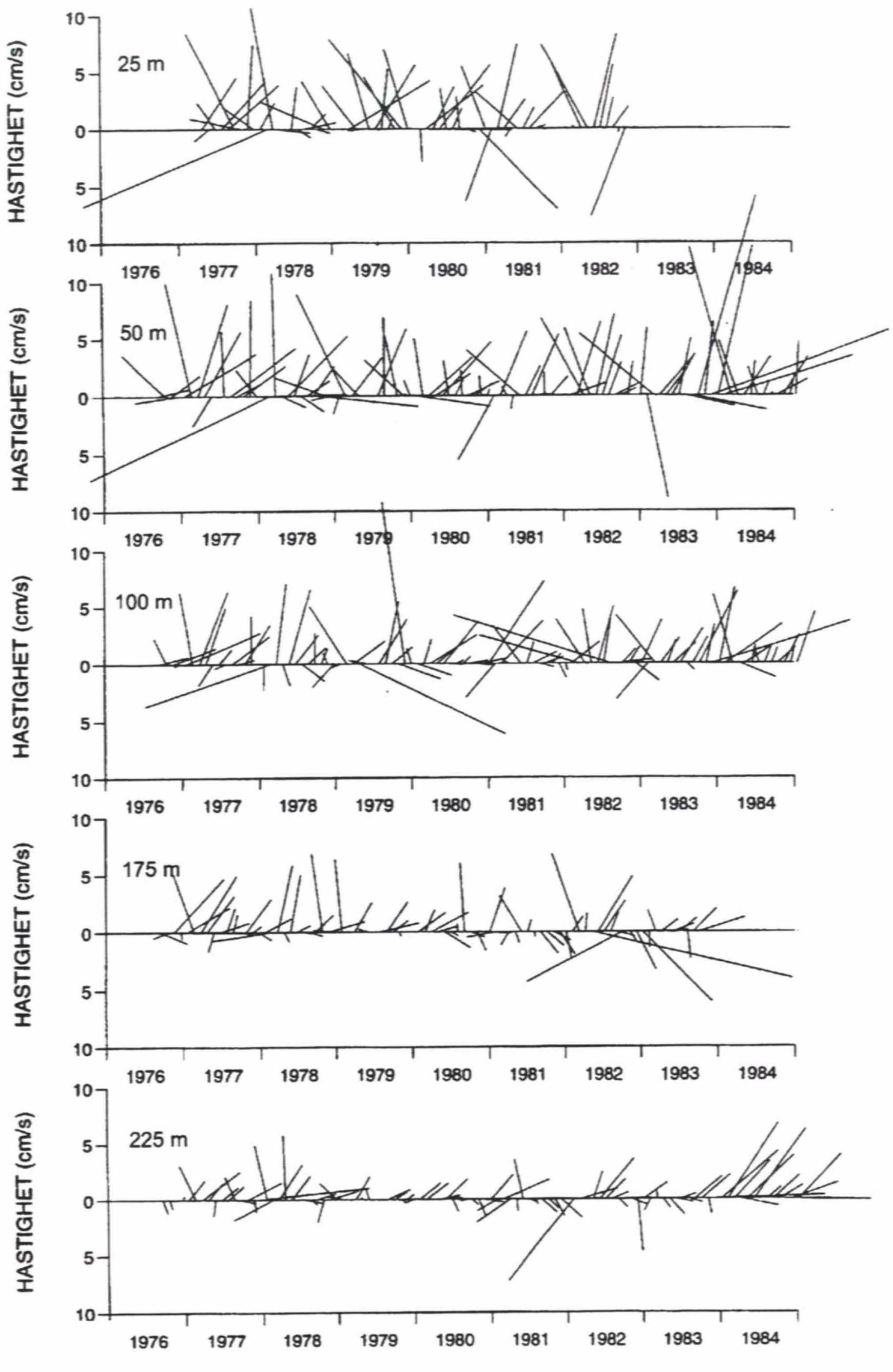

Fig. 4. Monthly mean current speed and direction from station 44 (Table 1).

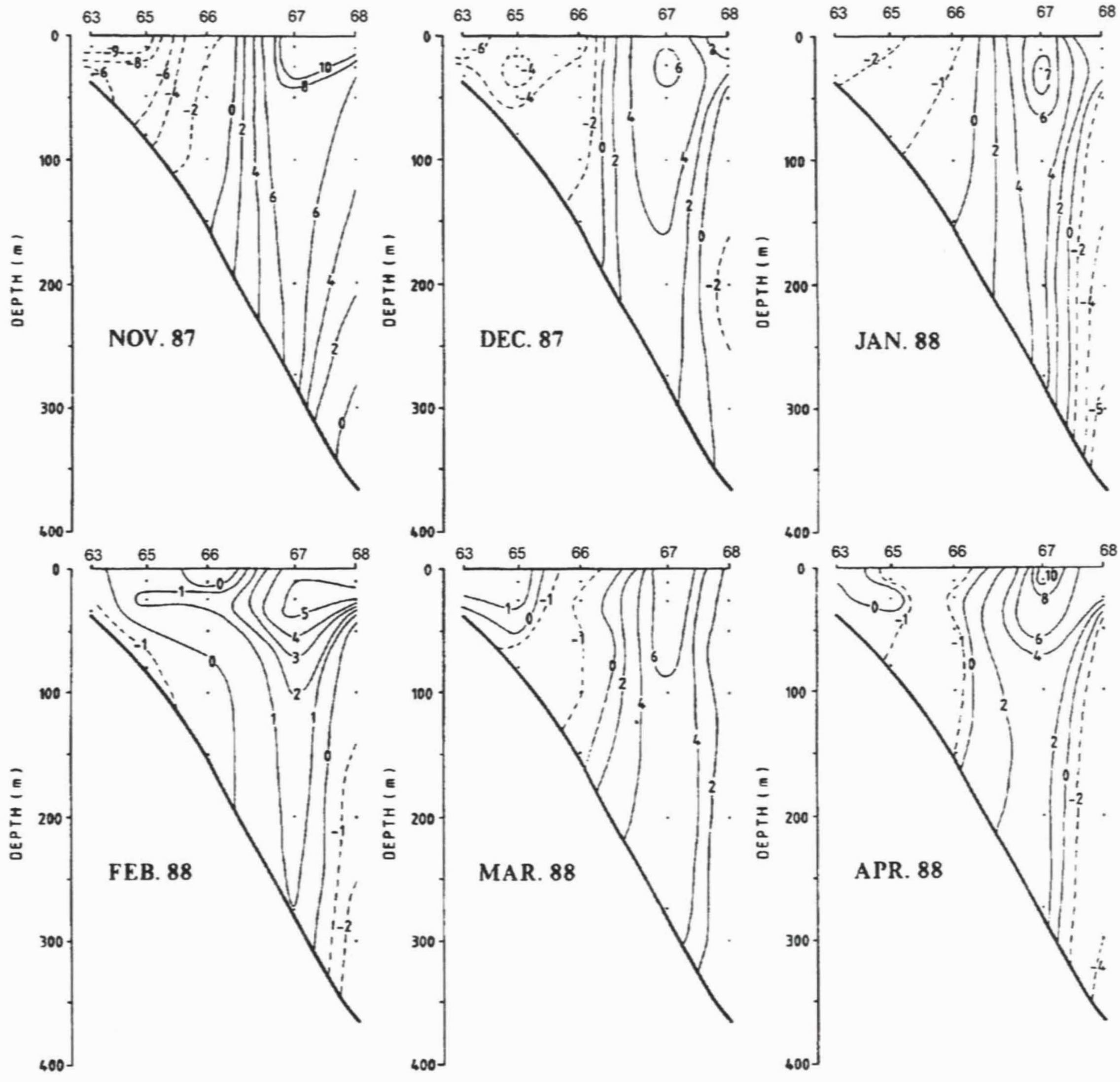

Fig. 5. Monthly mean current components through a section southeastward from the Svalbard Bank in 1988 (Fig. 2, Sts. 63, 65-68).

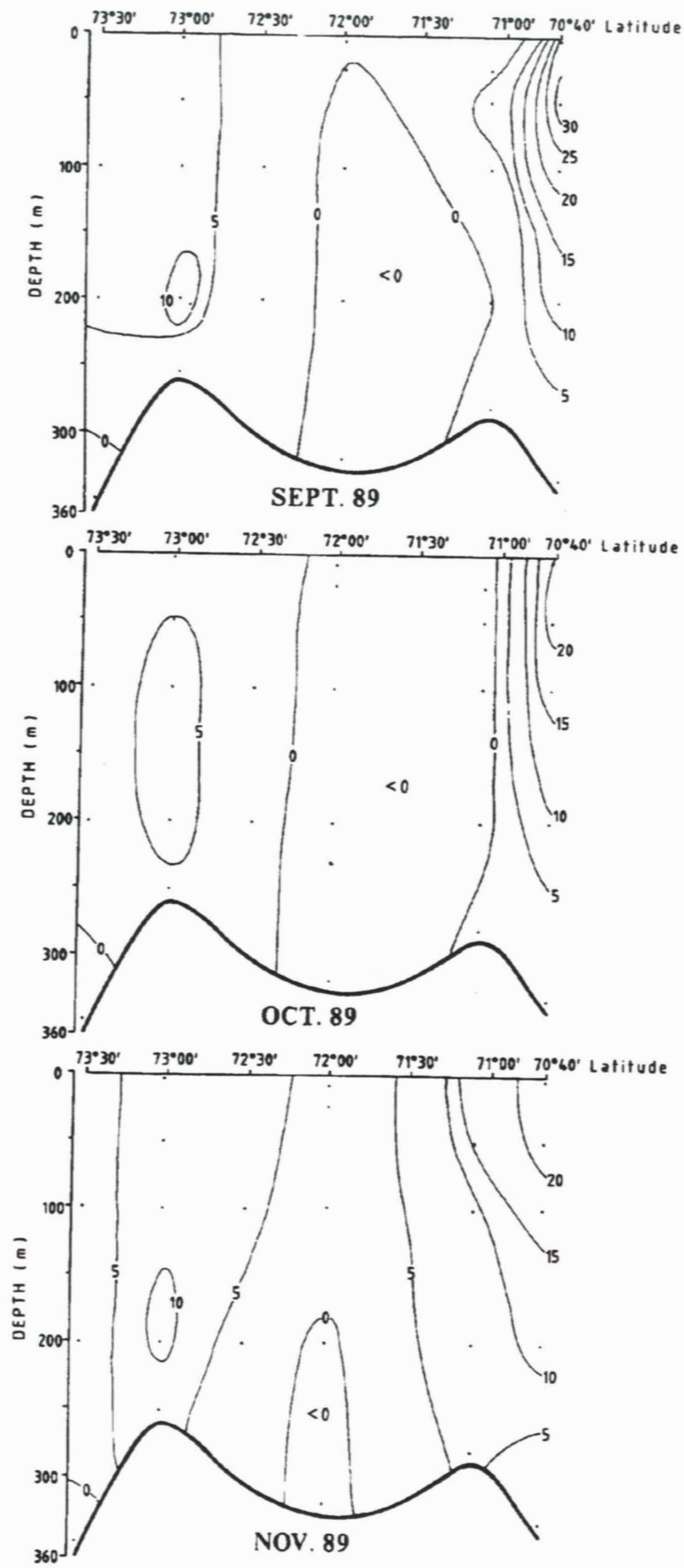

Fig. 6. Monthly mean current components through a section along the 31^{o} longitude in 1989 (Fig. 2, St. 48 -53).

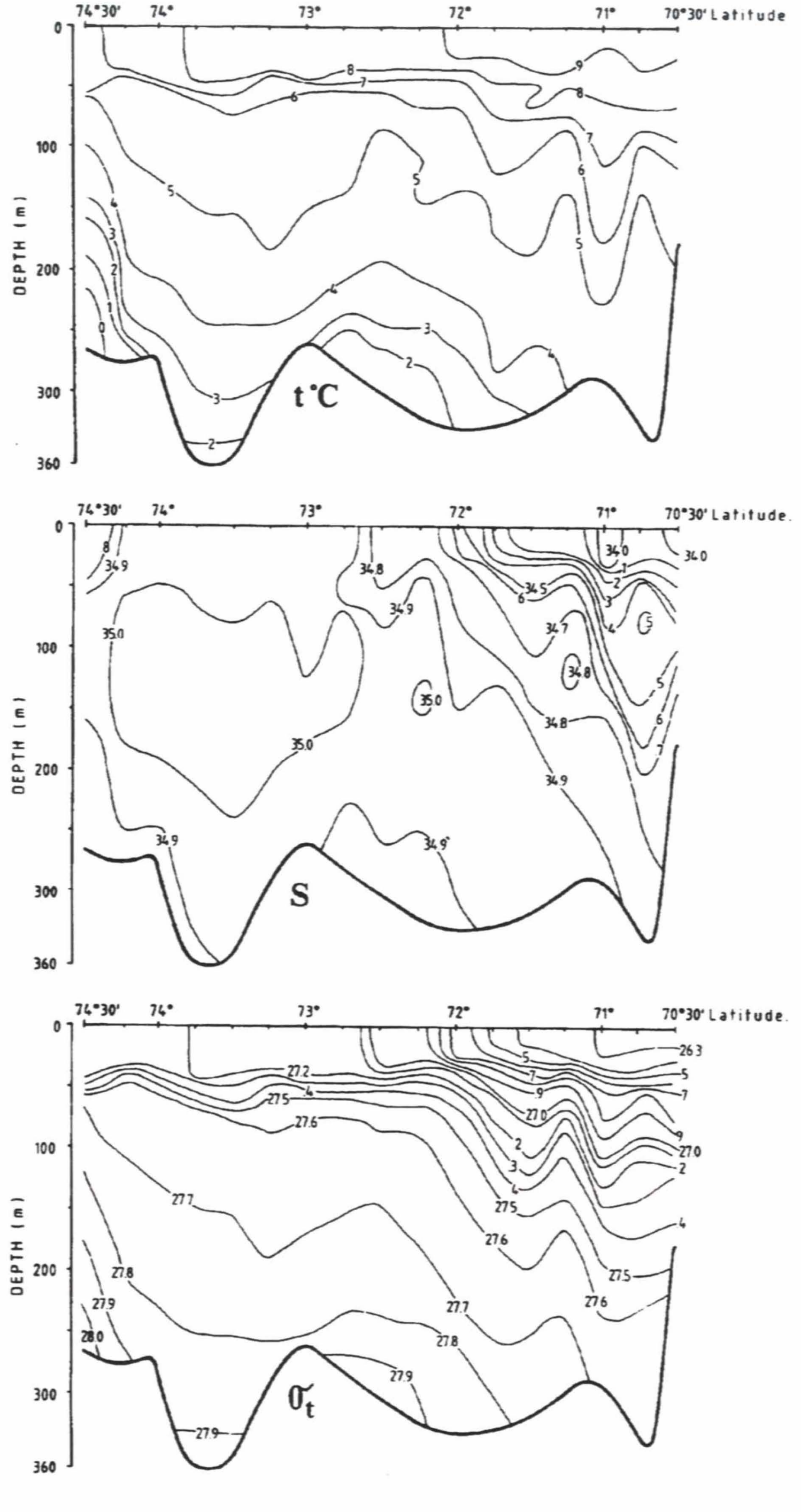

Fig. 7. Hydrographic section along 31°13'E from September 1989.

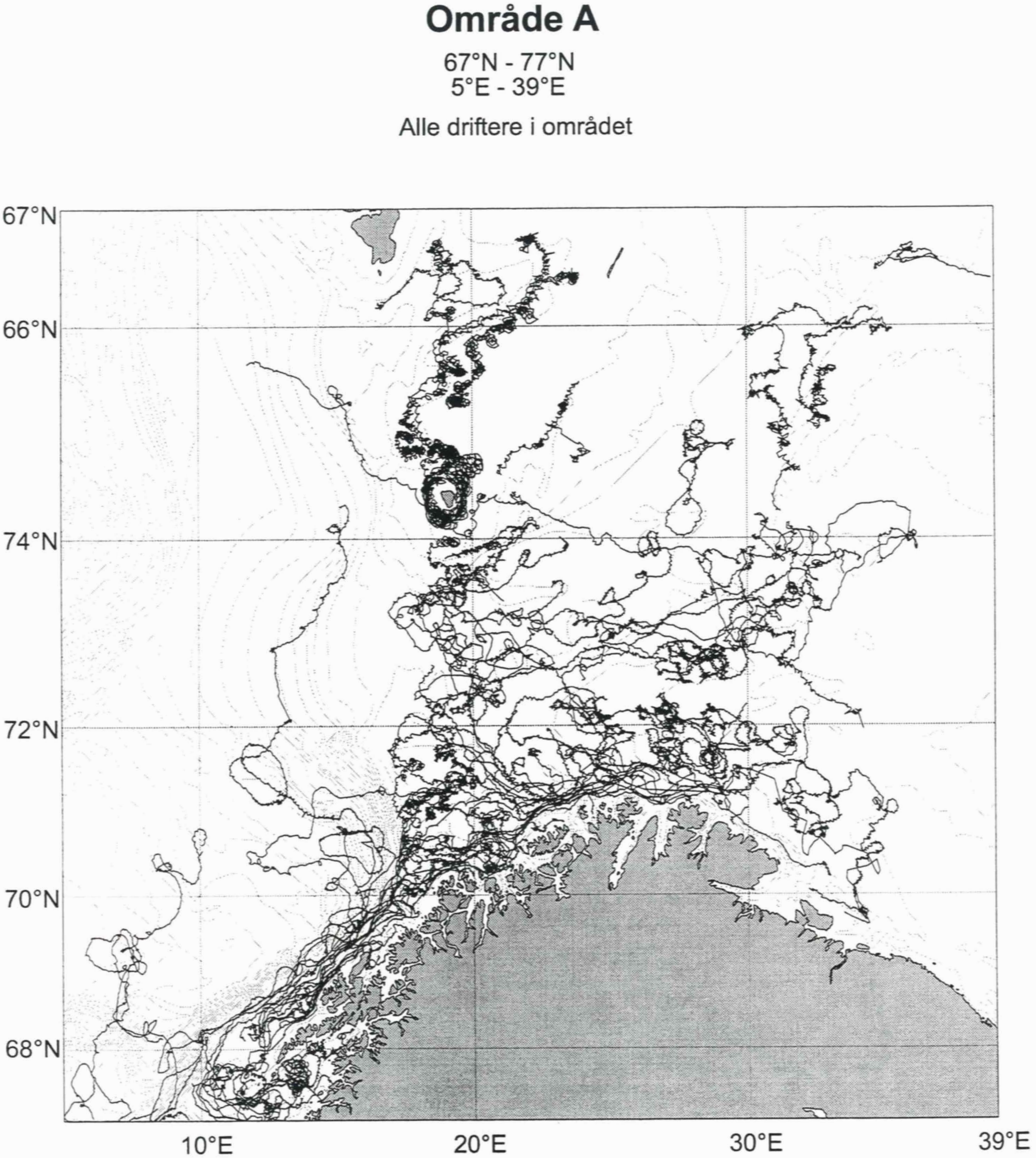

Fig. 8. Trajectory plot of all the Norwegian drifters deployed or drifting into the Barents Sea.

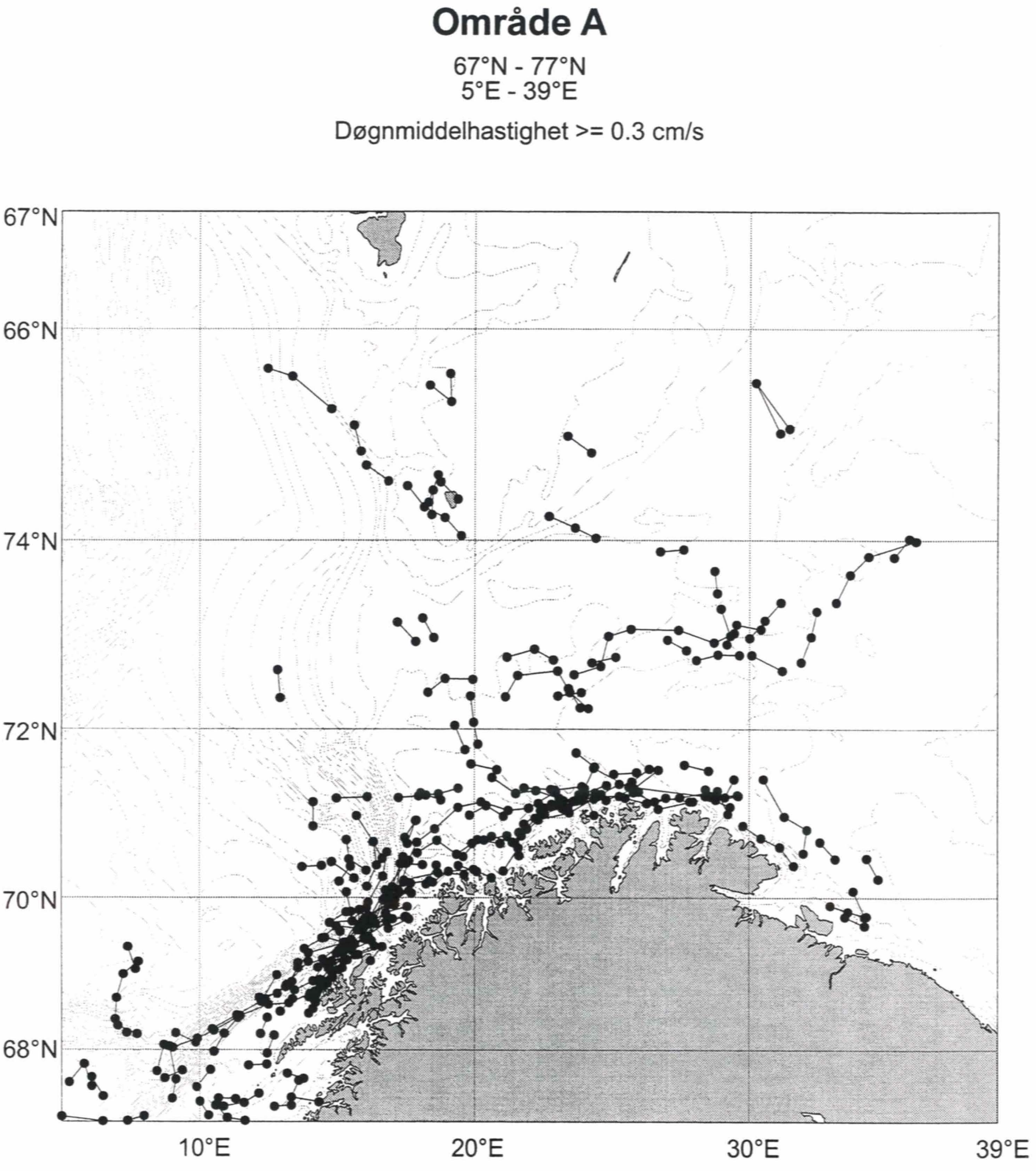

Fig. 9. Parts of the trajectories from Fig. 8 where the daily mean drift speed exceeds 30 cm s^{-1}.

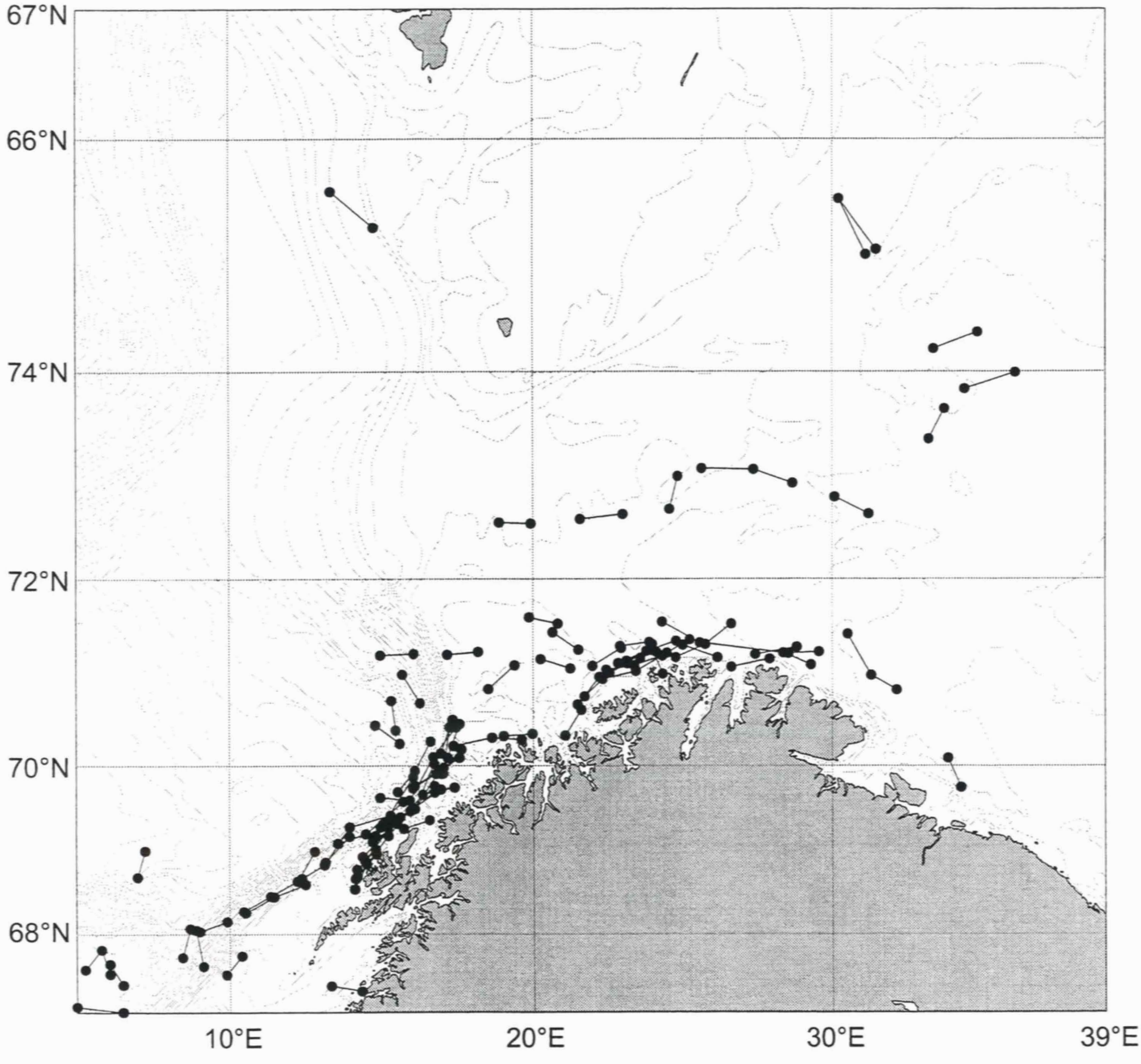

Fig. 10. Parts of the trajectories from Fig. 8 where the daily mean drift speed exceeds 40 cm s^{-1}.

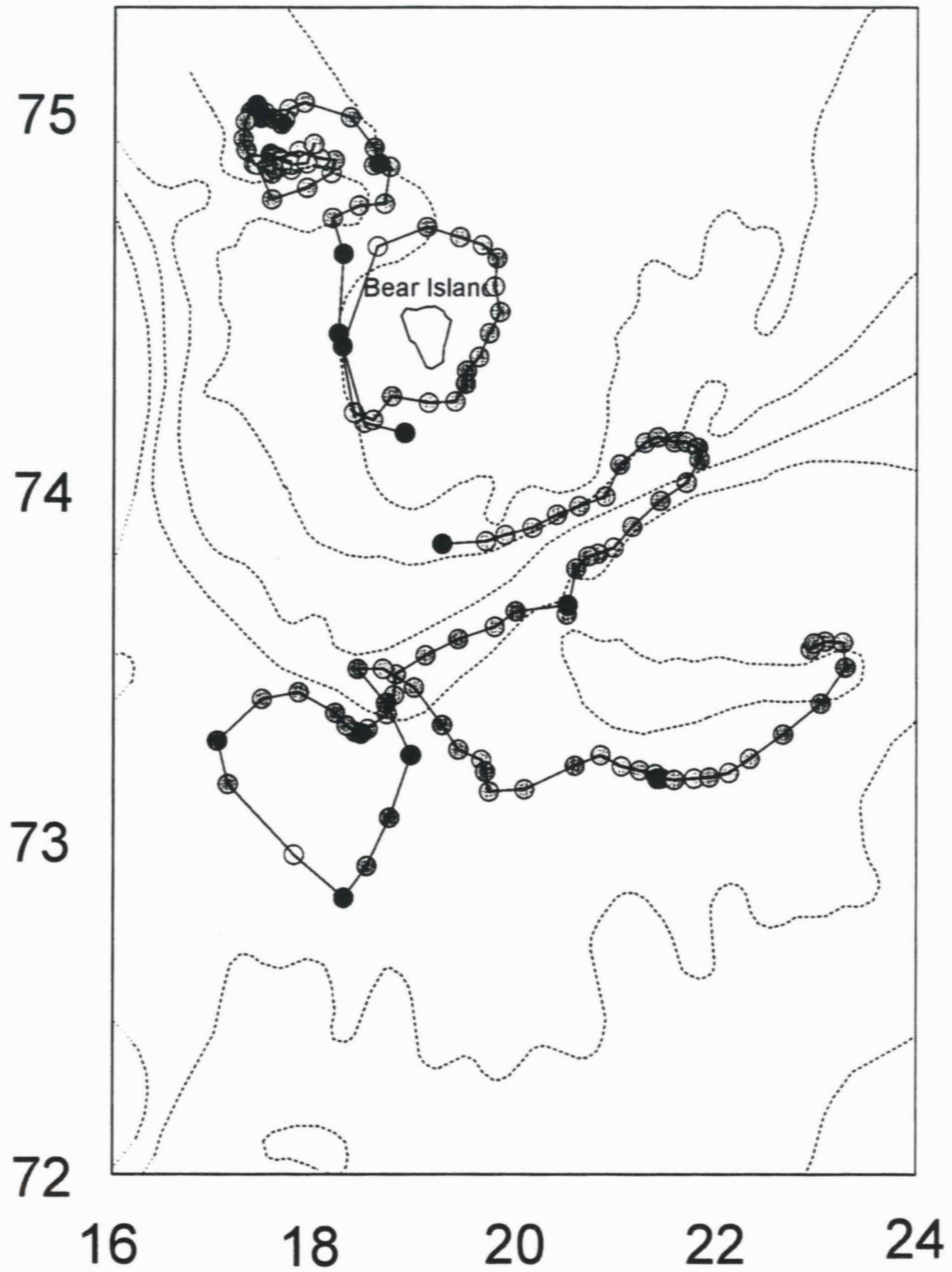

Fig. 11. Trajectories of two drifters during the period July–September 1989 in the Barents Sea.

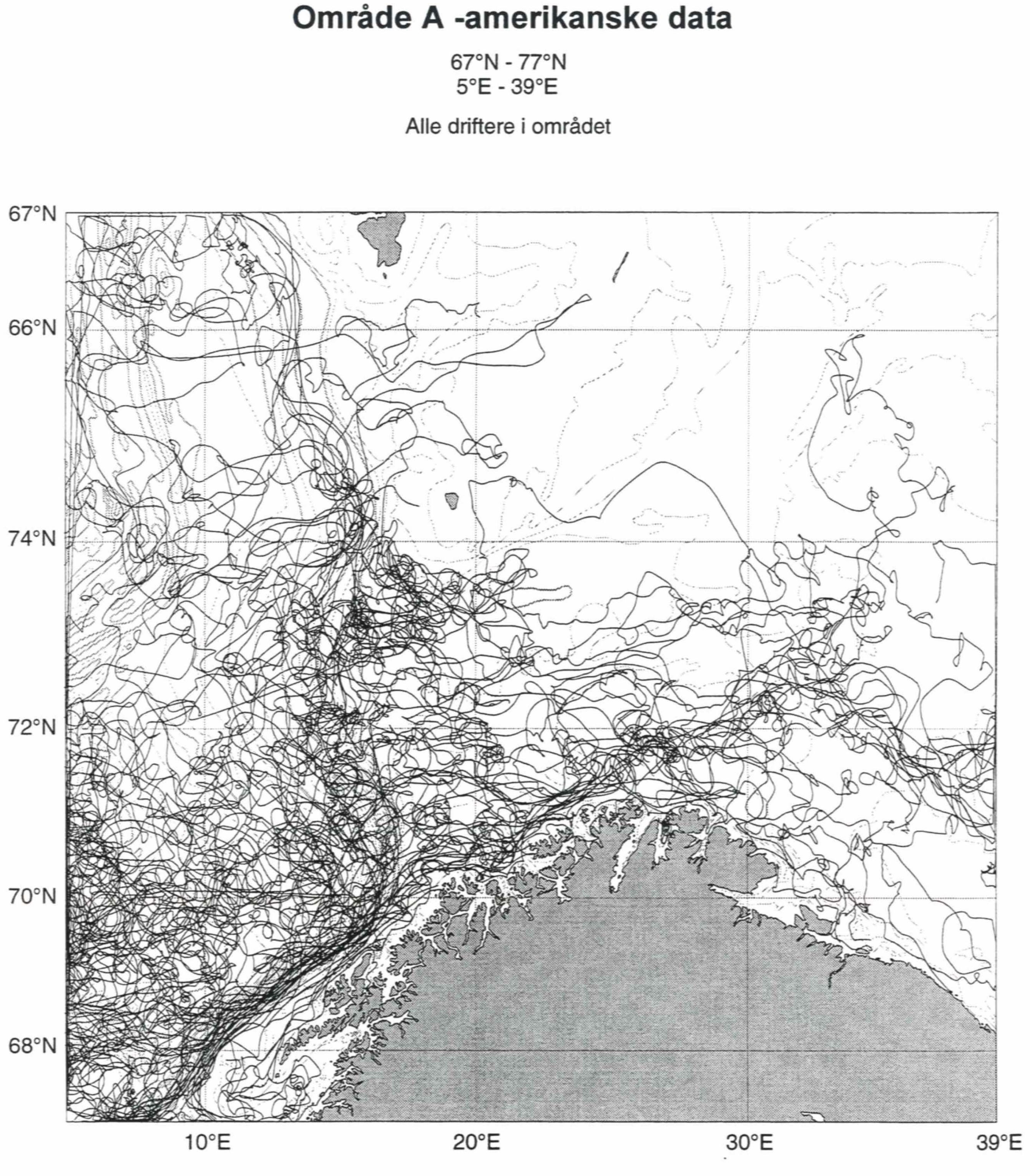

Fig. 12. Trajectory plot of all the SACLANT drifters drifting into the studied area.

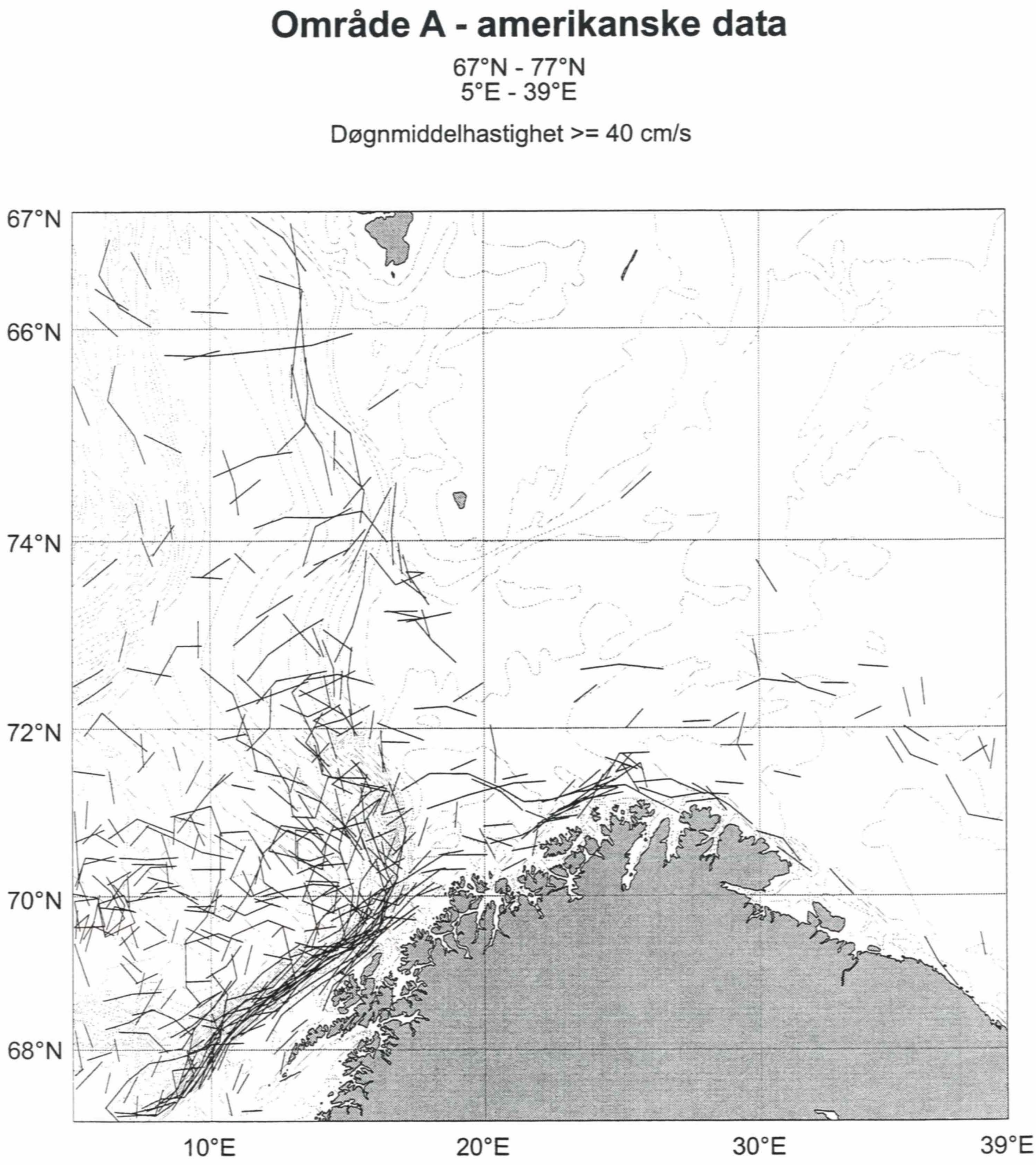

Fig. 13. Parts of the trajectories from Fig. 11 where the daily mean drift speed exceeds 40 cm s^{-1}.

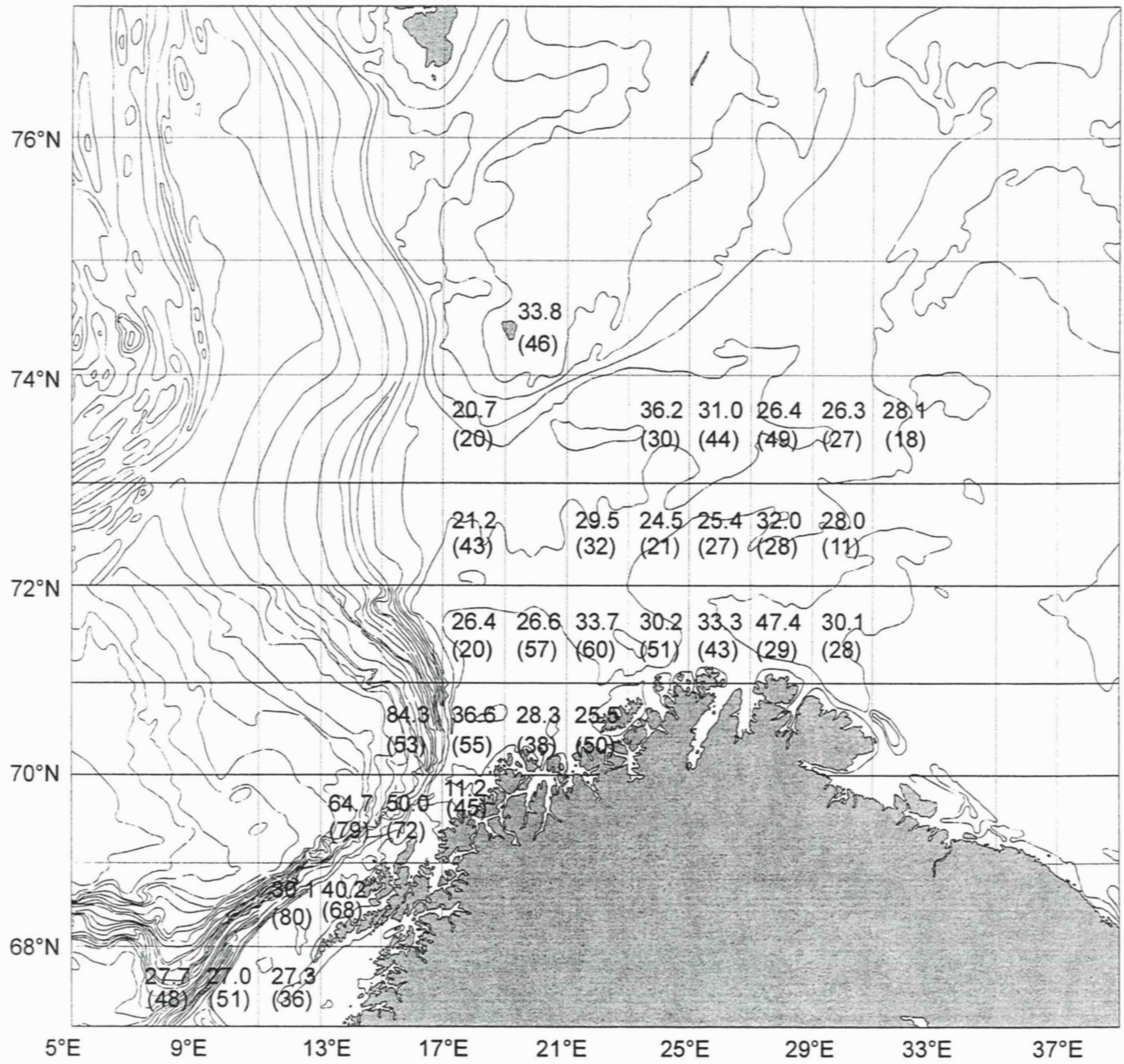

Fig. 14. Mean drift speed (cm s^{-1}) within each grid. The numbers in parenthesis are the directional stability of the current, *B*, expressed in per cent within each grid.

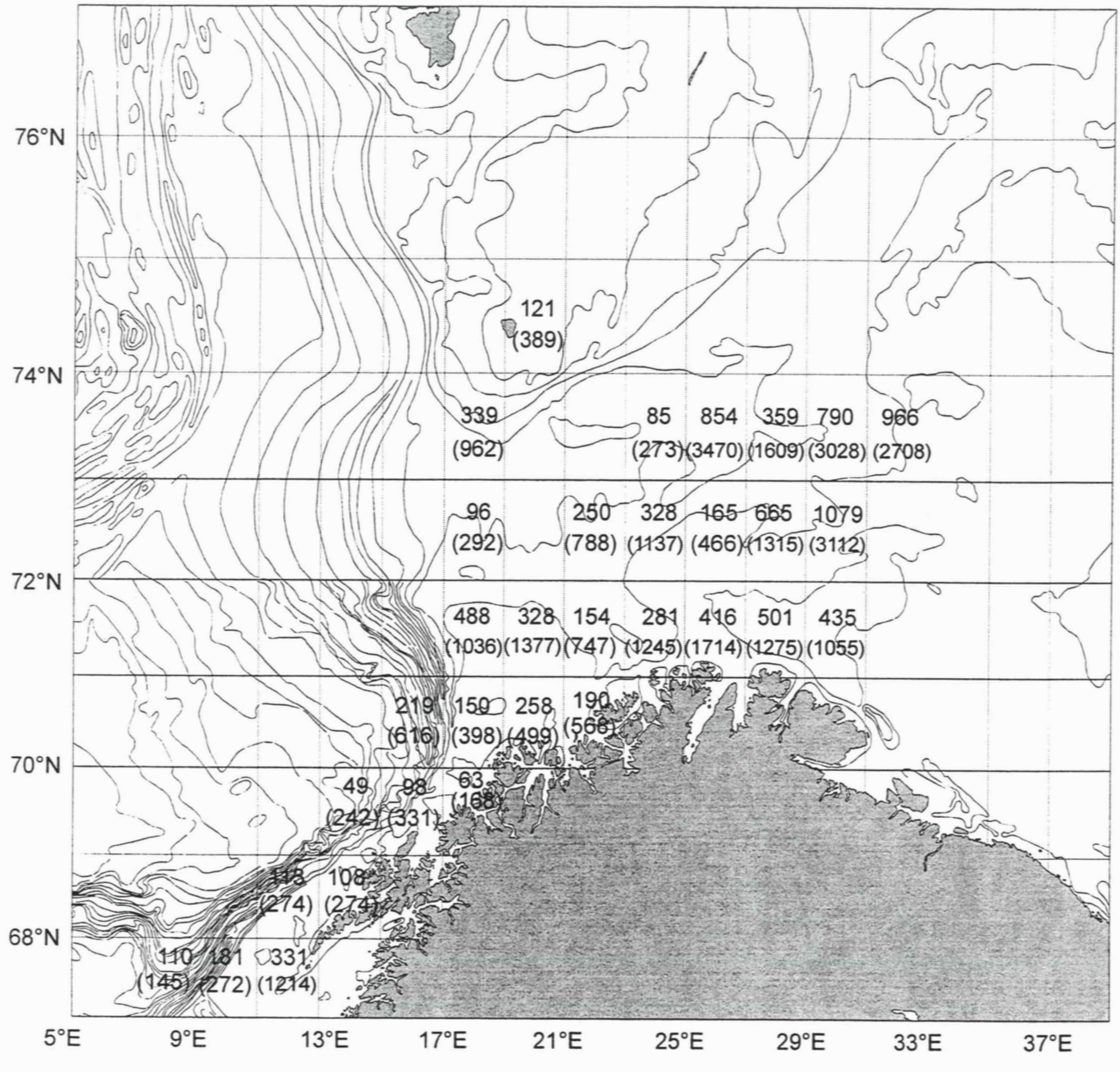

Fig. 15. Mean and maximum (in parenthesis) residence time in hours of the drifters within each grid.

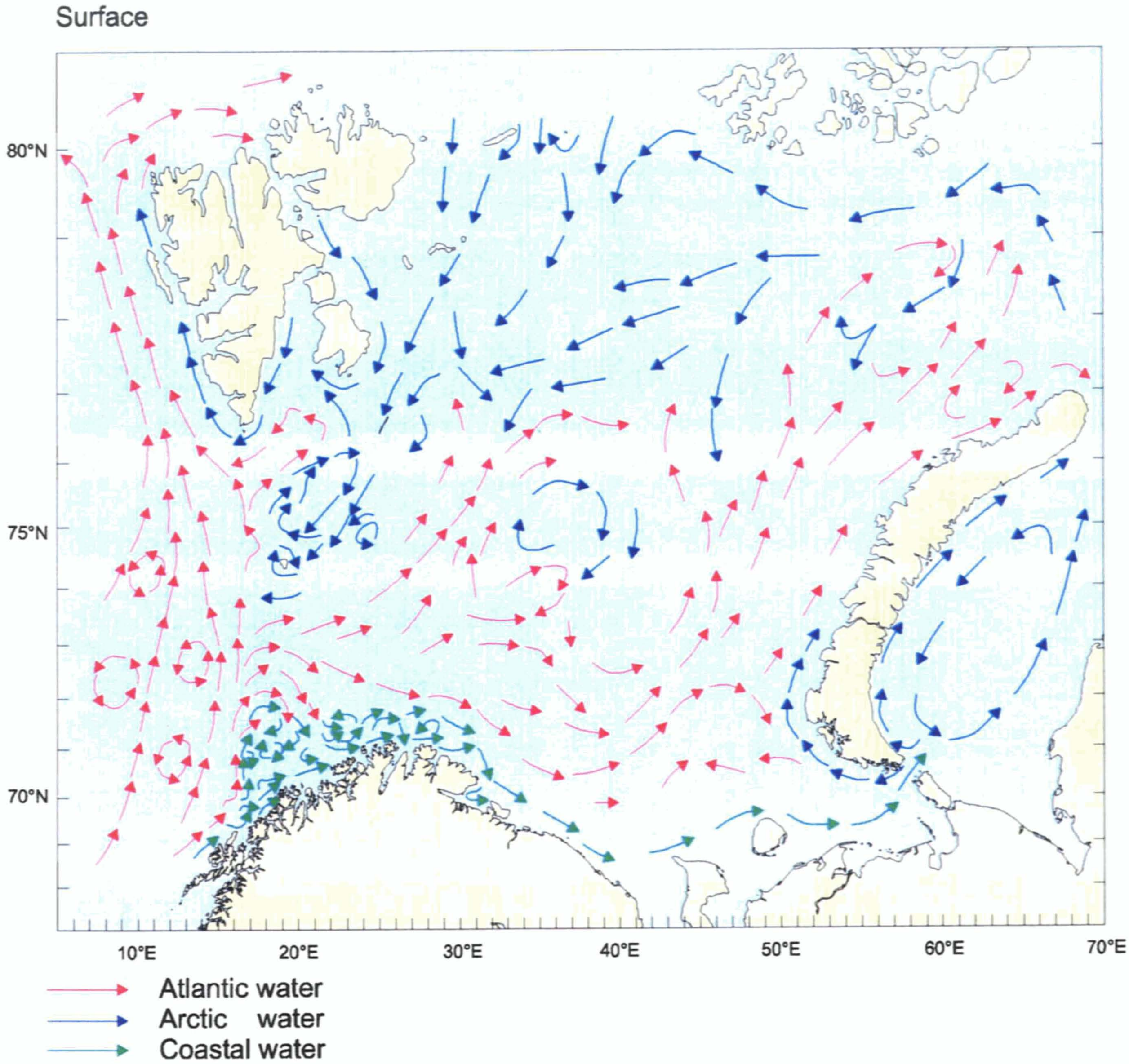

Fig. 16. Surface currents in the Barents Sea. Because of the barotropic conditions, it is representative for the upper 100m.

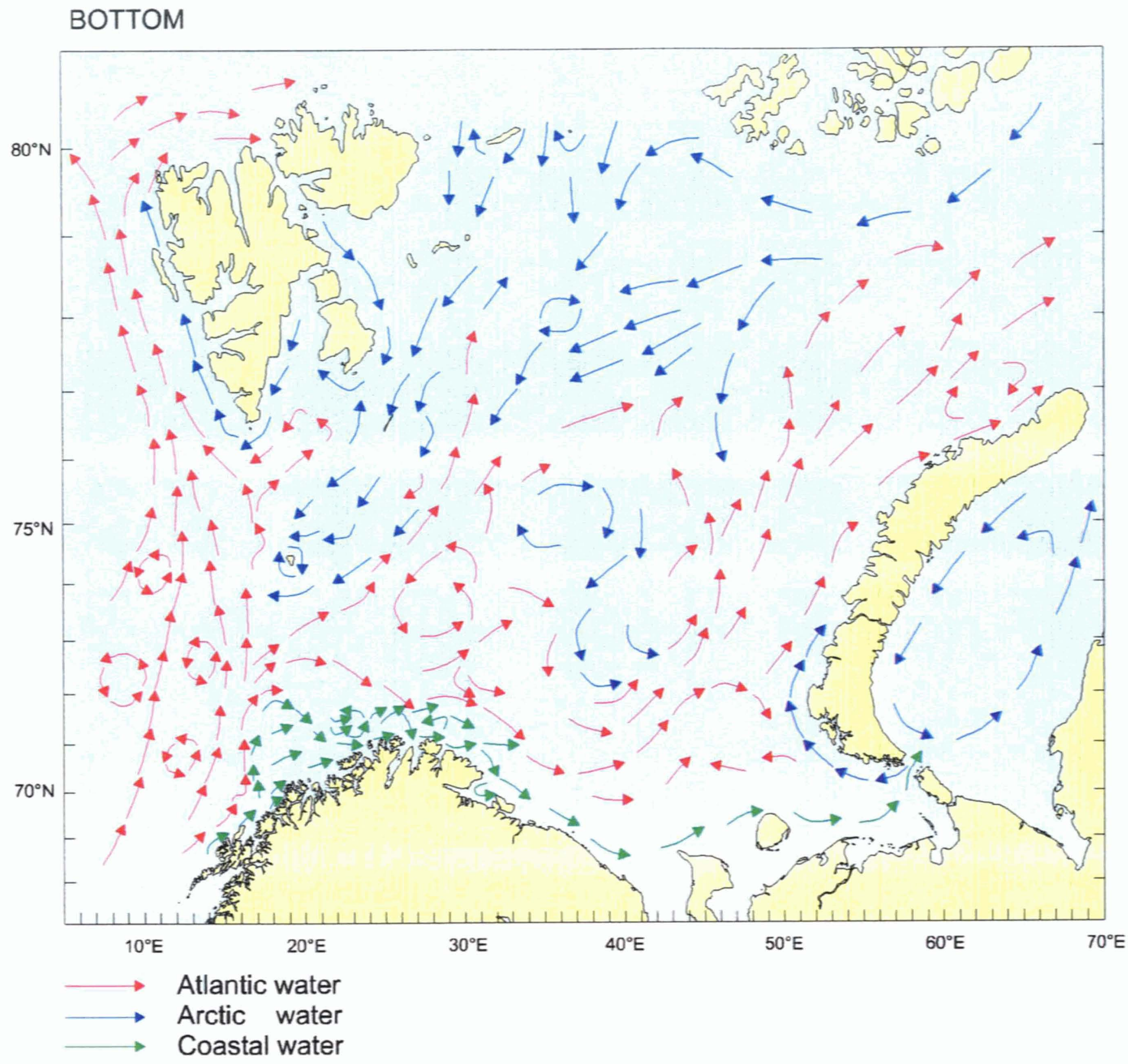

Fig. 17. Currents close to the bottom in the Barents Sea.