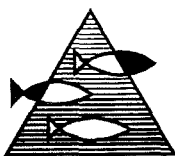


PROSJEKTRAPPORT

ISSN 0071-5638



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Tlf.: 56 36 60 40

Faks: 56 36 61 43

Distribusjon:

ÅPEN

HI-prosjektnr.:

Oppdragsgiver(e):

Oppdragsgivers referanse:

Rapport:

FISKEN OG HAVET

NR.3 - 1997

Tittel:

REPORT ON OCEANOGRAPHIC CRUISES
AND DATA STATIONS 1996

Senter:

Marint miljø

Seksjon: Fysisk oseanografi
og akustikk

Forfatter(e):

Karen Gjertsen

Antall sider, vedlegg inkl.:

89

Dato:

20.02. 1997

Sammendrag:

Rapporten gir en oversikt over toktene til Havforskningsinstituttets forskningsfartøy "G.O. Sars", "Johan Hjort", "Michael Sars" og "G.M. Dannevig" i 1996. I tillegg vises kurskart for leiefartøyene "Jan Mayen" og "Lance". Først vises en oversikt over tokt- nummer og tidsrom for toktene. Den påfølgende figur gir en oversikt over faste hydro- grafiske snitt og faste stasjoner (side 1). De to neste tabellene (side 2 og 3) viser når de faste snittene er tatt og antall observasjoner pr. måned fra de faste stasjonene.

Disse oversiktene er også innrapportert til Det internasjonale råd for havforskning (ICES) sammen med Roscop-skjema.

Data fra toktene er tilgjengelig fra Havforskningsinstituttet. Rapporten kan brukes til å identifisere båt og stasjonsnummer man ønsker data for.

Emneord - norsk:

1. Kurskart
2. Stasjonskart
- 3.

Emneord - engelsk:

1. Course track map
2. Stations map
- 3.


Prosjektleder
Seksjonsleder

4990

Summary:

The present report shows the course tracks and stations occupied by the research vessels "G.O. Sars", "Johan Hjort", "Michael Sars" and "G.M. Dannevig" during 1996.

The first tables show the cruise number and the periods for each cruise. The symbols used to identify the different stations are shown at the bottom of page 6.

The next page shows the standard sections worked out by the Institute of Marine Research and the position of the fixed stations in the coastal water. The following tables (page 2 and 3) indicate when the standard sections are worked out, while the next page shows the number of observations per month of each of the fixed stations.

The data is available on request. This report may be used to identify ship and station numbers.

	Page
CHART oceanographic stations and sections	1
STANDARD sections	2
STANDARD stations	3

"G. O. SARS" 1996

(Ship no 15)

Cruise no	Period of cruises	Page of track chart
1996001	15 Jan - 29 Jan	4
1996901	6 Feb - 5 Mar	5
1996003	7 Mar - 20 Mar	6
1996004	21 Mar - 1 Apr	7,8
1996005	3 Apr - 18 Apr	9
1996006	22 Apr - 24 Apr	10
1996007	29 Apr - 28 May	11,12
1996008	30 May - 24 Jun	13,14
1996009	25 Jun - 14 Jul	15,16
1996010	19 Jul - 15 Aug	17,18
	0-group survey-overview	19
1996902	17 Aug - 10 Sep	20,21
1996904	12 Sep - 5 Oct	22,23
1996013	17 Oct - 15 Nov	24,25
1996014	19 Nov - 18 Dec	26

"JOHAN HJORT" 1996

(Ship no 12)

Cruise no	Period of cruises	Page of track chart
1996201	15 Jan - 29 Jan	27
1996202	31 Jan - 5 Feb	28
1996901	5 Feb - 3 Mar	29
1996204	5 Mar - 18 Mar	30
1996205	20 Mar - 22 Apr	31-33
1996206	28 Apr - 3 May	34
1996207	4 May - 19 May	35-37
1996208	4 Jun - 7 Jul	38-39
1996209	9 Jul - 19 Jul	40
1996210	20 Jul - 5 Aug	41
1996903	7 Aug - 22 Aug	42-43
1996902	24 Aug - 10 Sep	44-45
1996904	12 Sep - 2 Oct	46-47
1996214	5 Oct - 28 Oct	48-49
1996215	30 Oct - 10 Nov	50
1996216	11 Nov - 29 Nov	51-52
1996217	2 Dec - 20 Dec	53

"MICHAEL SARS" 1996

(Ship no 11)

Cruise no	Period of cruises	Page of track chart
1996102	13 Jan - 13 Feb	54-56
1996103	15 Feb - 30 Mar	57
1996104	9 Apr - 25 Apr	58
1996105	29 Apr - 21 May	59-60
1996114	22 May - 5 Jun	61

1996115	7 Jun - 7 Jul	62-63
1996108	8 Jul - 22 Jul	64
1996903	24 Jul - 20 Aug	65
1996902	22 Aug - 10 Sep	66-67
1996111	Norw.Inst.of Fish.and Aquaculture, Tromsø: 11 Sep - 8 Oct	68
1996112	10 Oct - 30 Oct	69
1996113	2 Nov - 11 Dec	70-73

"G. M. DANNEVIG" 1996

(Ship no 16)

"G.M.Dannevig" is periodical hired by SFT
(Norwegian Pollution Control Authority)

Cruise no	Period of cruises	Page of track chart
	SFT (st. and 3)	74
1996351	8 Jan SFT	
1996301	9 - 10 Jan	75
1996302	11 - 13 Jan	76
1996352	22 Jan SFT	
1996353	5 Feb SFT	
1996303	5 Feb - 6 Feb	75
1996354	20 Feb SFT	
1996355	29 Feb SFT	
1996306	4 - 5 Mar	75
1996307	7 - 8 Mar	77
1996356	15 Mar SFT	
1996308	21 - 27 Mar	78
1996357	1 Apr SFT	
Exstracr.1	09.apr	
1996358	15 Apr HI \ SFT	
1996309	16 Apr - 17 Apr	75
1996309\310	15 Apr - 4 May	79
Exstracr. 2	(28 Apr - 30 Apr)	80
1996311	6 May - 10 May	
1996359	13 May SFT	
1996312	13 May - 14 May	75
Exstracr.3	22 May - 24 May	81
1996360	24 May SFT	
1996314	3 Jun - 9 Jun	
1996361	10 Jun SFT	
1996315	9 Jun - 10 Jun	75
1996316	13 Jun - 20 Jun	82
1996362	24 Jun - 26 Jun HI \ SFT	83
1996317	1 - 7 Jul	
1996363	8 Jul SFT	
1996318	8 Jul - 9 Jul	75
1996319	17 Jul - 3 Aug	
1996364	5 Aug SFT	
1996320	5 Aug - 6 Aug	75
1996321	12 Aug - 17 Aug	
1996322	15 Aug	
1996365	19 Aug SFT	
1996323	20 Aug - 2 Sep	
1996366	9 Sep SFT	
1996325	9 Sep - 10 Sep	75
1996326	11 Sep	

1996327	16 Sep - 3 Oct	
	26 Sep - 27 Sep	84
1996367	19 Sep	SFT
1996368	7 Oct	SFT
1996328	6 Oct - 7 Oct	75
1996329	14 Oct	
1996330	17 Oct - 18 Oct	85
1996369	19 Oct	SFT
1996331	22 Oct - 1 Nov	
1996370	4 Nov	SFT
1996332	5 Nov - 6 Nov	75
1996333	18 Nov - 26 Nov	86
1996335	19 Dec	75
1996371	13 Dec	SFT

"JAN MAYEN" 1996

(Ship no 19)

Page of
track chart

1996901	5 Feb - 29 Feb	87
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"LANCE" 1996

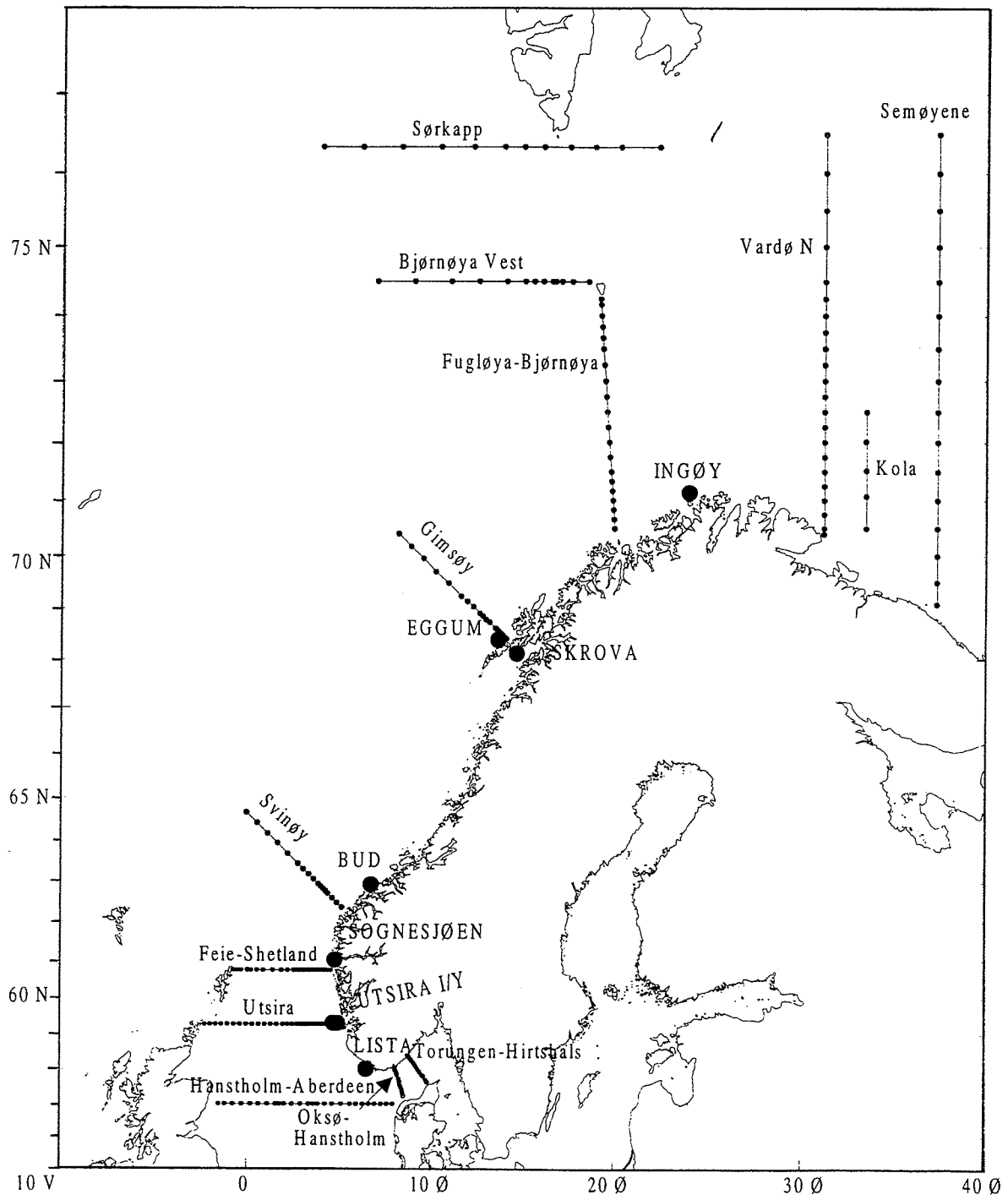
(Ship no 34)

Page of
track chart

1996806	23 Feb - 14 Mar	88-89
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Guidelines:

- z Vertical Oceanogr. st., CTD ST.
(Nutrient samples are collected at several CTD stations)
- △ Pelagic trawl station
- Bottom trawl station
- ⊙ CTD and PLANKTON st
- Grab station
- ◇ Plankton station
- M Mocness



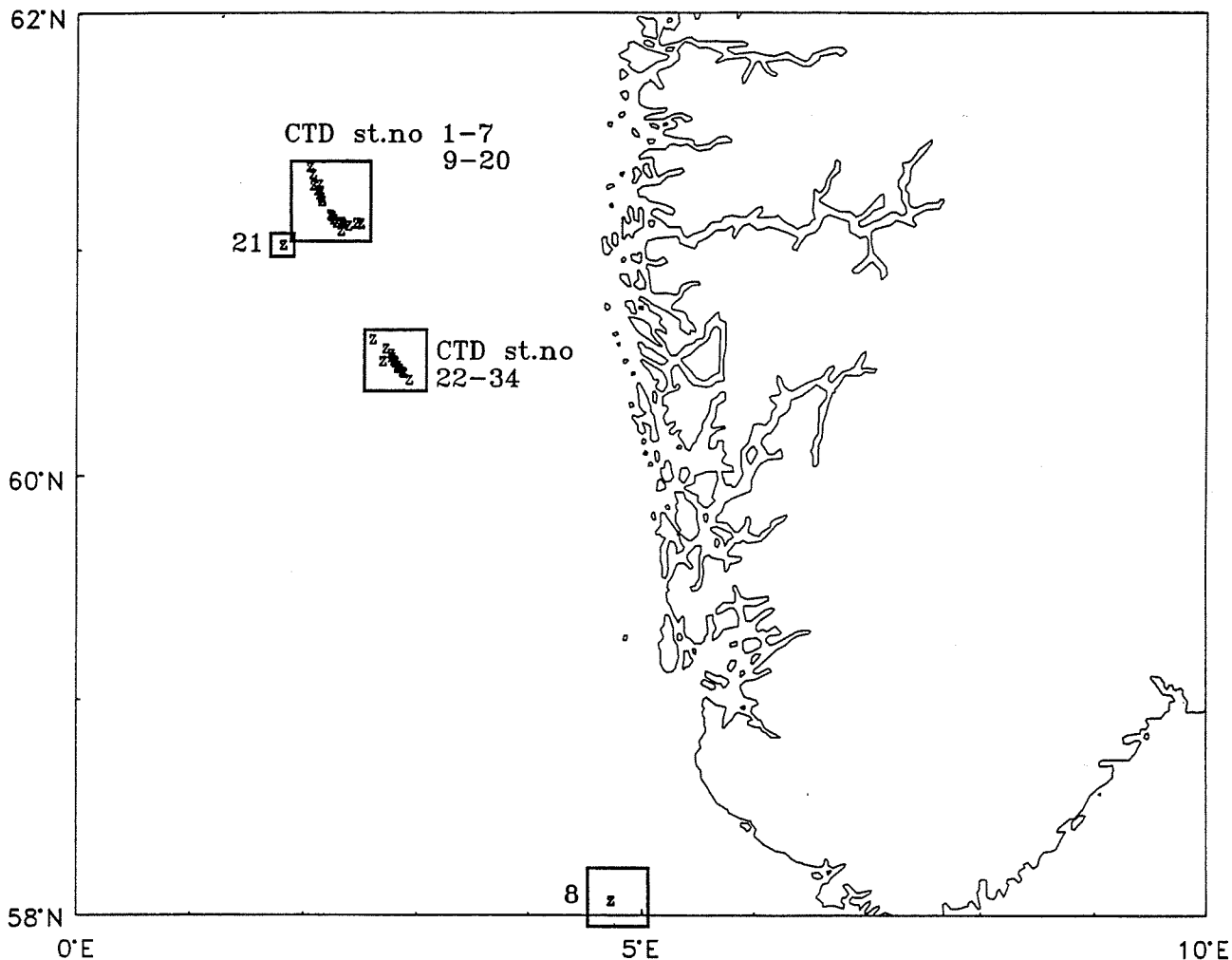
STANDARD 1996

Cruise no/ship

SECTIONS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
→	Page 75 shows this section taken by "G.M.DANNEVIG"											
Torungen - Hirtshals											1996014GS	
Oksø - Hanstholm					1996105MS	1996208JH					1996014GS	
Hanstholm - Aberdeen	1996102MS				1996105MS	1996208JH					1996014GS	
Utsira West	1996102MS			1996105MS	1996105MS	1996009GS					1996014GS	
Feie - Shetland	1996102MS			1996205JH		1996009GS 1996208JH					1996014GS	
Svinøy - North/West			1996204JH 1996004GS			1996115MS						
Gimsøy - North/West				1996005GS	1996007GS	1996008GS	1996010GS				1996215JH	
			1996204JH		1996207JH 1996007GS	1996115MS	1996209JH 1996210JH					
Sørkapp								1996902GS				
Fugløya - Bear Island		1996202JH	1996204JH		1996207JH		1996115MS		1996902GS	1996904GS		
Bear Island - West			1996204JH								1996215JH	
Vardø - North			1996204JH				1996115MS		1996902JH			
Sem. Island - North								1996902MS				

STANDARD STATIONS	1996												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
LISTA													
N58 01 E06 32	3	3	3	3	3	3	3	3	3	3	3	3	36
UTSIRA Y													
N59 19 E04 44	3	2	4	3	3	3	3	3	3	3	3	3	36
UTSIRA I													
N59 19 E04 59	3	2	4	3	3	3	3	3	3	3	3	3	36
SOGNESJØEN													
N61 01 E04 50	3	2	3	2	3	2	3	3	1	2	2	1	27
BUD													
N62 56 E 06 47	4	1	3	3	3	3	3	3	3	2	3	3	34
SKROVA													
N68 07 E14 39	4	4	4	3	3	3	4	2	3	3	3	4	40
EGGUM													
N 68 23 E13 38	3	4	3	5	3	3	3	3	3	2	4	3	39
INGØY													
N71 08 E 24 01	1	0	2	3	3	2	4	3	2	2	2	2	26

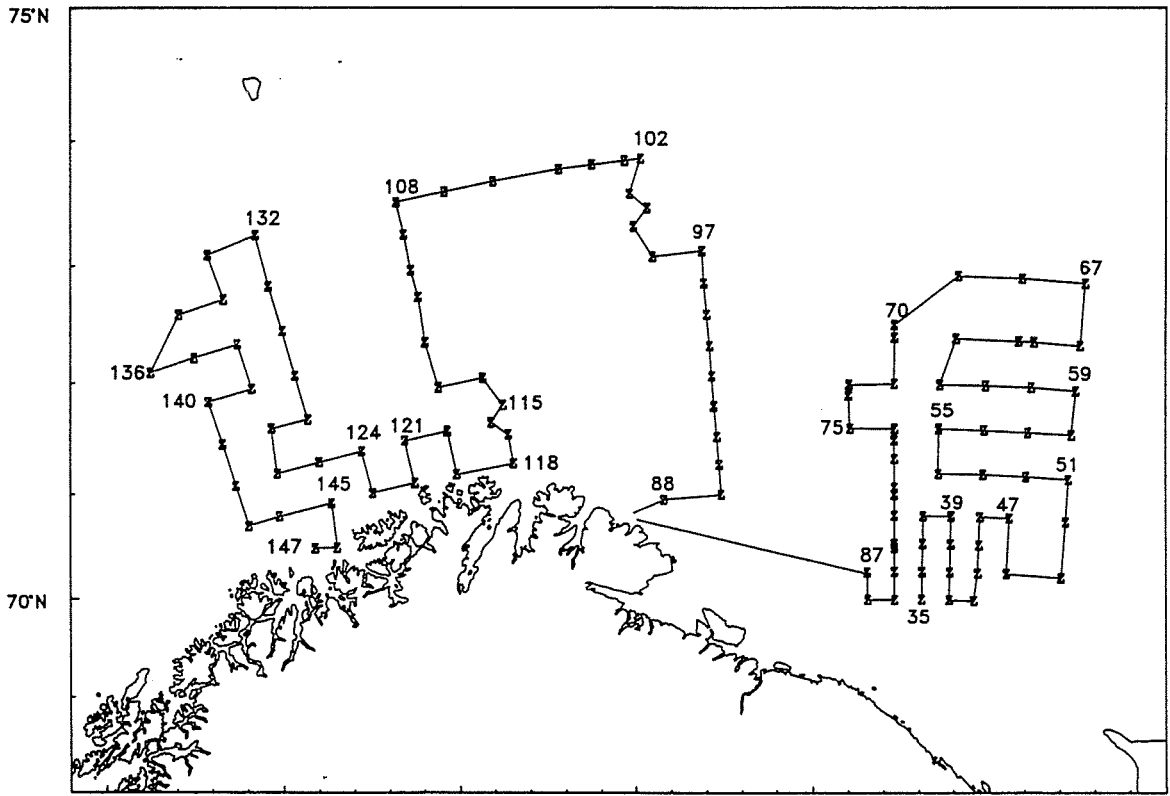


15 - 29 Jan 1996
 Cruise no 1996001

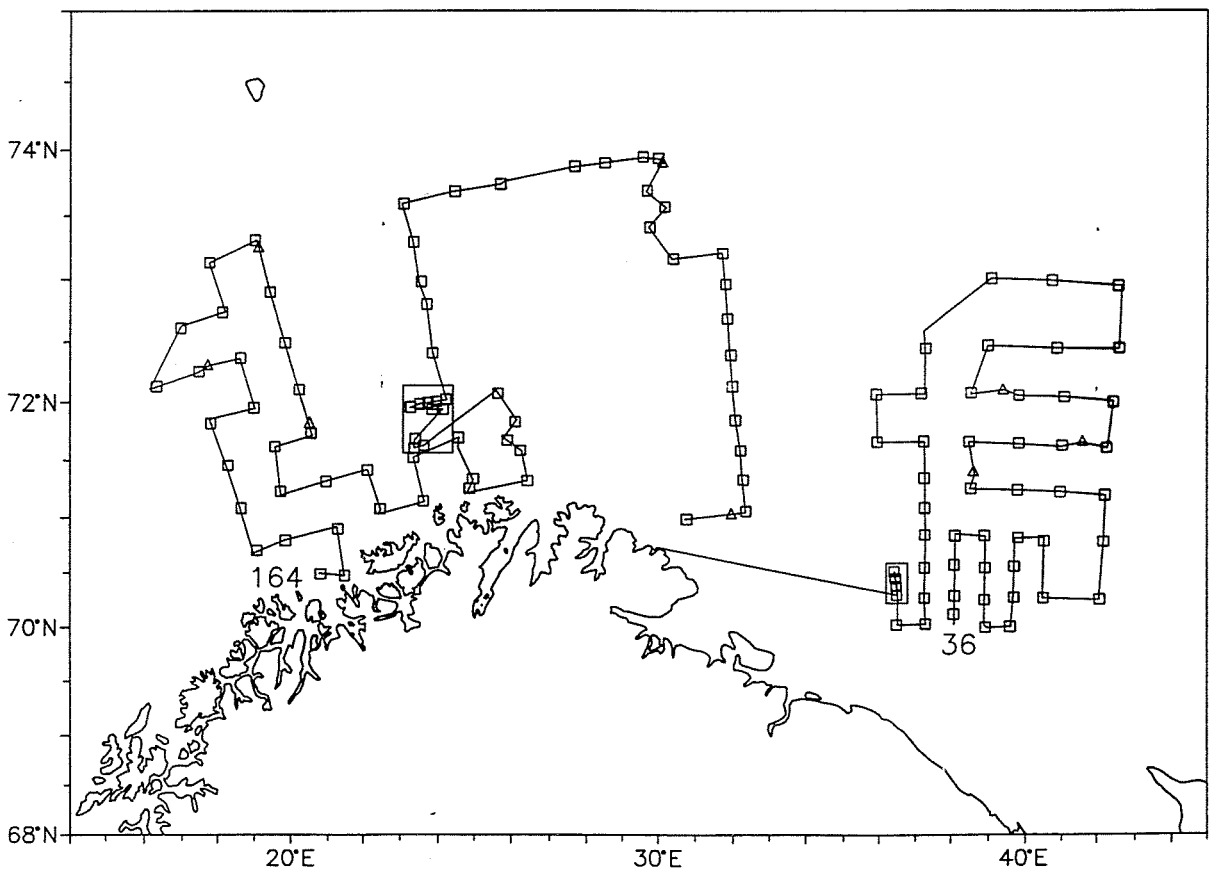
z CTD st.no 1-34

"G.O. Sars"

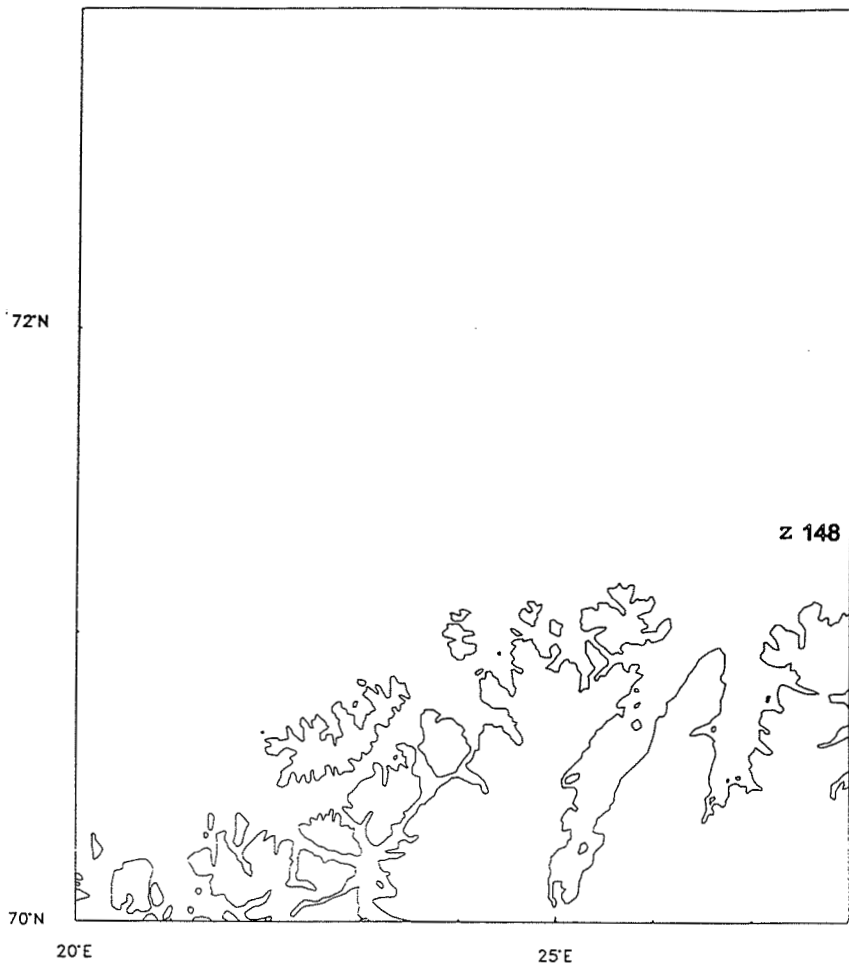
□ Boxes for trawling (35 dem.trawl)
 (Uptake and effects of oil hydrocarbon
 in fish from oil installation areas)



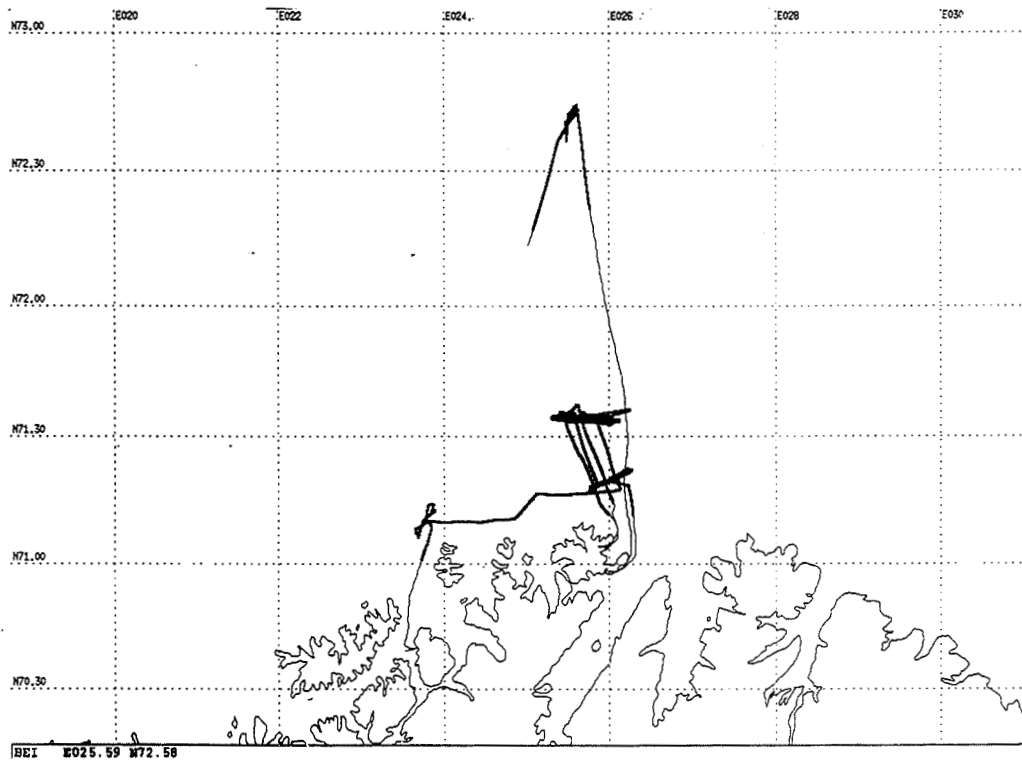
20°E 30°E 40°E
 6 Feb - 5 Mar 1996 z CTD st.no 35-147 "G.O.Sars"
 Cruise no 1996901



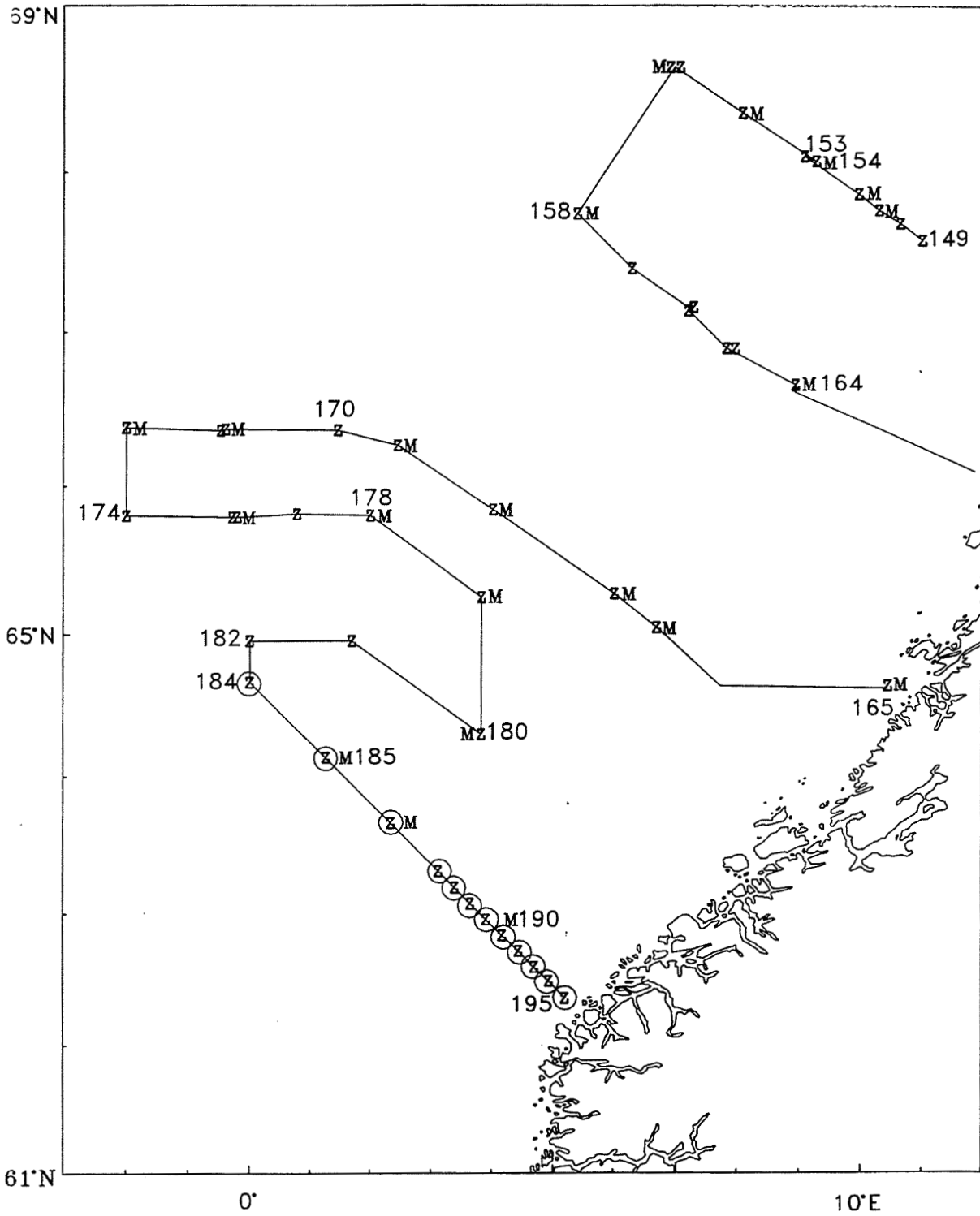
68°N 70°N 72°N 74°N
 20°E 30°E 40°E
 6 Feb- 5 Mar 1996 □△ TRAWL st.no 36-164 "G.O.Sars"
 Cruise no 1996901
 □ Bottom tr.
 △ Pel. tr.



7 - 20 Mar 1996 z CTD st.no 148 "G.O.Sars"
 Cruise no 1996003



Track chart. TRAWL st. not shown

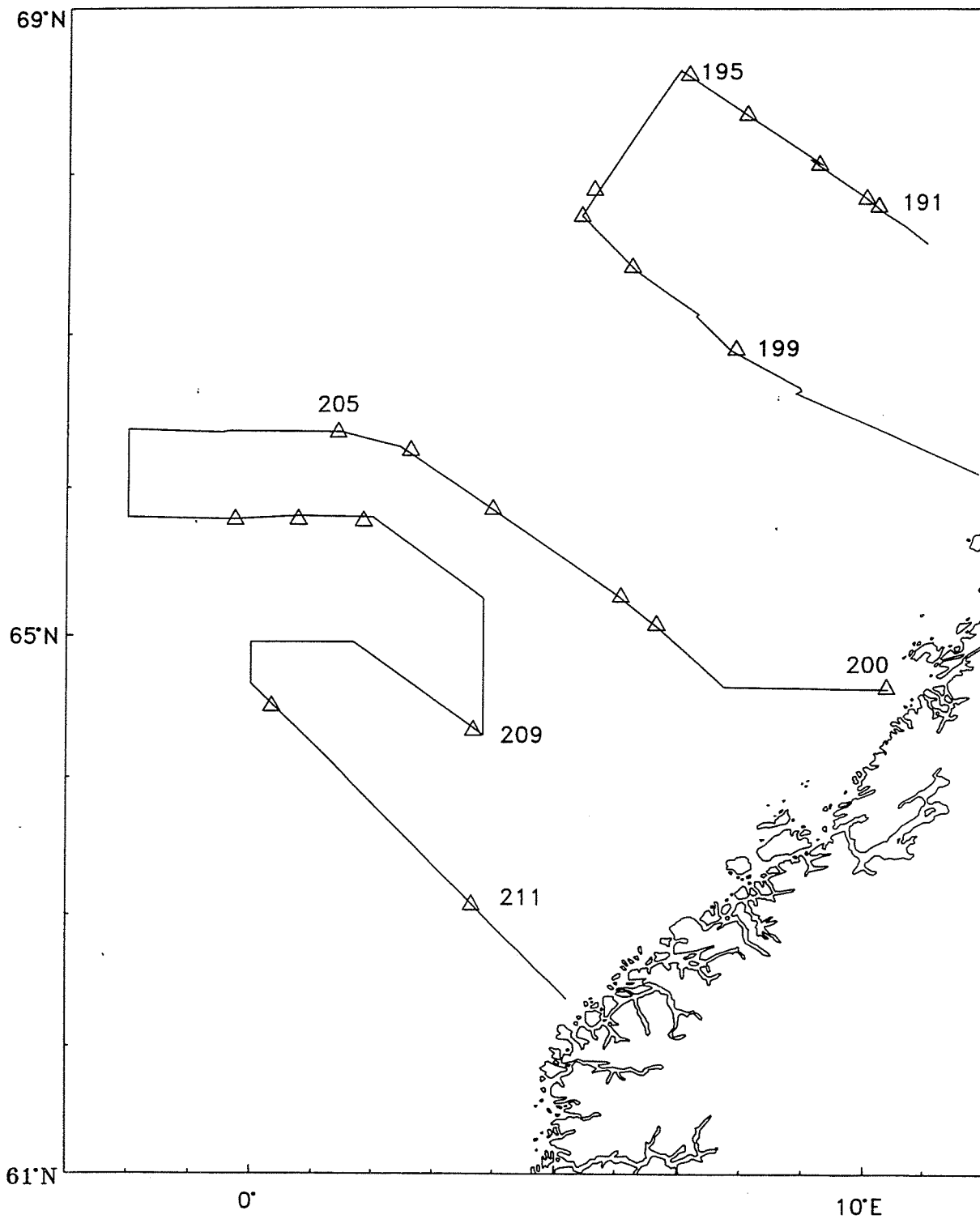


21 Mar - 1 Apr 1996
 Cruise no 1996004

z CTD st.no 149-195
 M Moccness st.
 (z) CTD and PLANKTON St. (WP-II net)

"G.O.Sars"

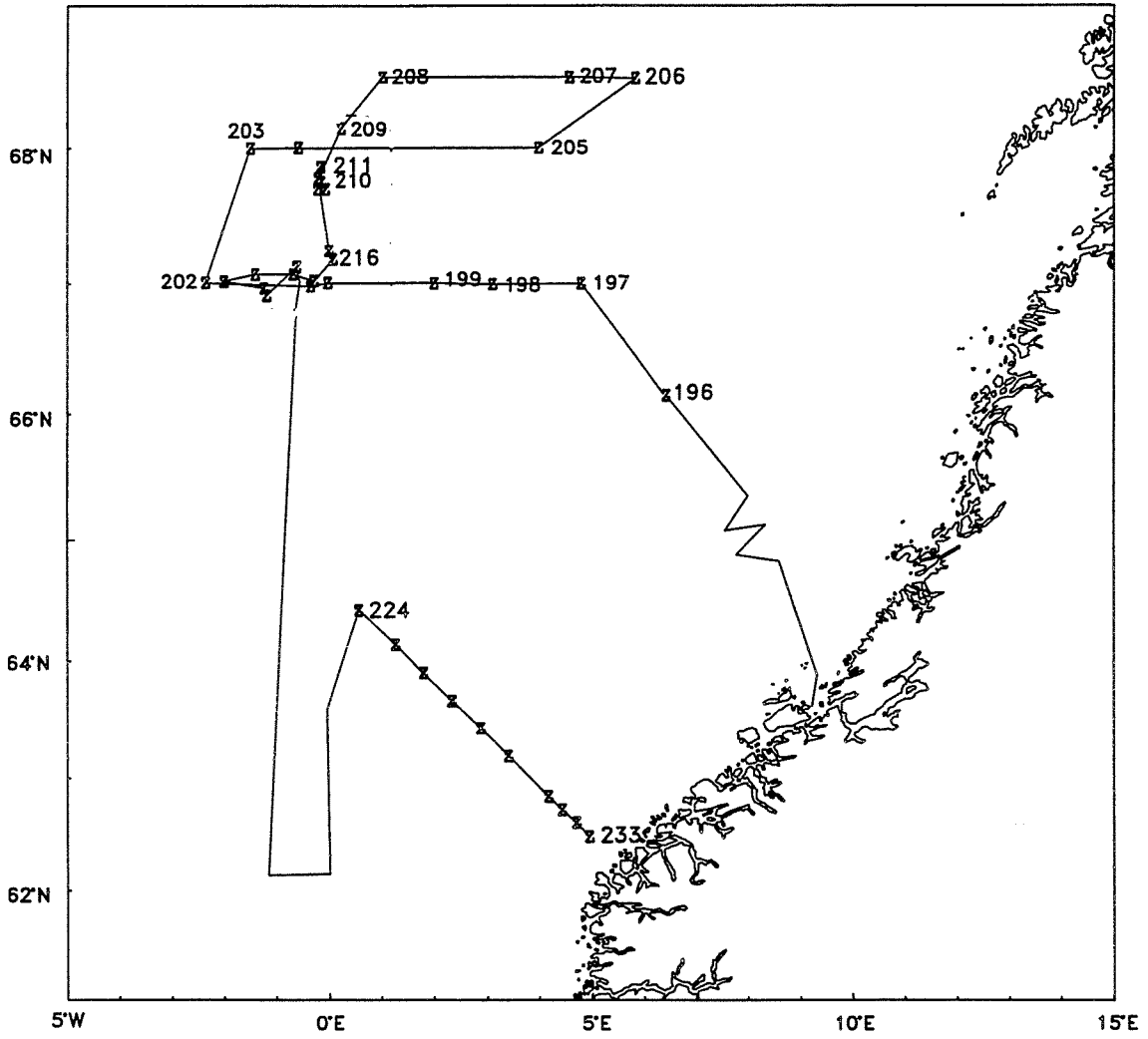
Standard section Svinøy NW: st.no 184-195



21 Mar - 1 Apr 1996 △ TRAWL st.no 191-211

"G.O.Sars"

Cruise no 1996004



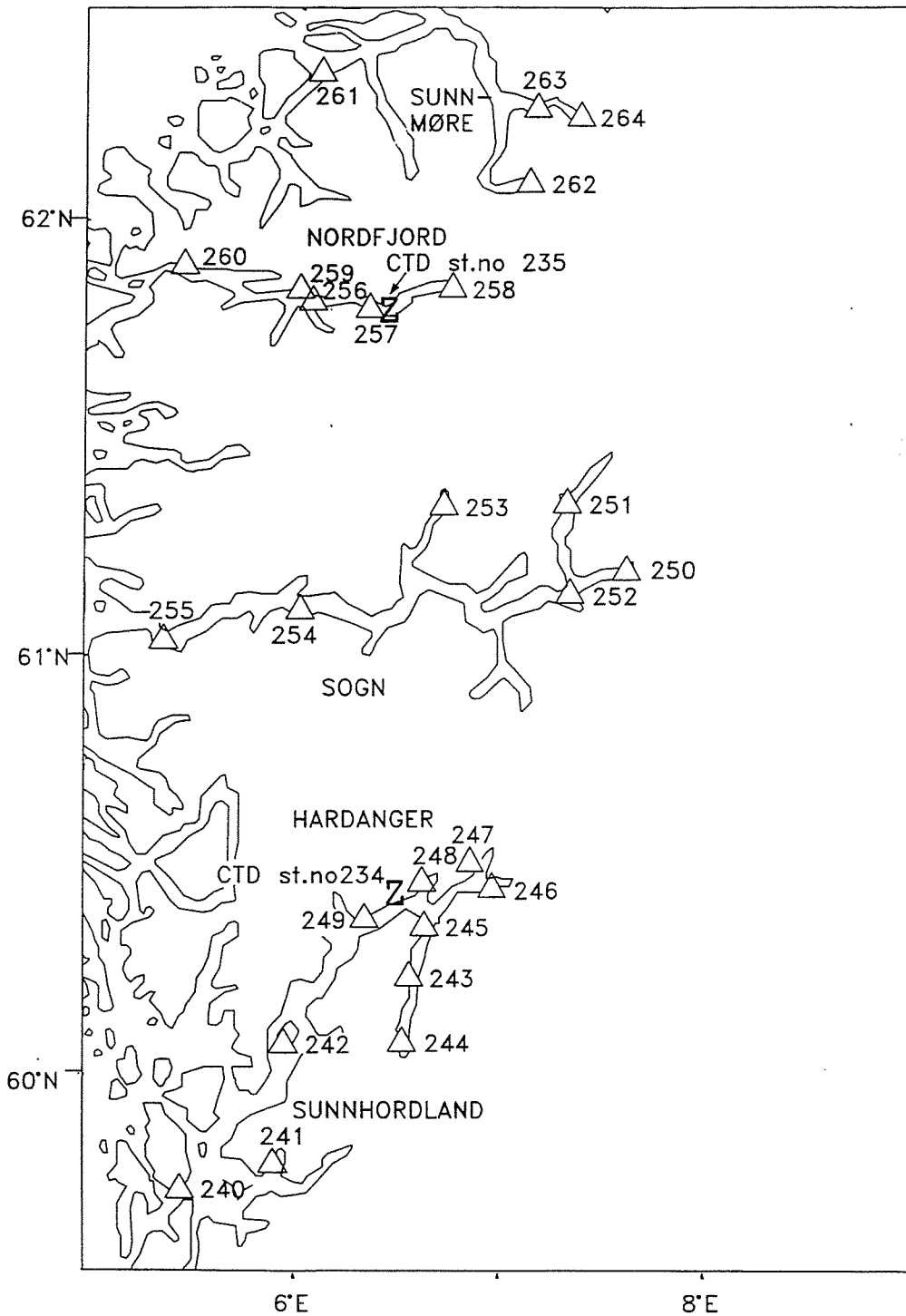
3 - 18 Apr 1996

z CTD st.no 196-233

"G.O.Sars"

Cruise no 1998005

(TRAWL st. and MOCNESS st. not shown)



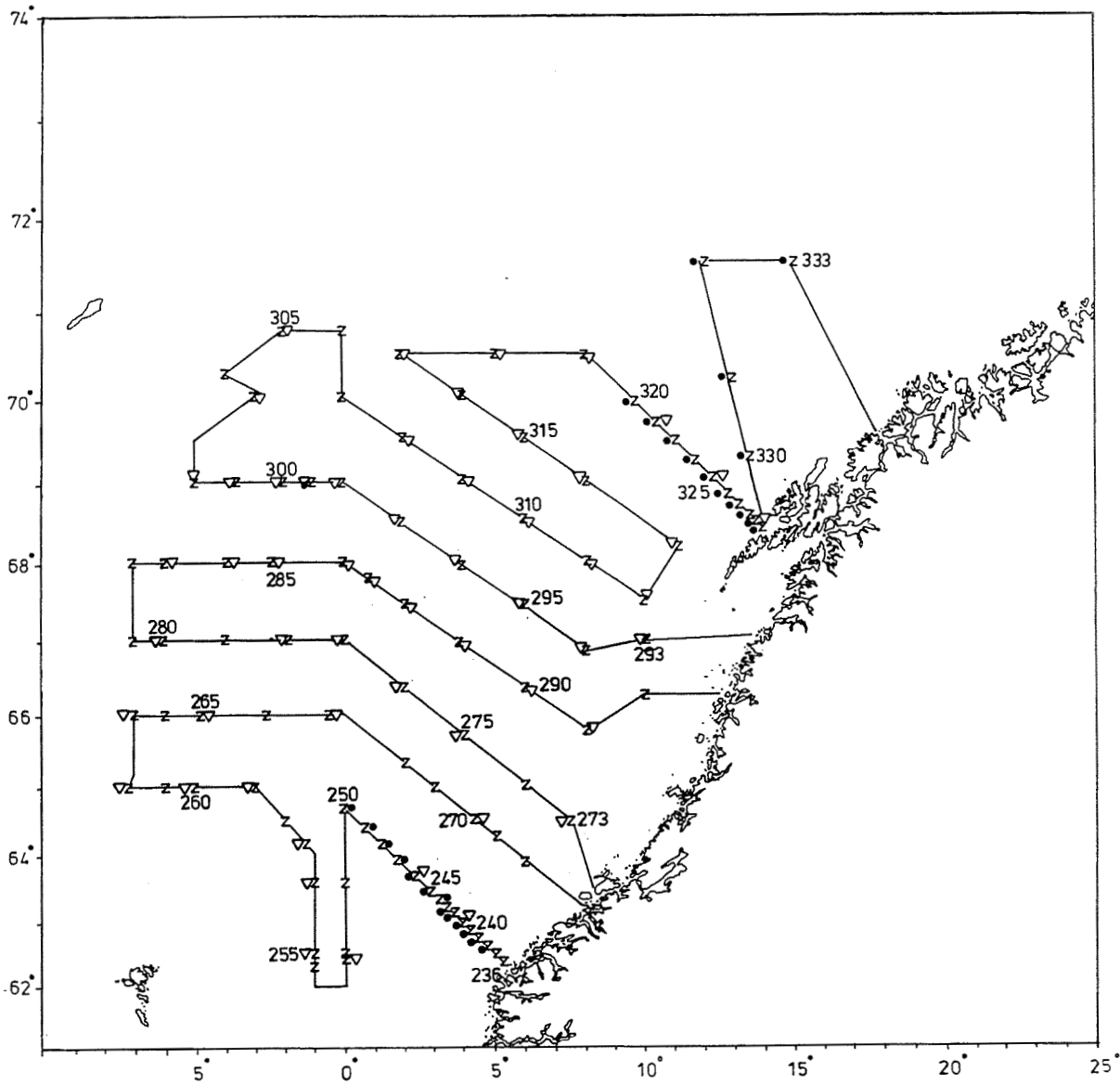
22-24 Apr 1996

Z CTD st.no 234-235

"G.O.Sars"

Cruise no 1996006

△ Pel. trawl st.no 240-264



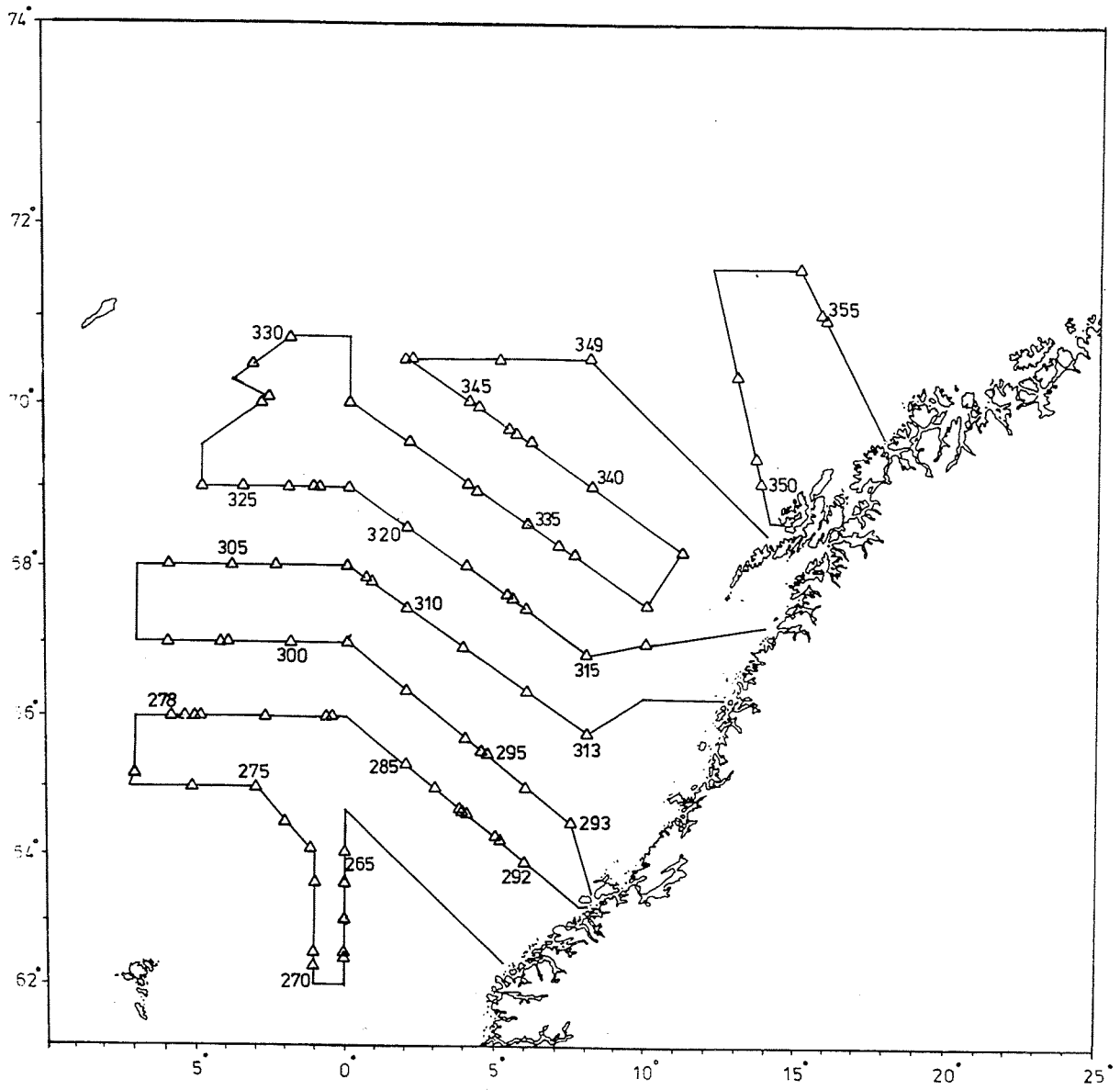
29 Apr - 28 May 1996
 Cruise no 1998007

z CTD st.no 236-333
 • WP2-net
 ∇ MOCNESS st.

"G.O. Sars"

Standard section: Svinøy NW st.no 236-250

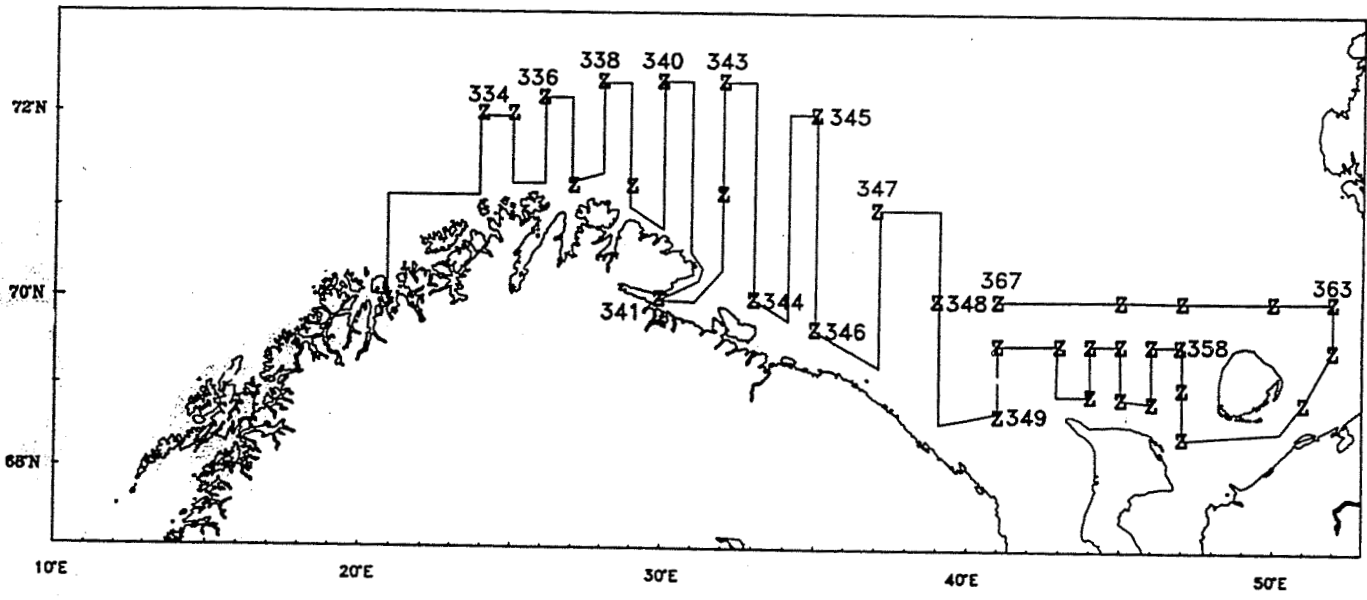
Gimsøy NW: st.no 319-329



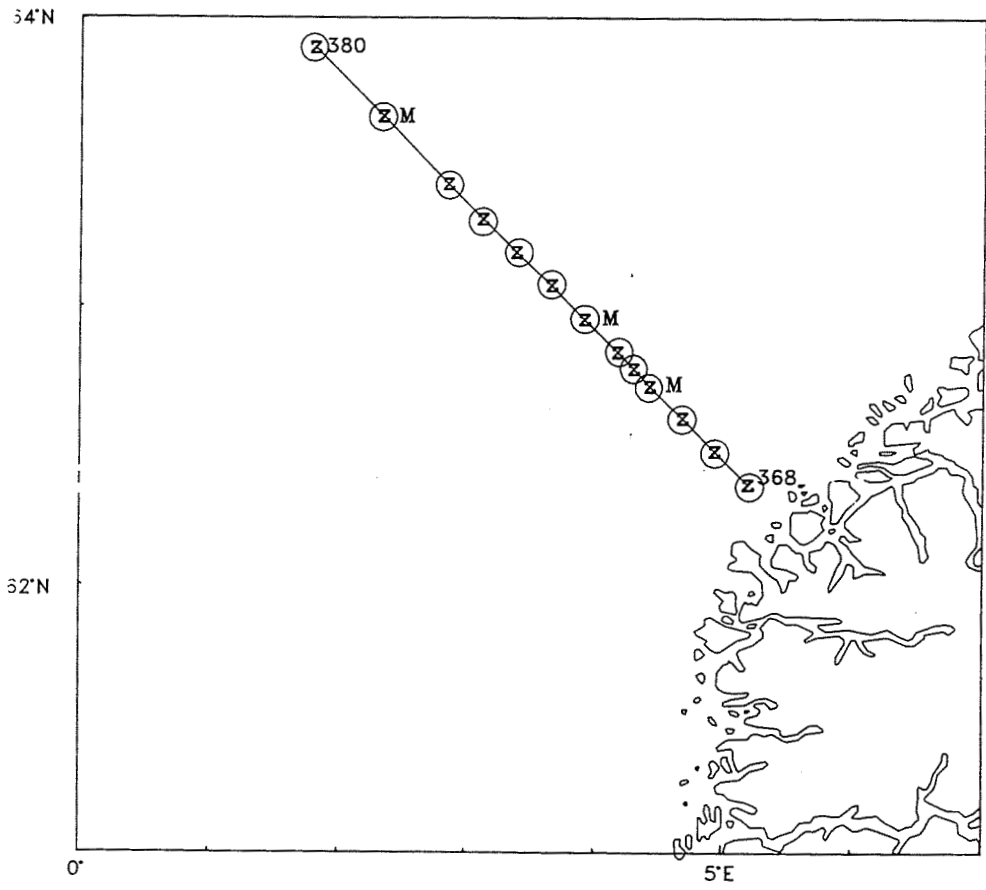
29 Apr - 28 May 1996
Cruise no 1998007

△ Pel. TRAWL st.no 265-355

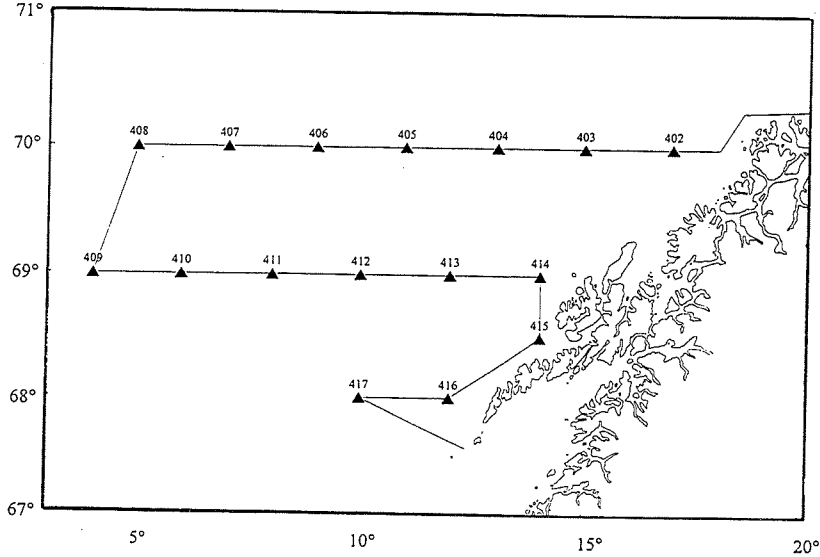
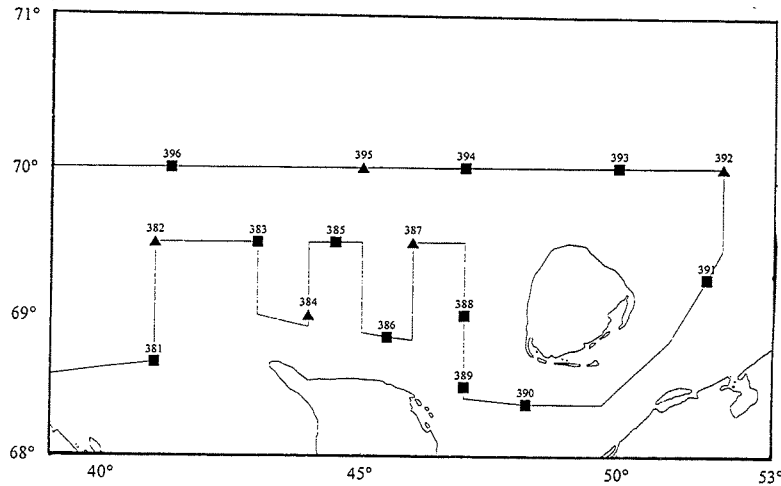
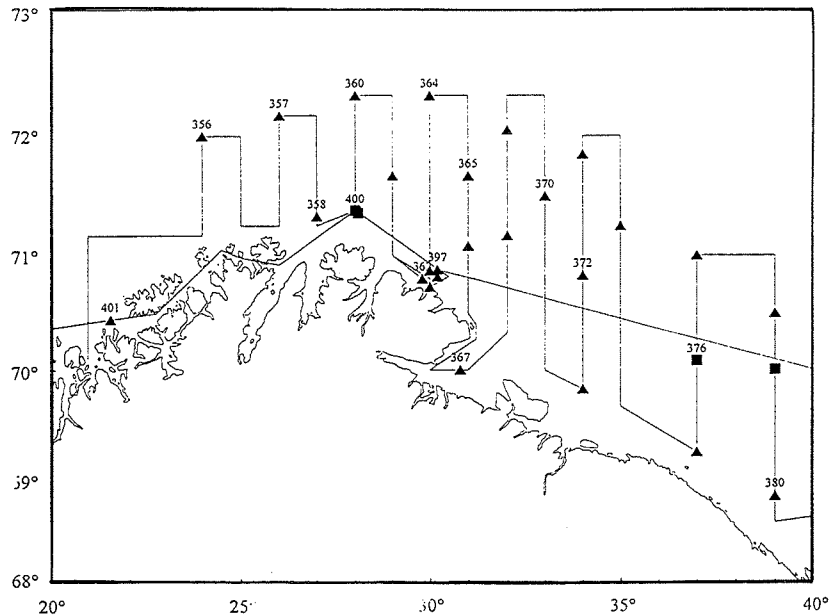
"G.O. Sars"



30 May - 20 Jun 1996 (I part) z CTD st.no 334-367 "G.O.Sars"
 Cruise no 1996008



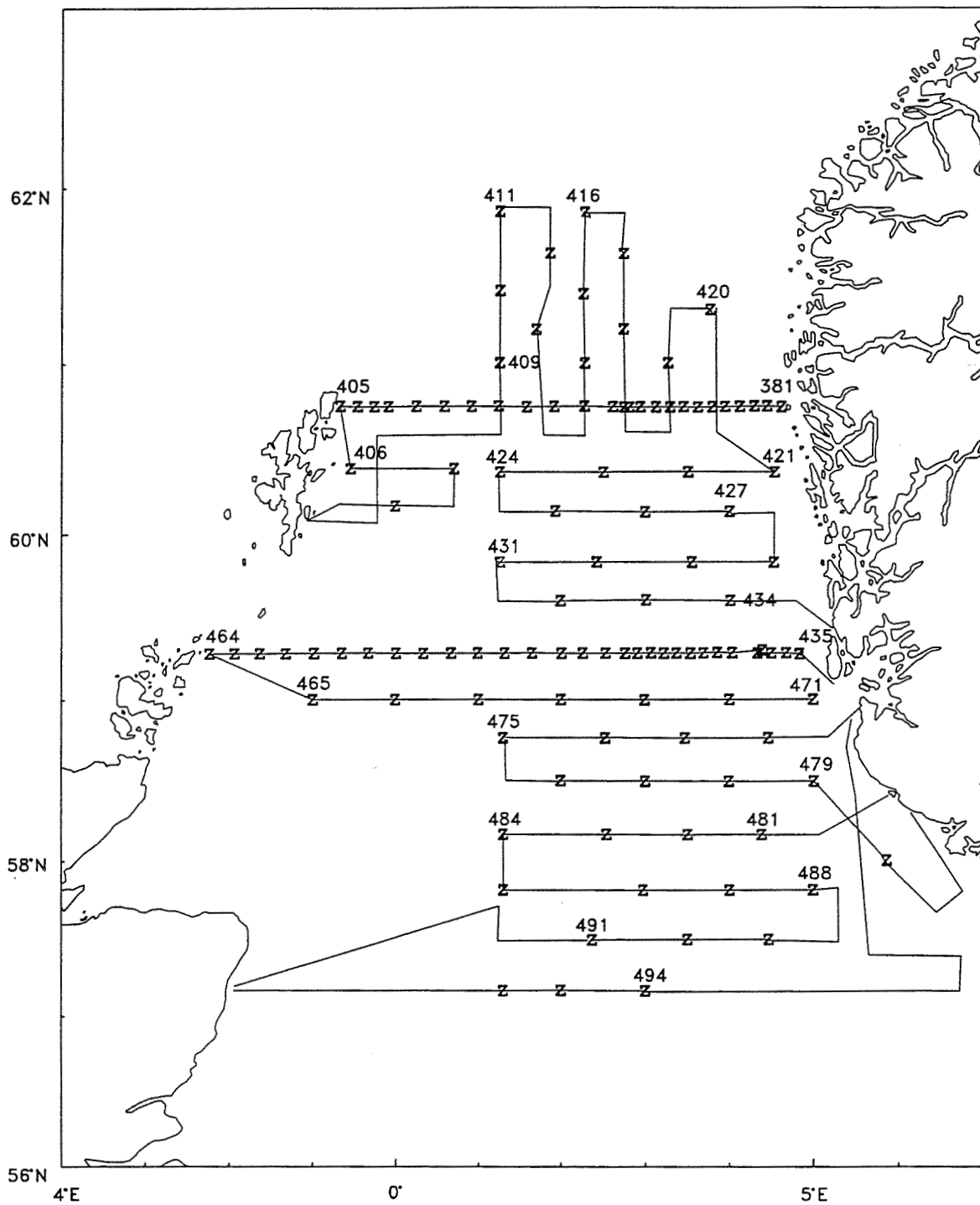
21 - 24 Jun 1996 Part II (Z) CTD and PLANKTON (WPII-net) st.no 368-380
 M Mocness st. "G.O.Sars"
 Cruise no 1996008
 Standard section Svinøy NW



30 May - 24 Jun 1996
Cruise no 1996008

TRAWL st.no 356-417
▲ Pel. trawl
■ Bottom trawl

"G.O.Sars"



25 Jun - 14 Jul 1996

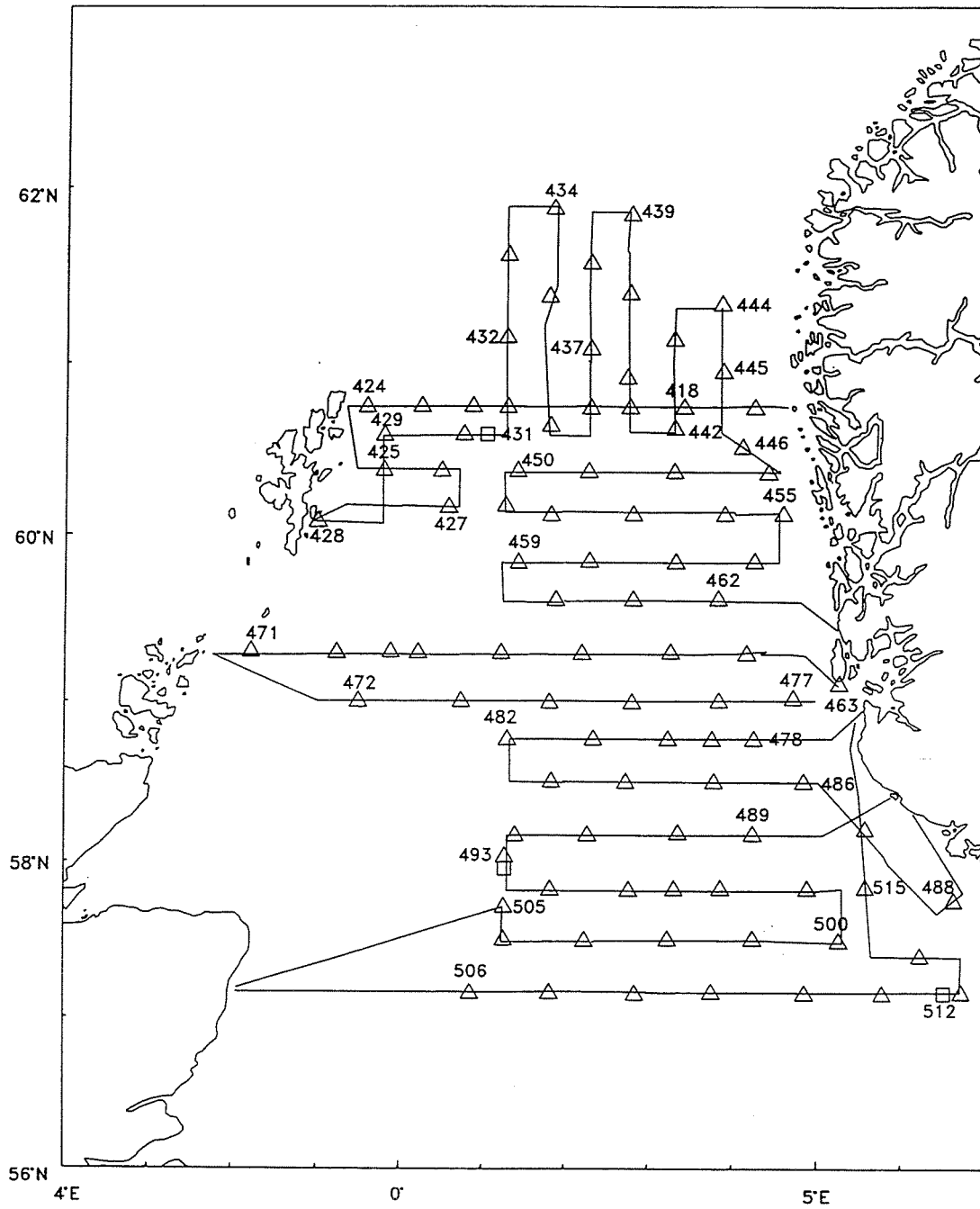
z CTD st.no 381-494

"G.O.Sars"

Cruise no 1996009

Standard section: Feie - Shetland st.no 381-405

Utsira - Start Point st.no 435-464



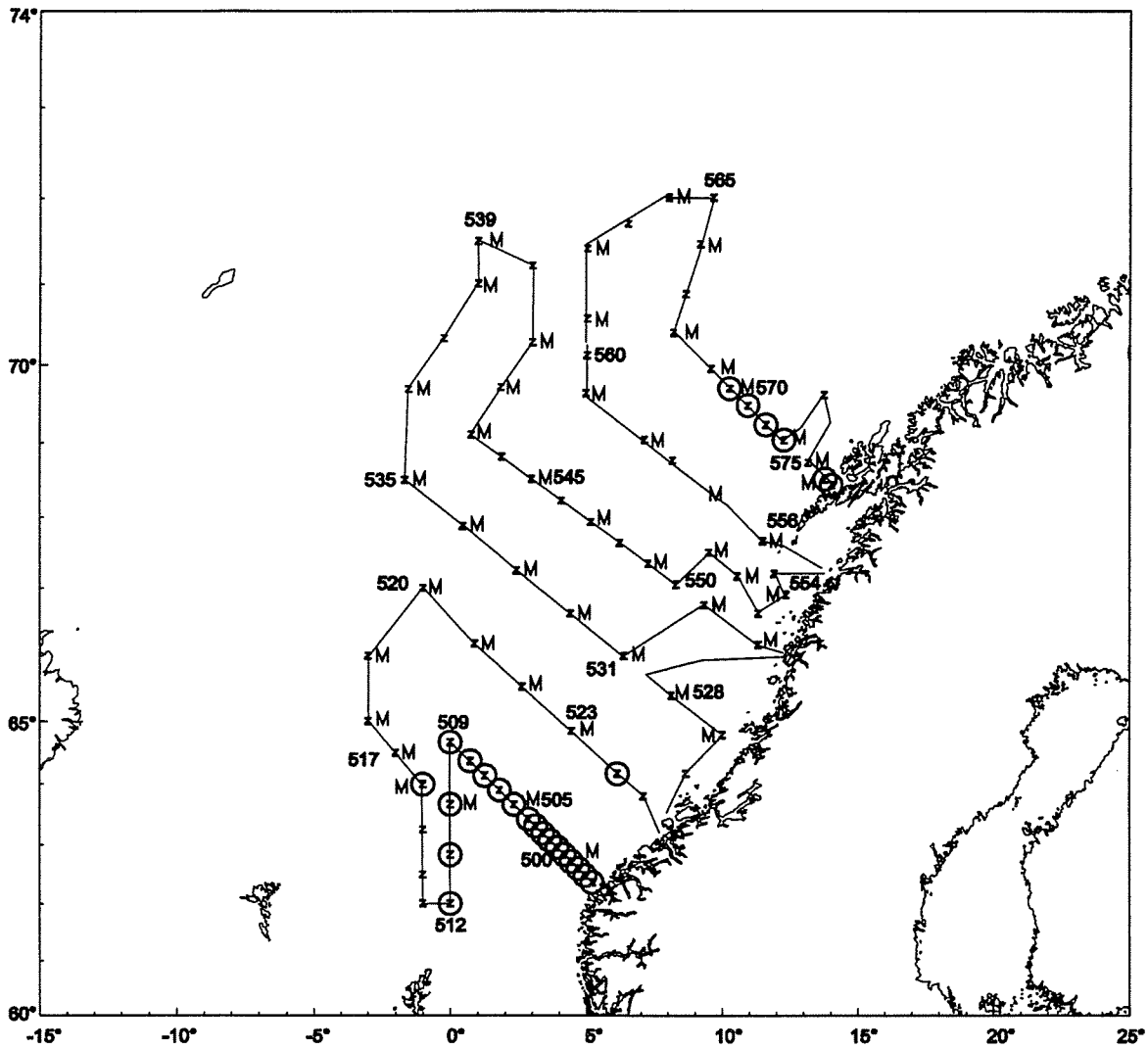
25 Jun - 14 Jul 1996 □△TRAWL st.no 418-515

"G.O.Sars"

Cruise no 1996009

△ Pel tr.

□ Bottom tr.



19 Jul 15 Aug 1996

z CTD st.no 495 -577

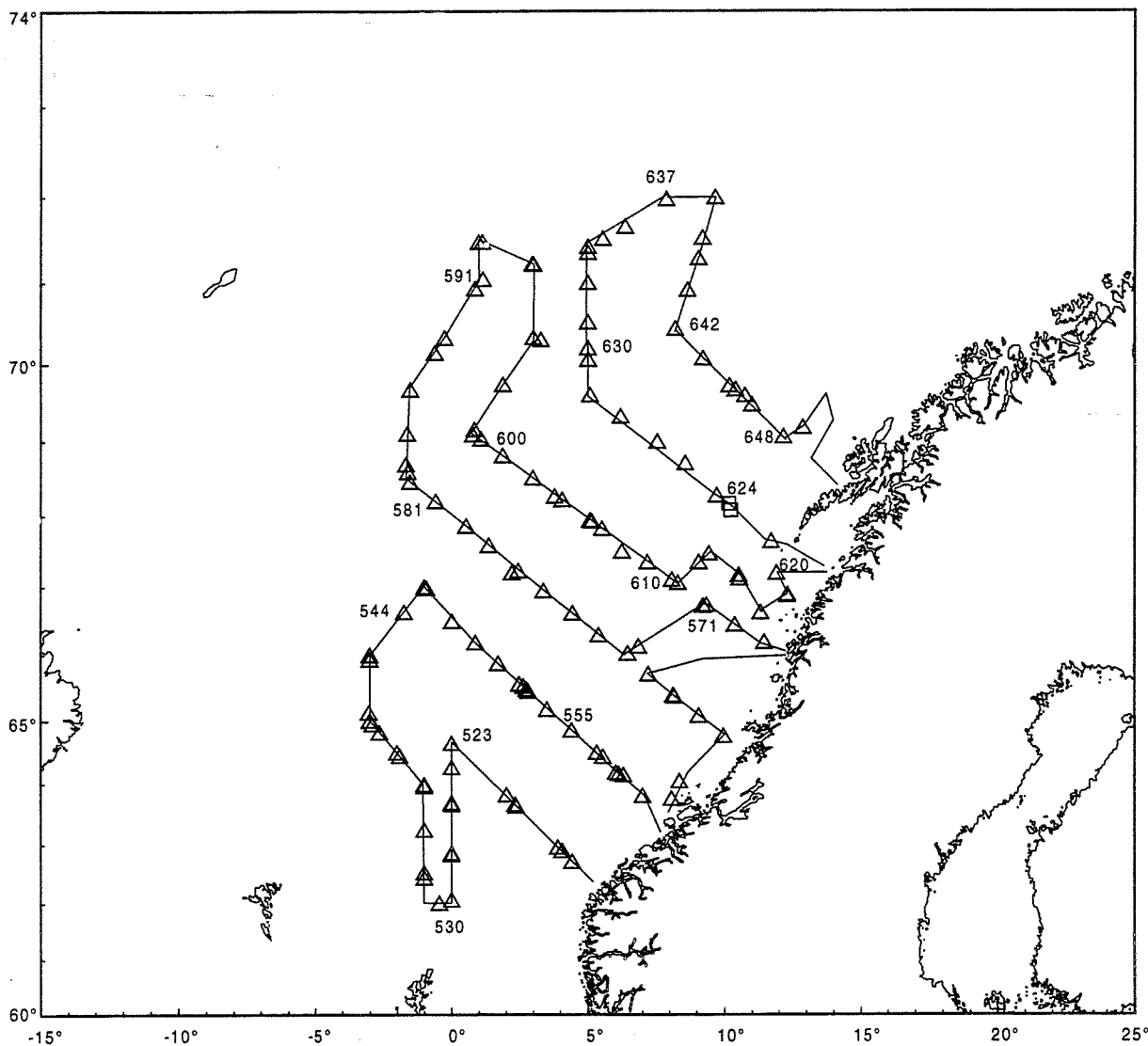
"G.O.Sars"

Cruise no 1996010

ⓐ CTD and PLANKTON st. (WP II-net)

M Mocness st.

Standard section Svinøy NW: st.no 495-509



19 Jul - 15 Aug 1996

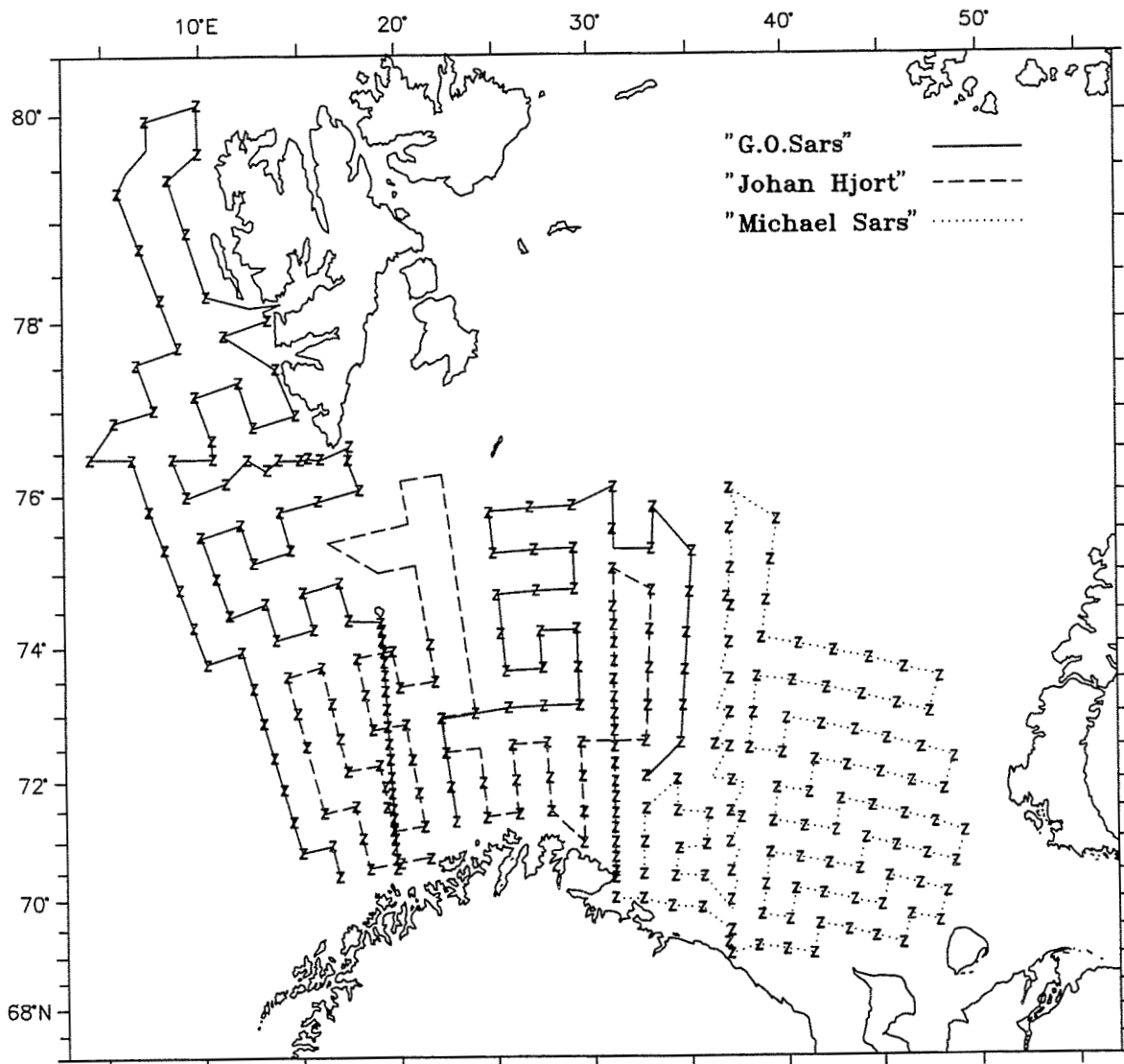
△□ TRAWL st.no 516-649

"G.O.Sars"

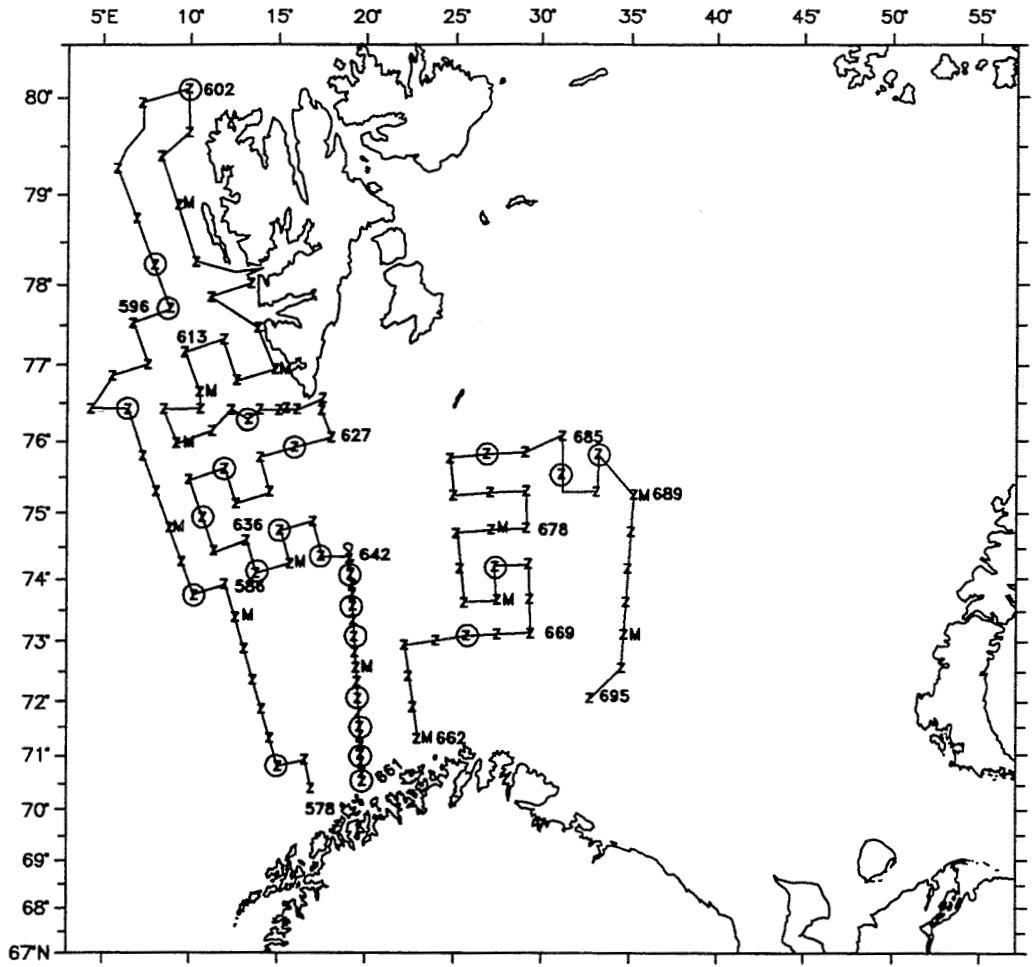
Cruise no 1996010

△ Pel. trawl

□ Bottom trawl



0-group survey overview



17 Aug - 10 Sep 1996

Cruise no 1996902

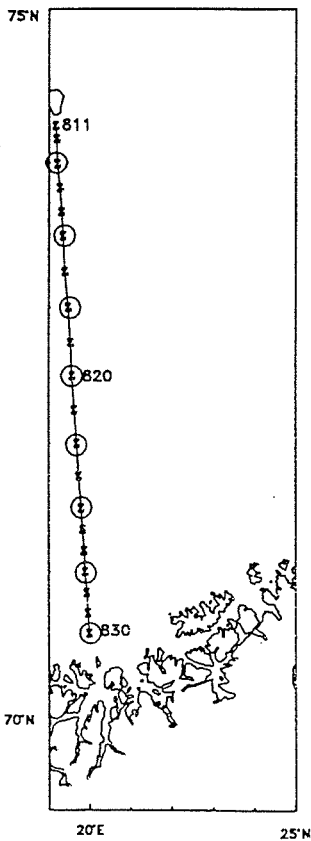
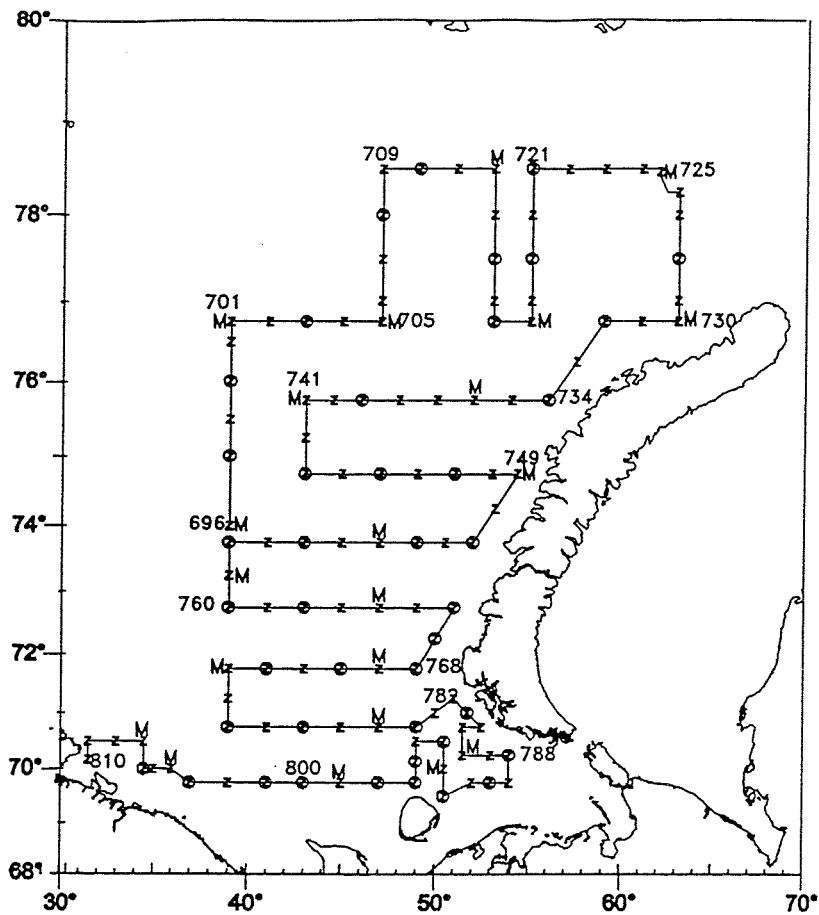
z CTD st.no 578-695 "G.O.Sars"

⊙ CTD and PLANKTON st. (WPII-net)

M Mocness st. (plankton)

Standard section Fugløya-Bear Island: st.no 642-661

Sørkapp: st.no 592-593,615-616,619,621-624,626



Cruise no 1996904

"G.O.Sars"

12 Sep - 2 Oct 1996

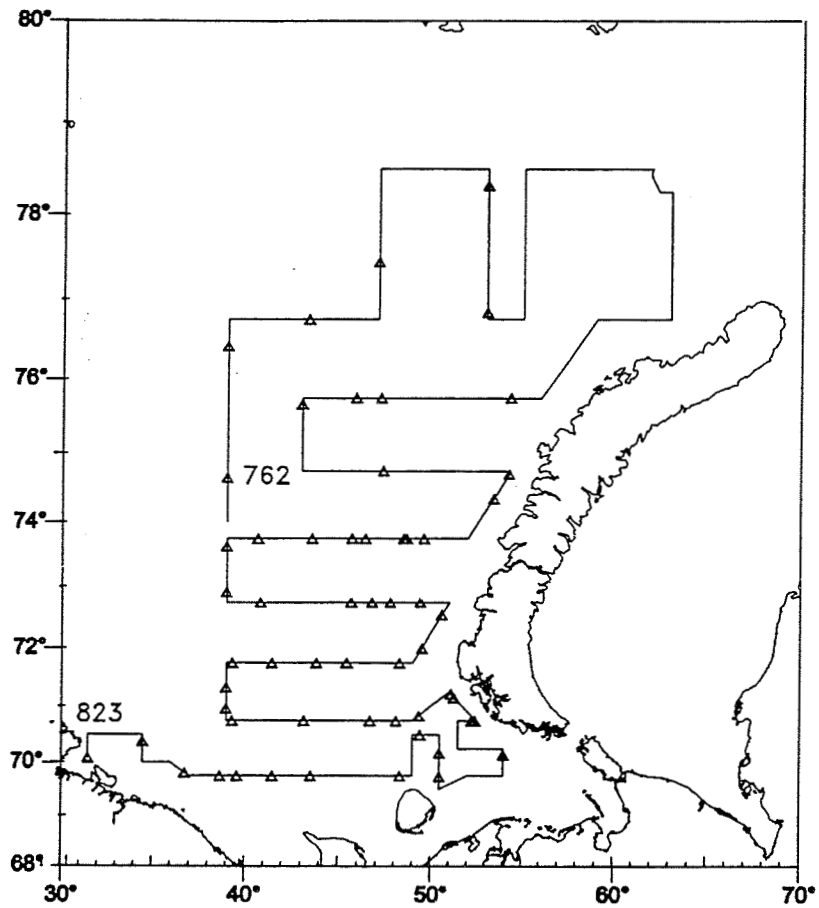
z CTD st.no 696-810

⊙ CTD and PLANKTON (WPII-net)

M MOCNESS st.

3-5 Oct 1996

Standard section Fugløya-Bjørnøya st.no 811-830

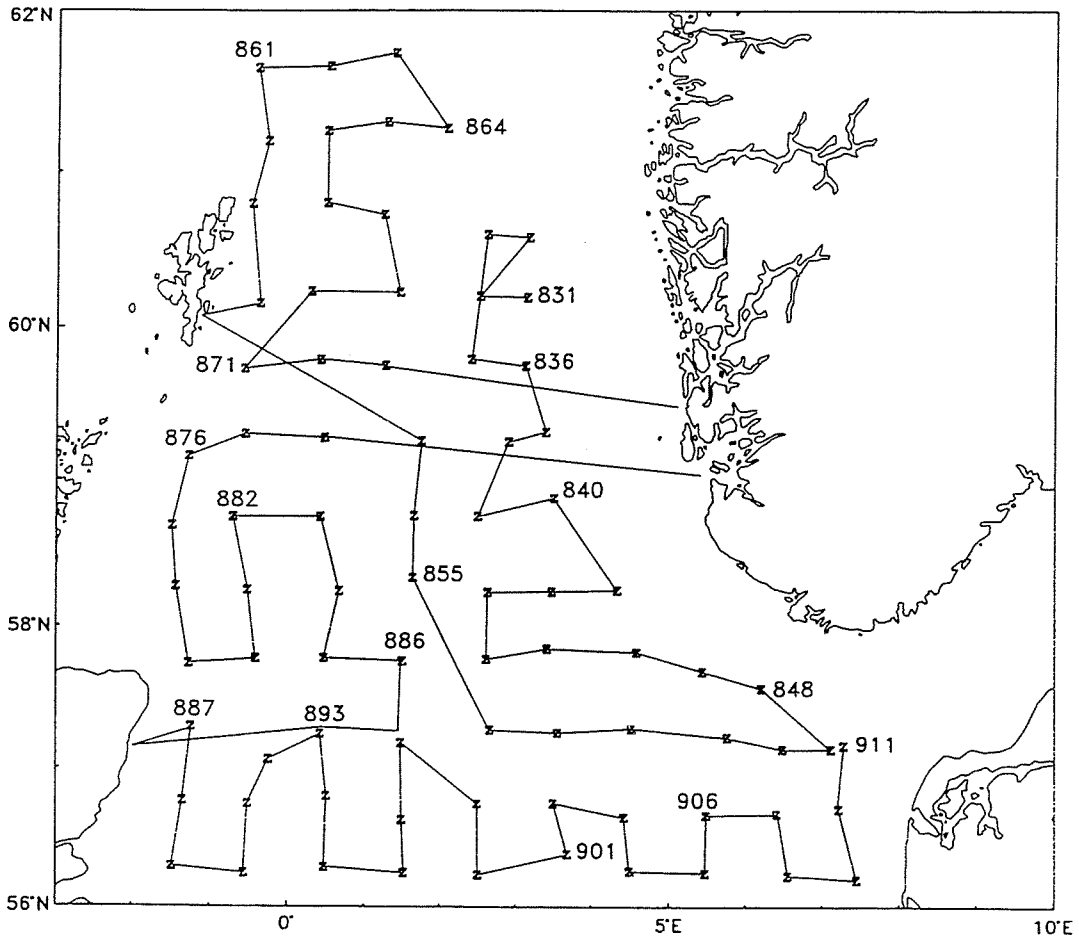


12 Sep - 2 Oct 1996

"G.O.Sars"

△ Pel. TRAWL st.no 762-823

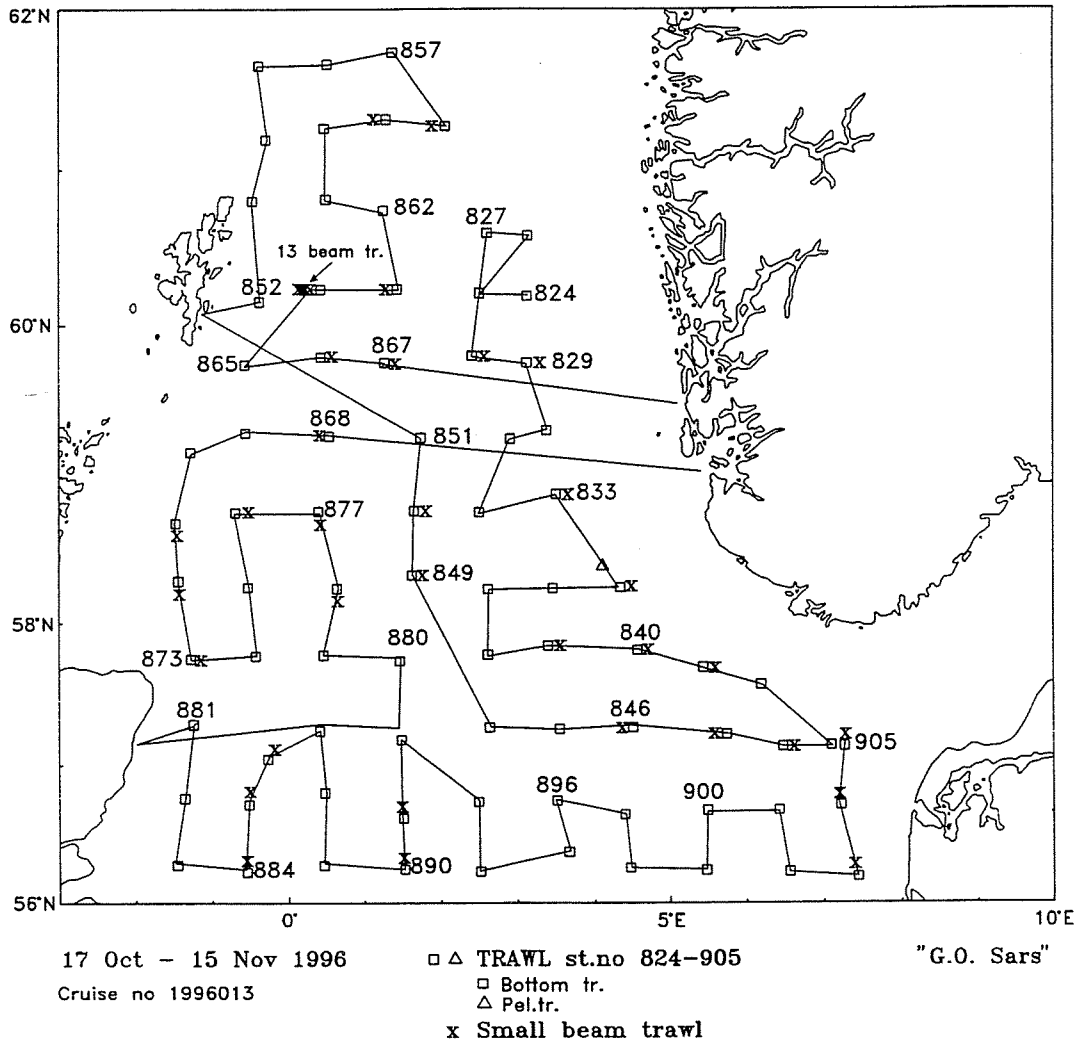
Cruise no 1996904

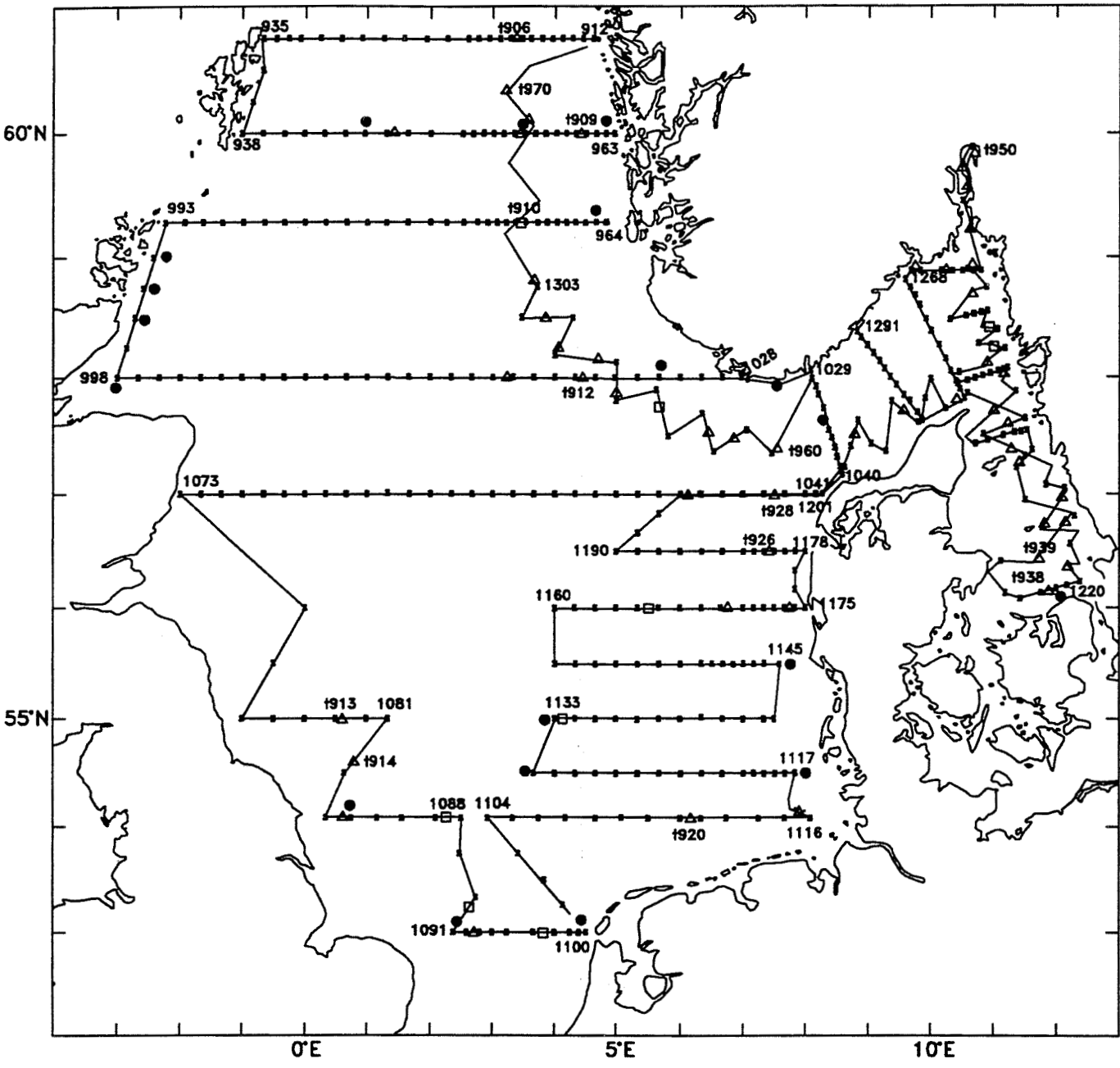


17 Oct - 15 Nov 1996
Cruise no 1996013

z CTD st.no 831-911

"G.O. Sars"





19 Nov - 18 Dec 1996

z CTD st.no 912-1303

"G.O.Sars"

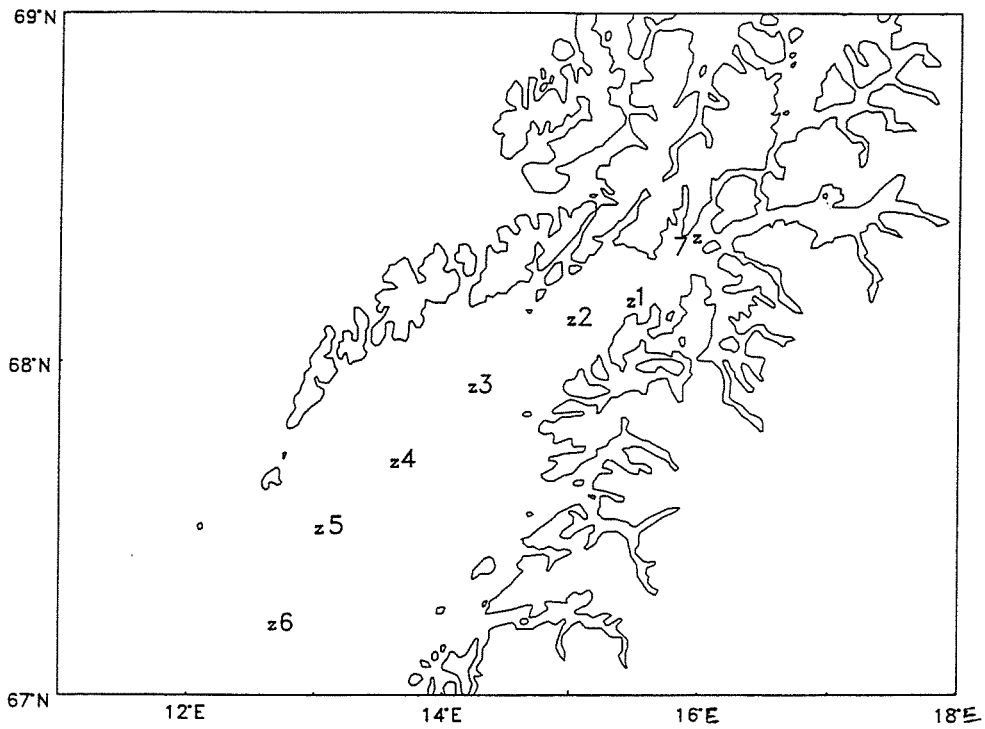
Cruise no 1996014

△□ TRAWL st.no 906-960

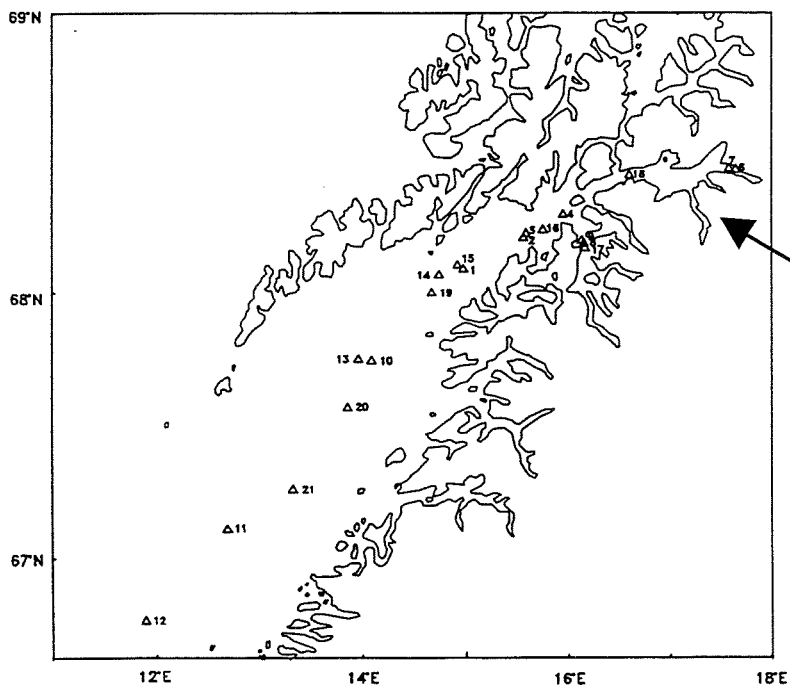
△ Pel. trawl
 □ Bottom trawl

● Grab st.

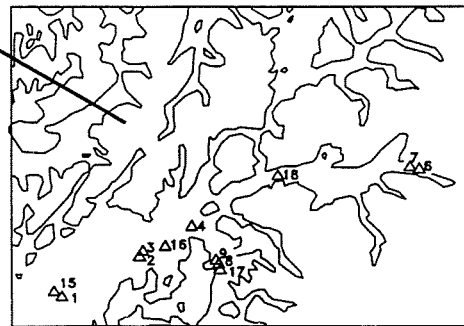
Standard section : Feie - Shetland: st.no 912-935
 Utsira - Start Point: st.no 964-993
 Hanstholm - Aberdeen: st.no 1041-1073
 Okse - Hanstholmen: st.no 1029-1040

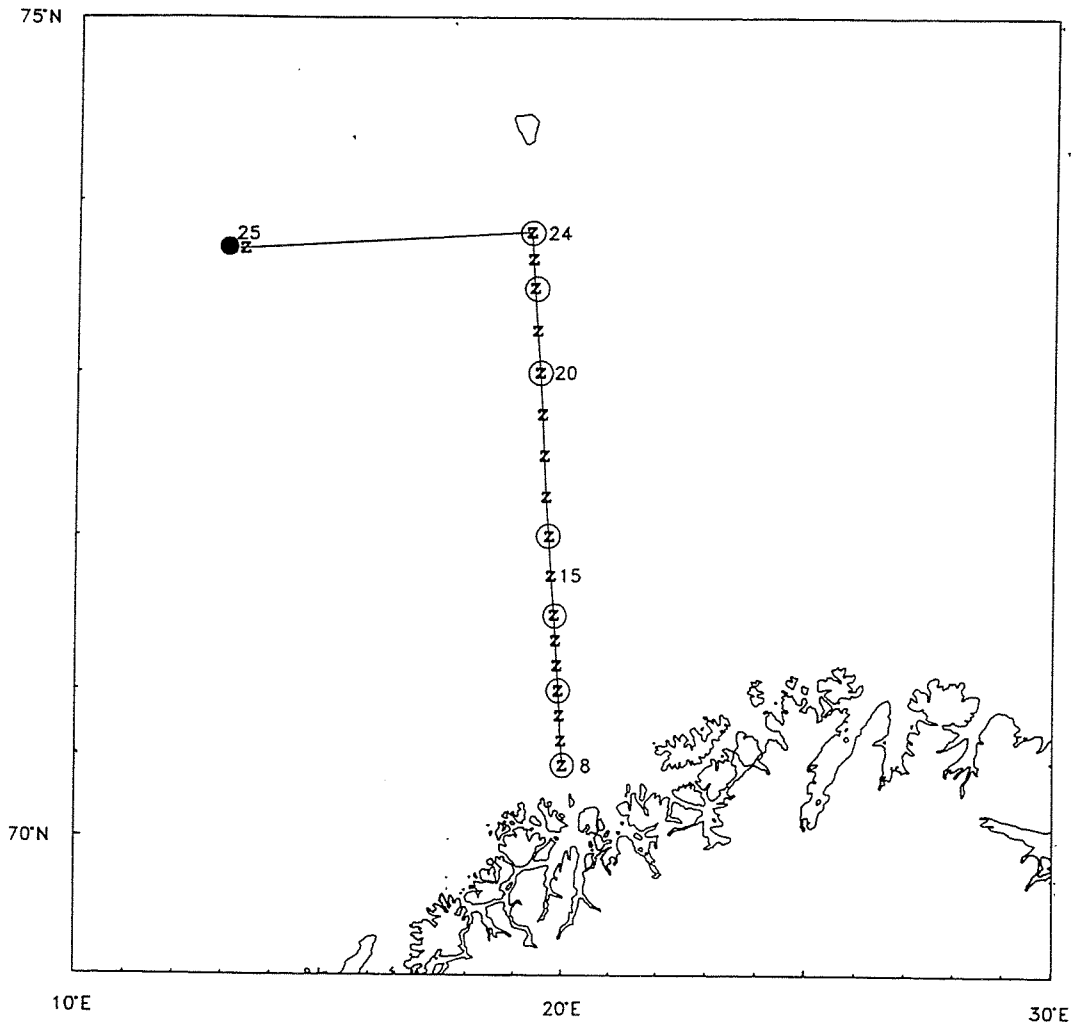


15 - 29 Jan 1996 z CTD st.no 1-7 "J. Hjort"
 (Cruise no 1996201)



15 - 29 Jan 1996 Δ TRAWL (pel.tr) st.no 1-21 "Johan Hjort"
 (Cruise no 1996201)





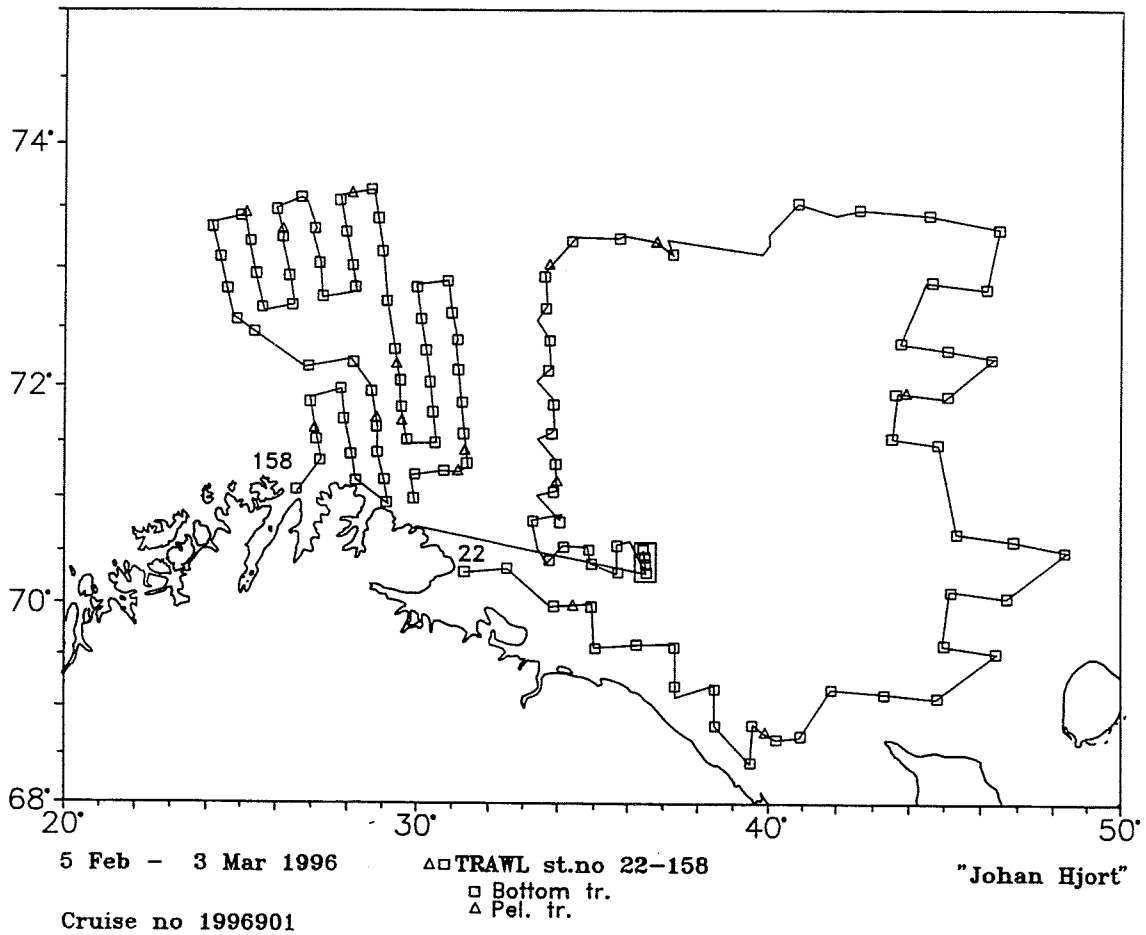
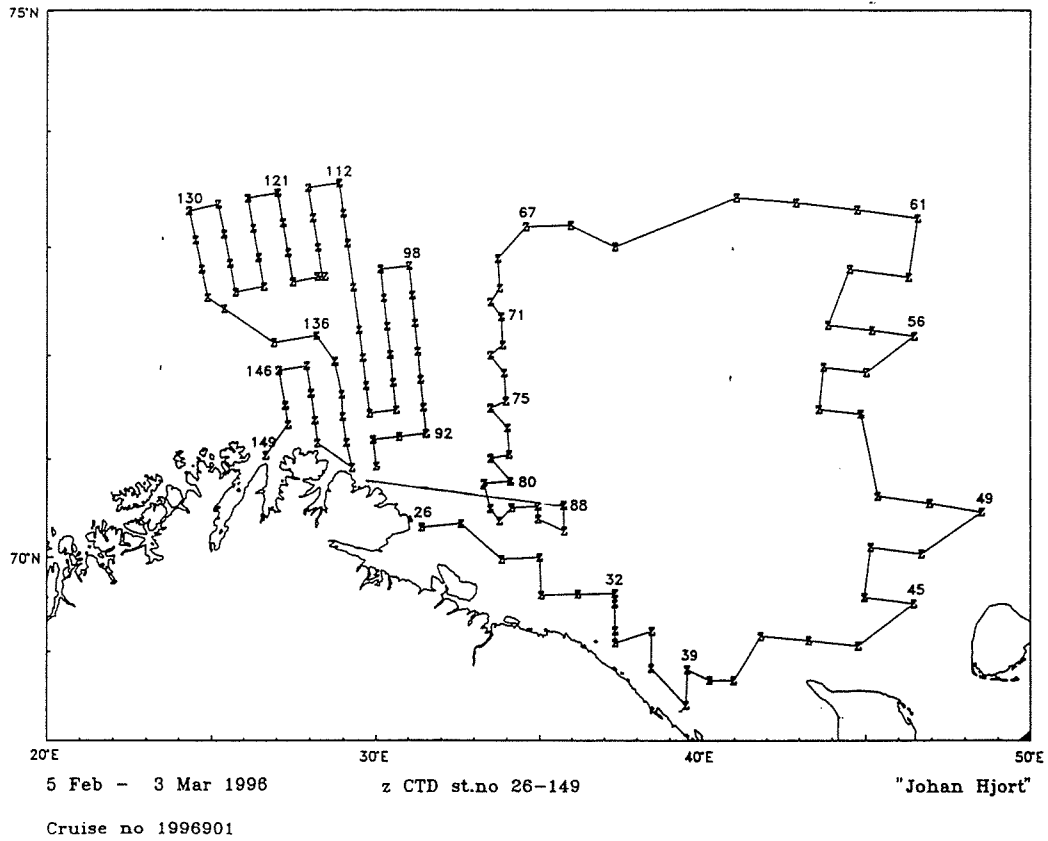
31 Jan - 5 Feb 1996 z CTD st.no 8 - 25 "J. Hjort"

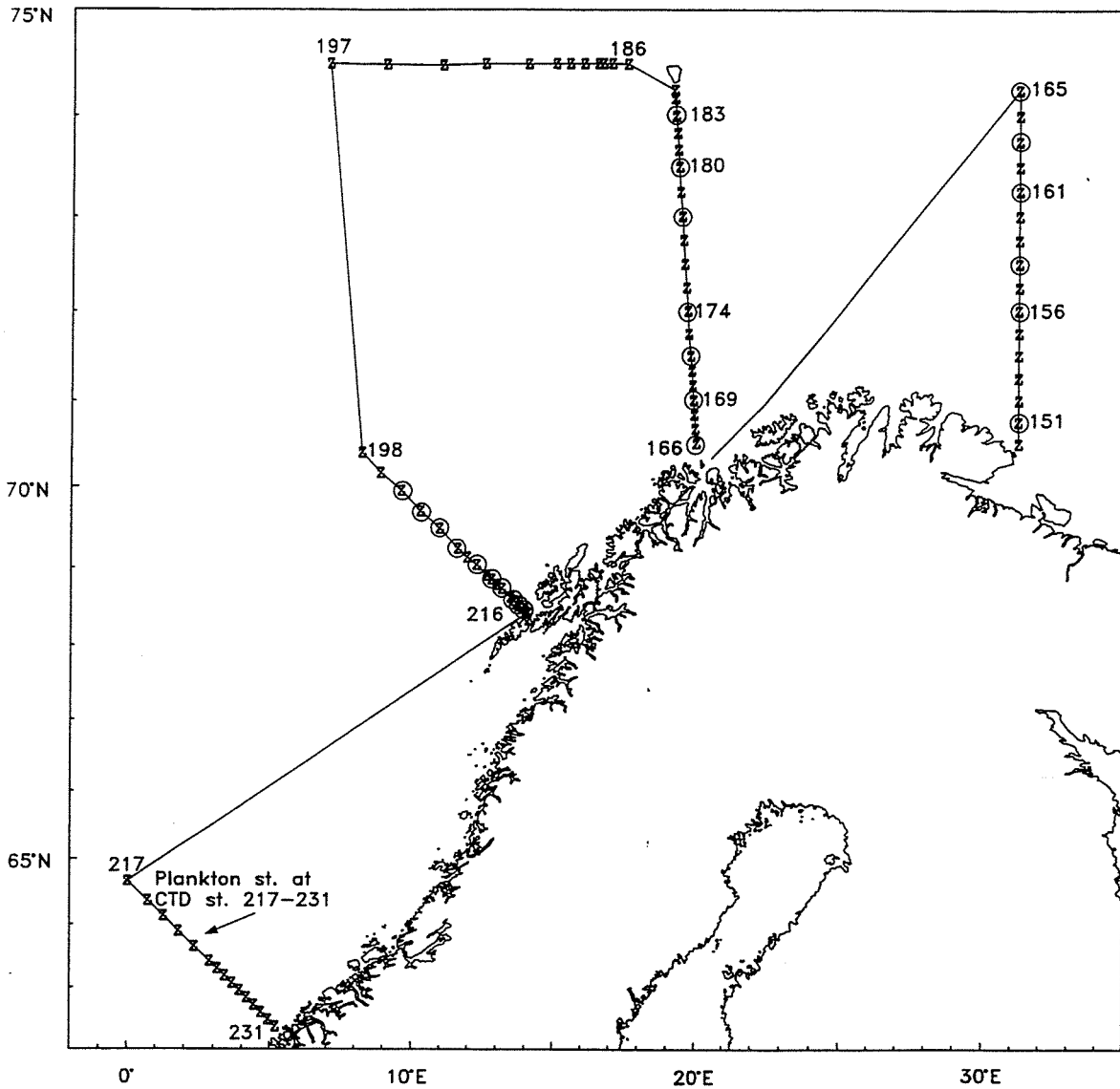
Cruise no 1996202

⊙ CTD and PLANKTON st.

● Sediment sample (grab)

Standard section: Fugløya - Bear Isl. st.no 8-24



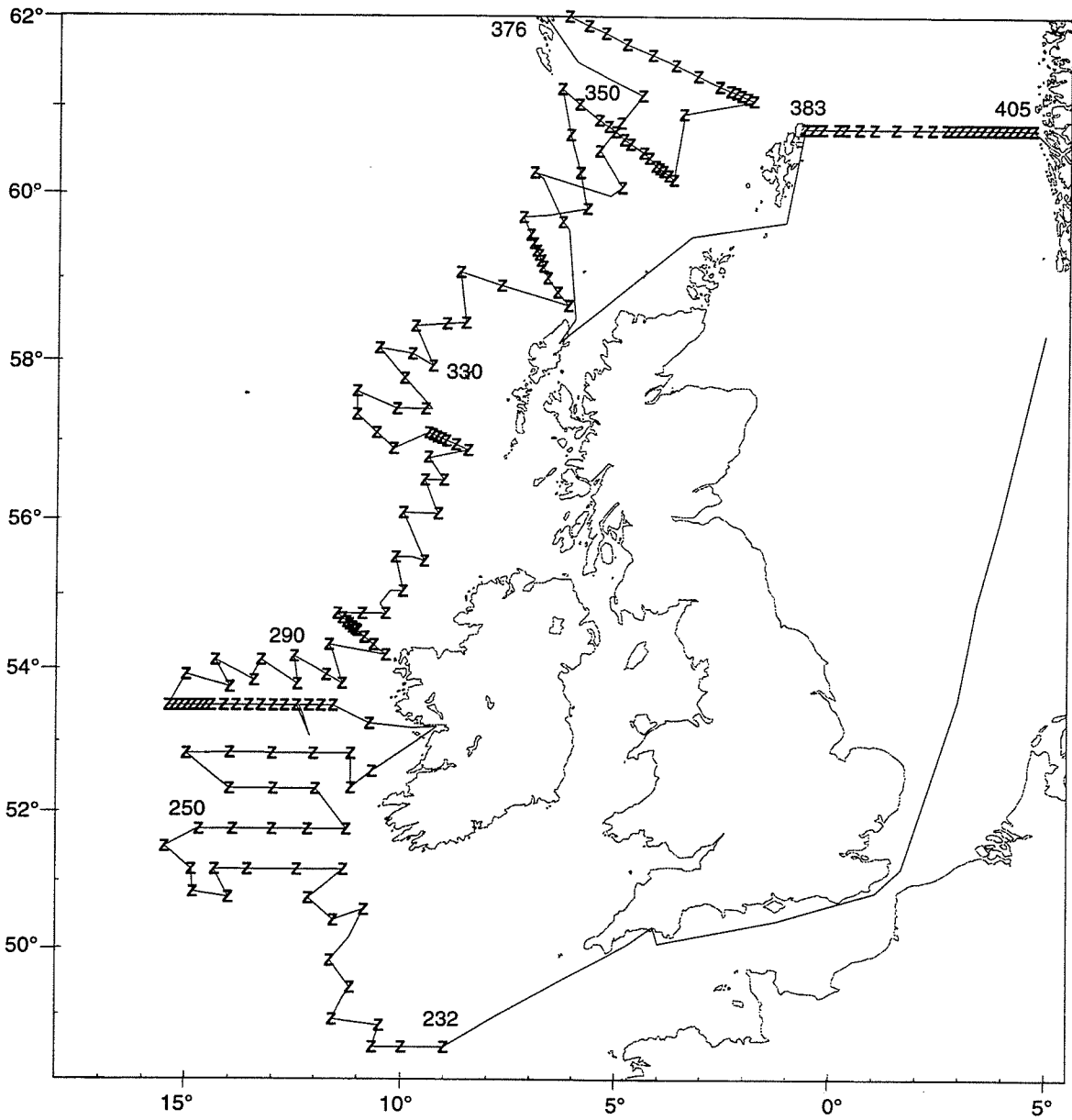


5- 18 Mar 1996
 Cruise no 1996204

z CTD st.no 150-231
 ⊗ CTD and PLANKTON st. (Wp-2 net)

"Johan Hjort"

Standard section: Vardø N: st.no 150-165
 Fugløya-Bear Island: st.no 166-185
 Bear Island W: st.no 186-197
 Gimsøy NW: st.no 198-216
 Svinøy NW: st.no 217-231



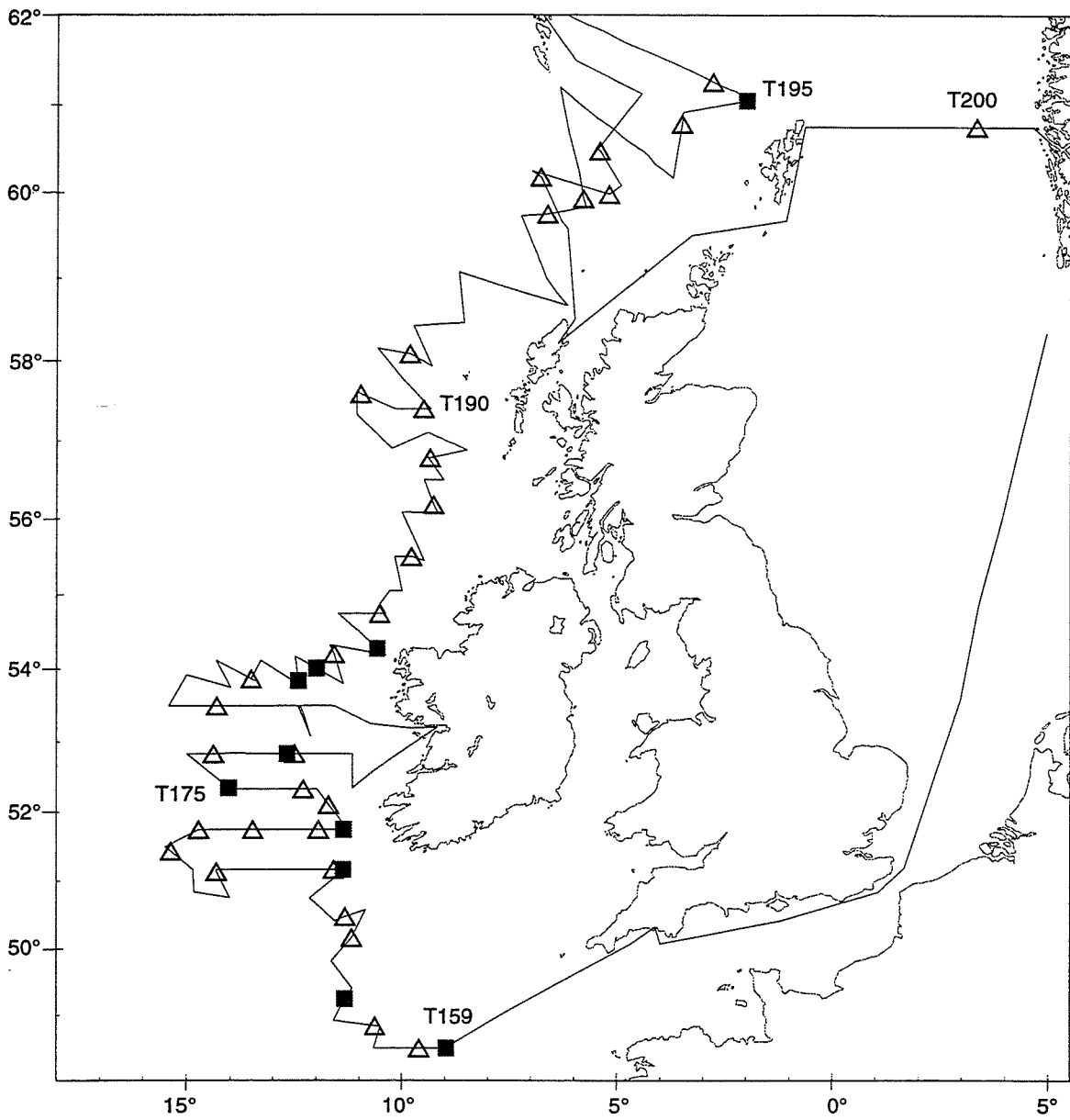
20 Mar - 22 Apr 1996

z CTD st.no 232-405

"J. Hjort"

Cruise no 1996205

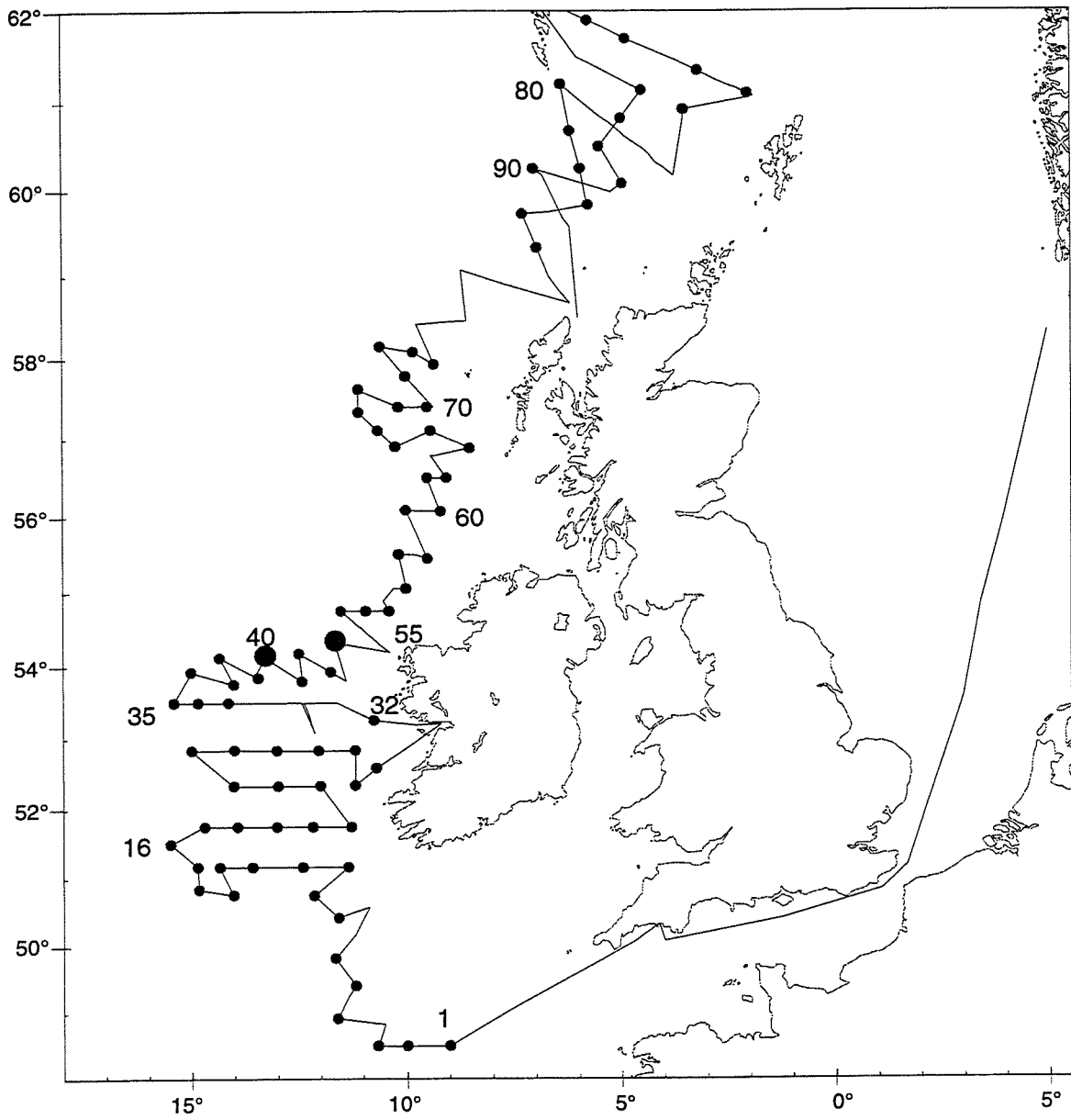
Standard section Feie-Shetland: st.no 383-405



20 Mar - 22 Apr 1996
 Cruise no 1996205

■ TRAWL st.no 159-200
 ■ Bottom tr.
 △ Pel tr.

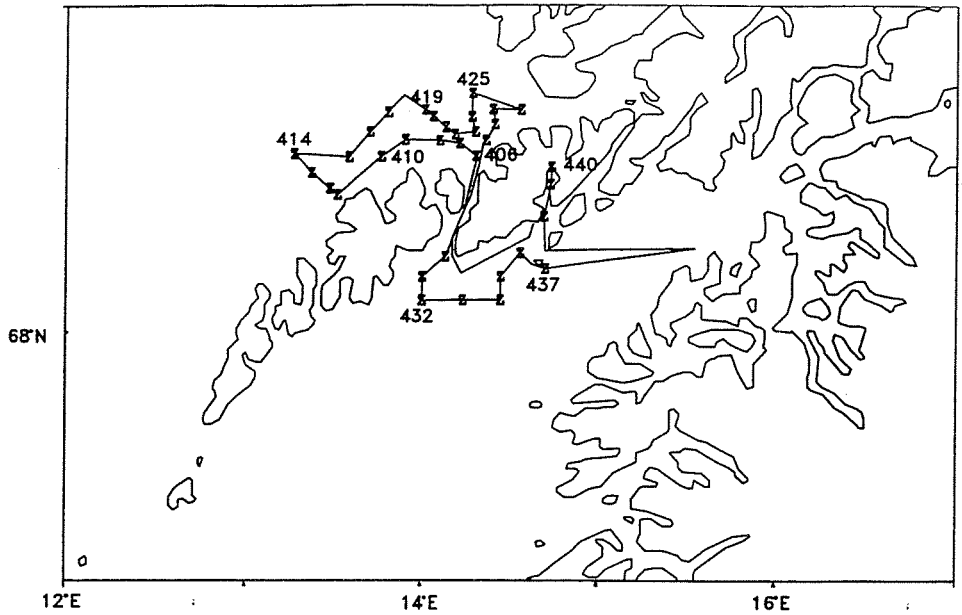
"J. Hjort"



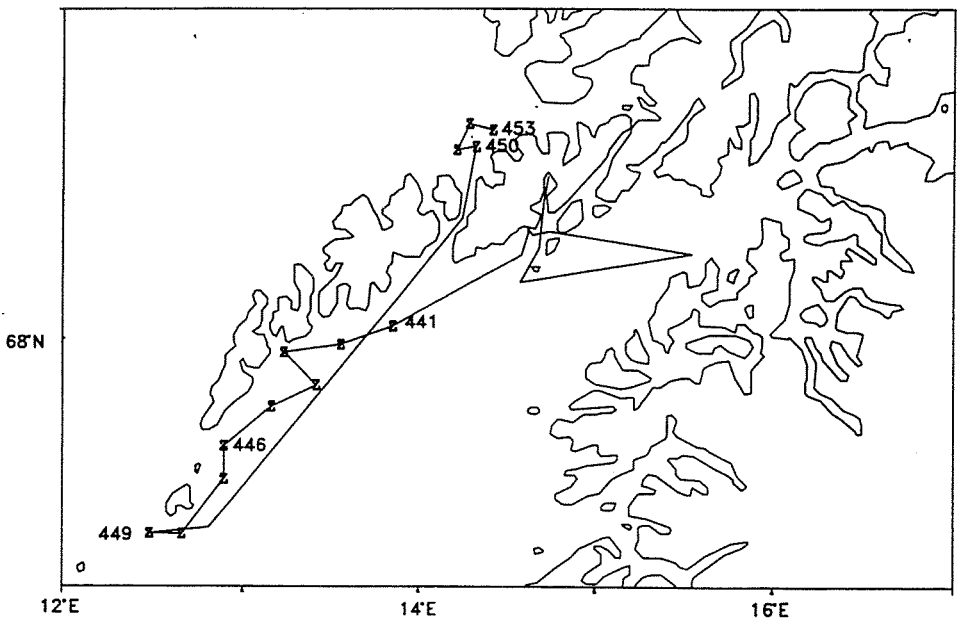
20 Mar - 22 Apr 1996 ● Bongo stations

"J. Hjort"

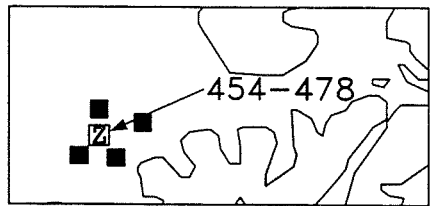
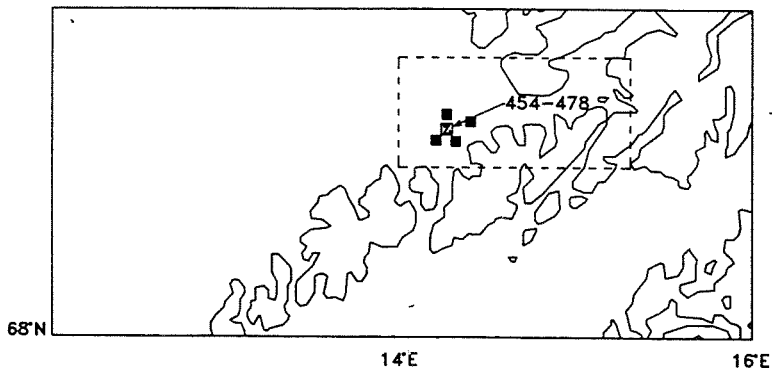
Cruise no 1996205



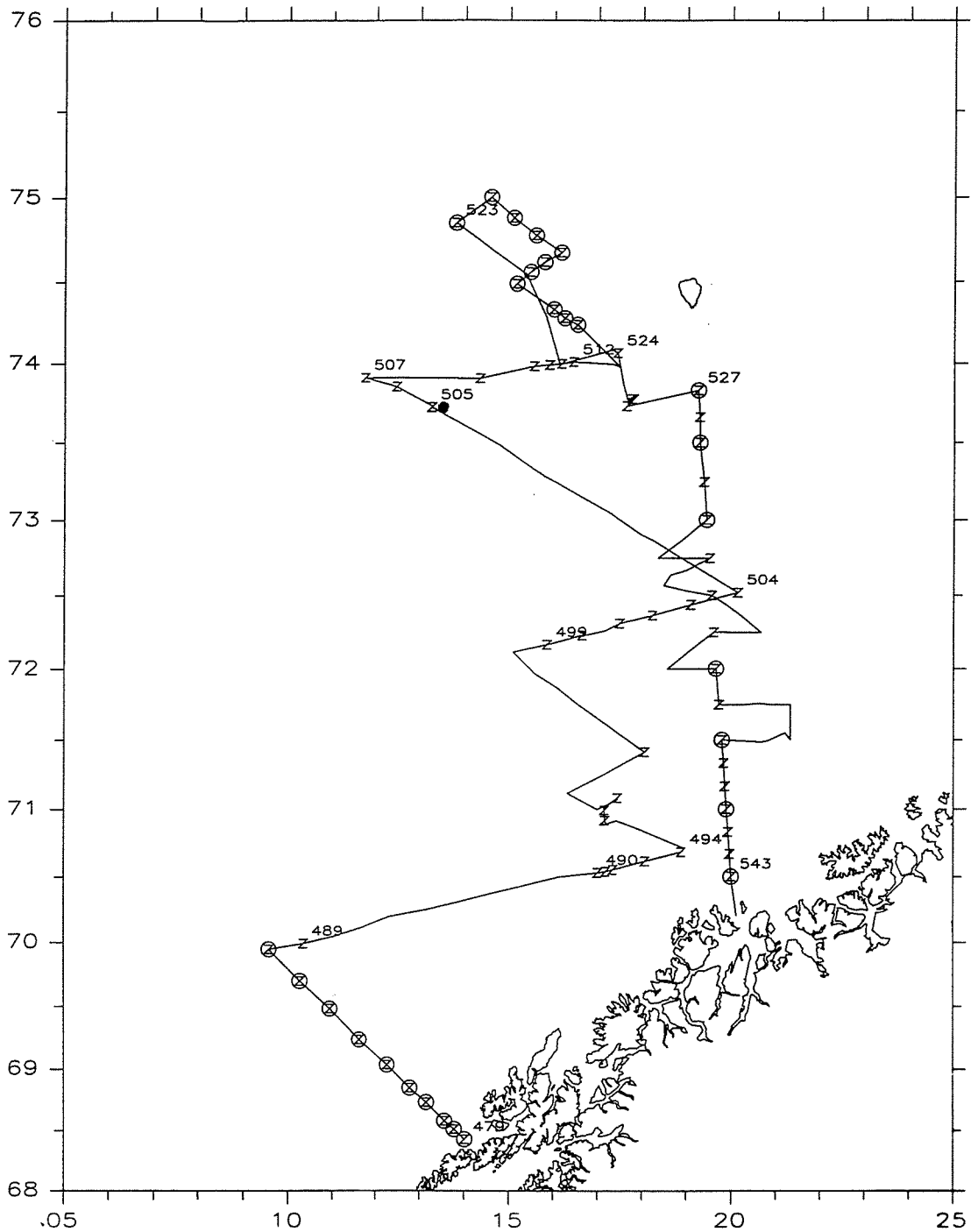
26 Apr-3 May 1996 PART I 26-28.4.96 z CTD and PLANKTON st. "Johan Hjort"
Cruise no 1996206 (Juday net) st.no 406-440



PART II: 28.4.-3.5.96 z CTD and PLANKTON st.
(Juday net) st.no 441-453



- Current meter
- ▣ Anchorstation: Ctd st.no 454-478
Zooplankton pump profiler
Ichtyplankton
Juday net
Current measurement



4 - 19 May 1996
 Cruise no 1996107

Z CTD st.no 479-543

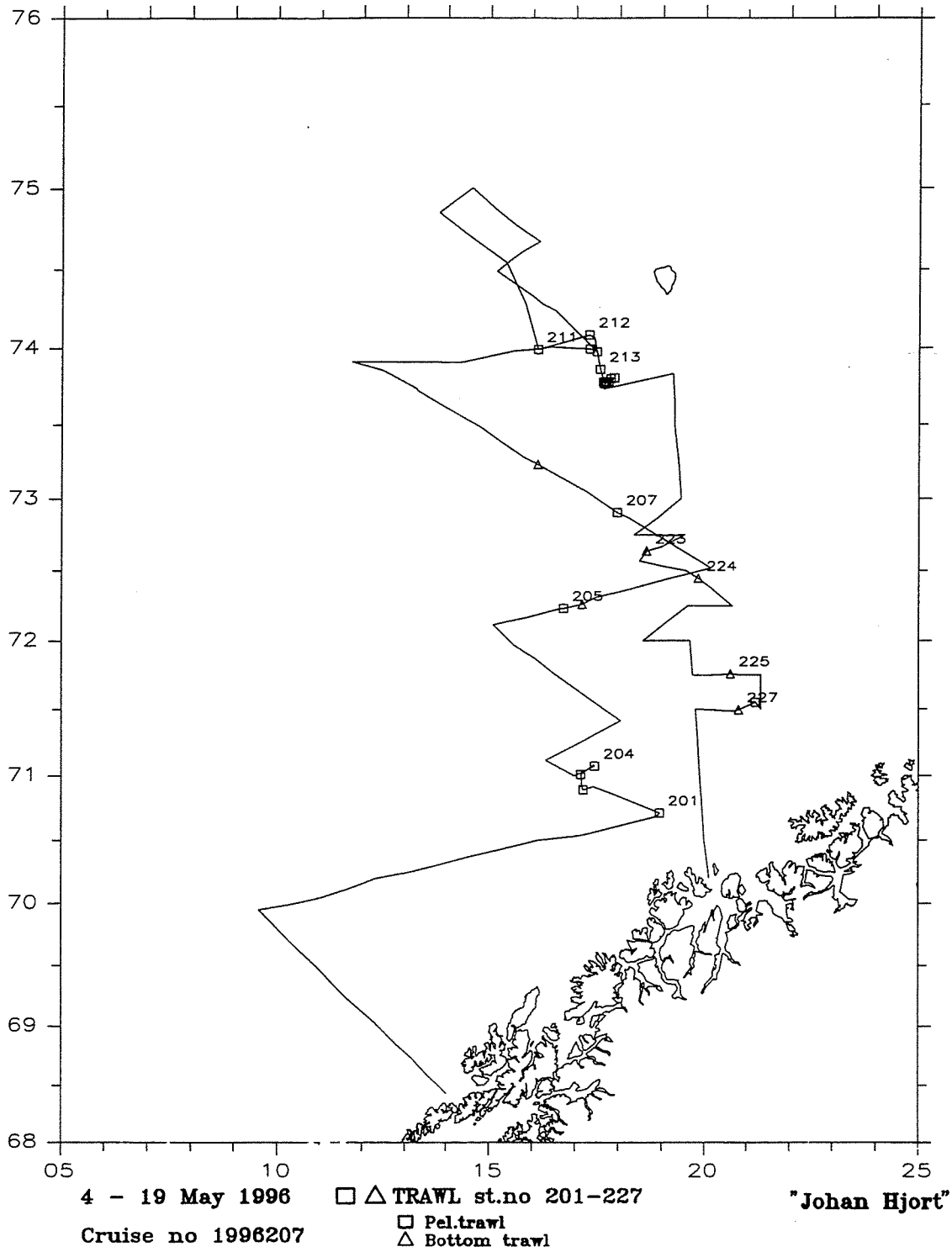
"Johan Hjort"

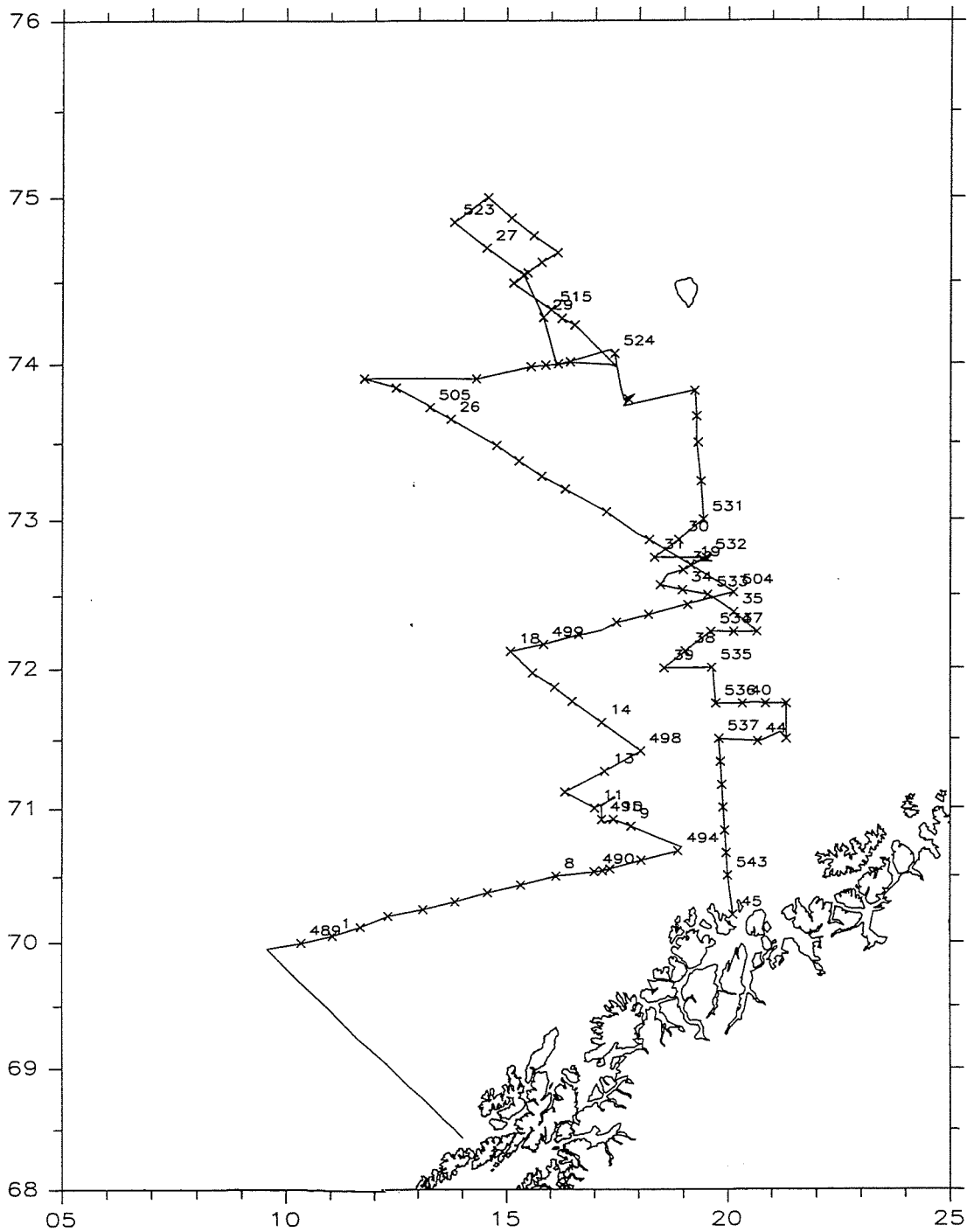
⊗ CTD and Plankton st. (WP-2net)

● 3 Grab st. (sediment)

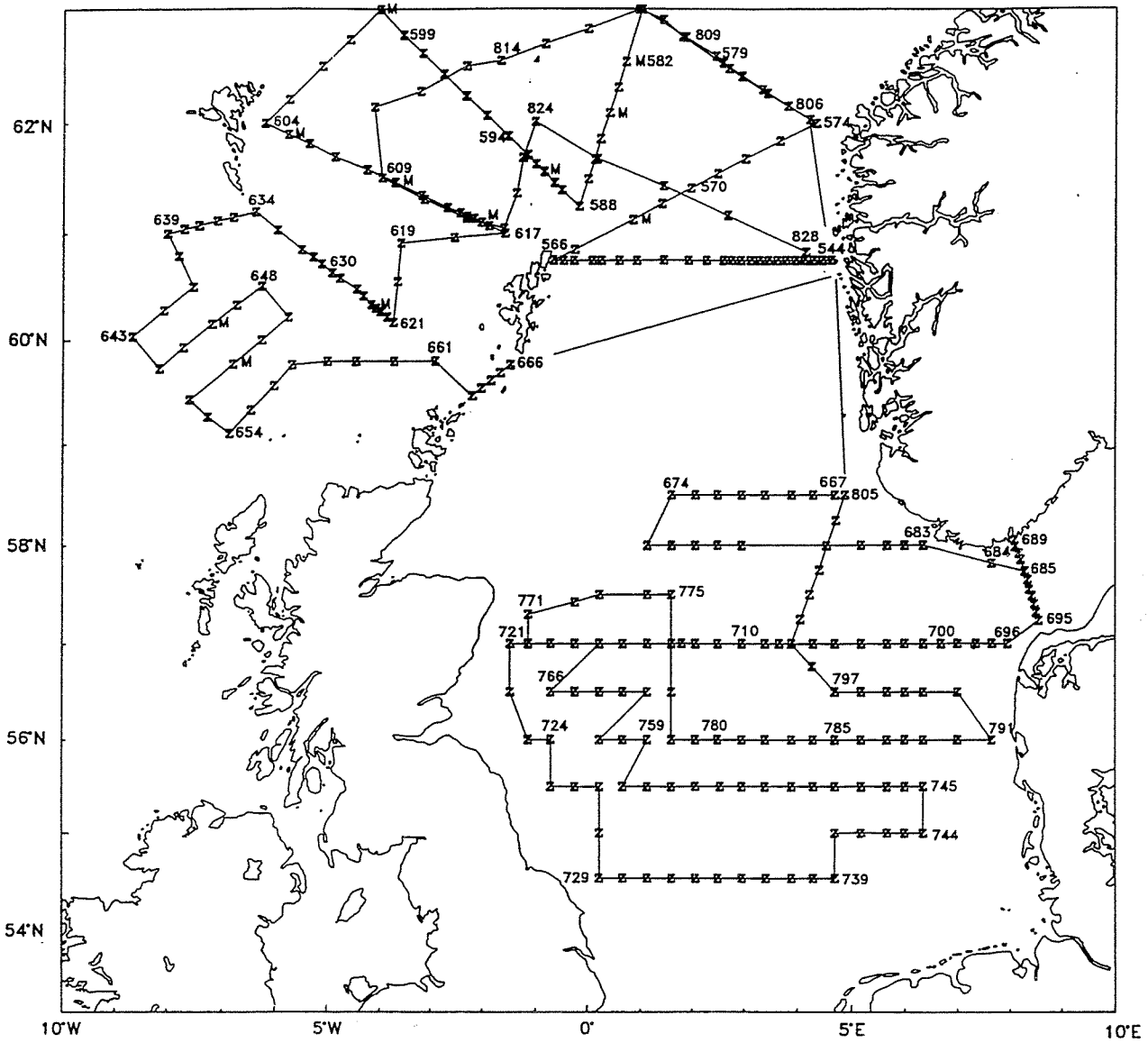
Standard section Fugløya - Bear Island: st.no 527-543

Gimsøy NW: st.no 479-488





4 - 19 May 1996 x Egg-net (st.1-45 and 489-543) "Johan Hjort"
 Cruise no 1996207



4 Jun - 7 Jul 1996

z CTD st.no 544-828

"Johan Hjort"

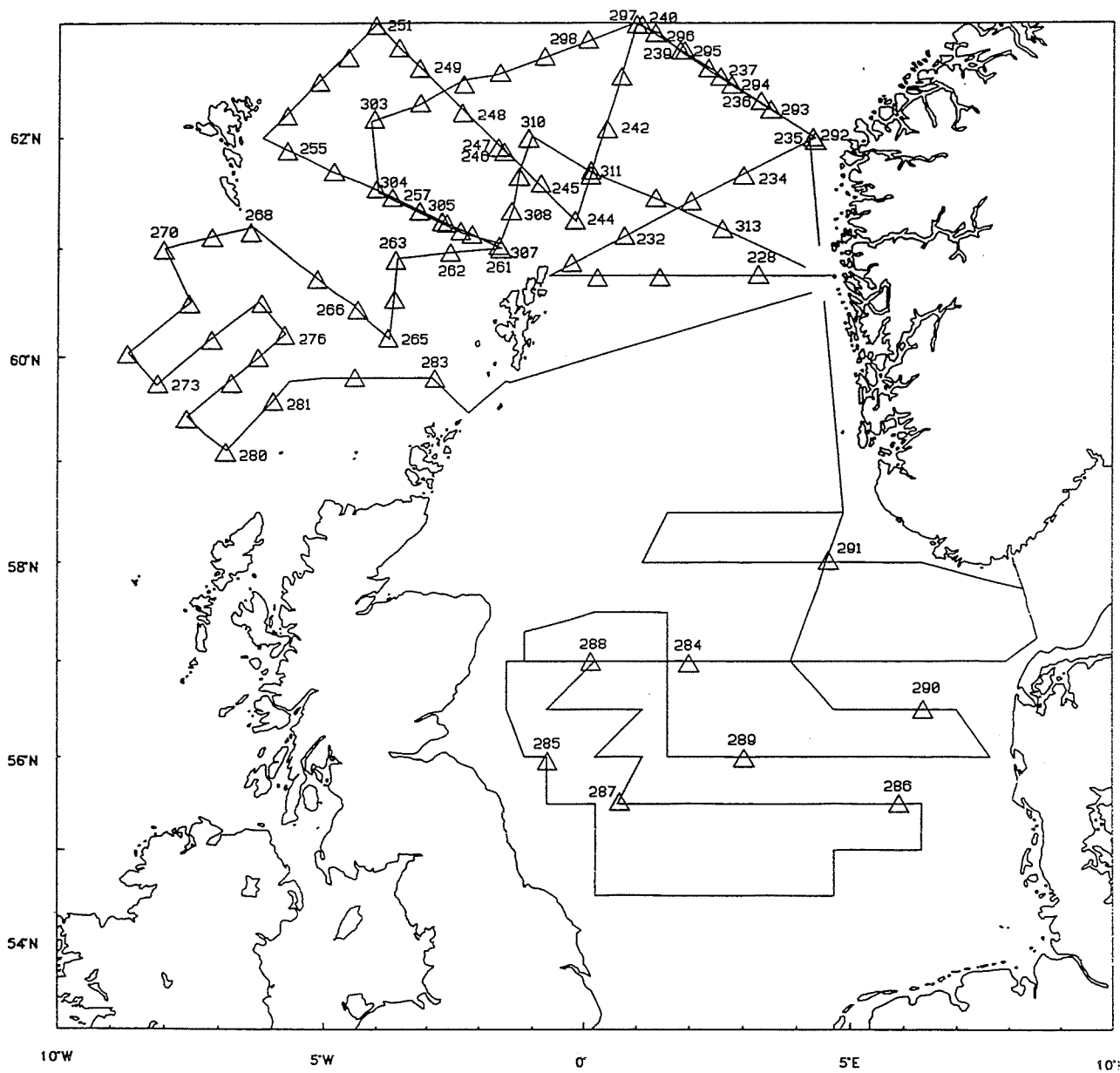
m Mocness st.

Cruise no 1996208

Standard sections: Feie - Shetland st.no 544-566

Okse - Hanstholm st.no 685-695

Hanstholm - Aberdeen st.no 696 -721

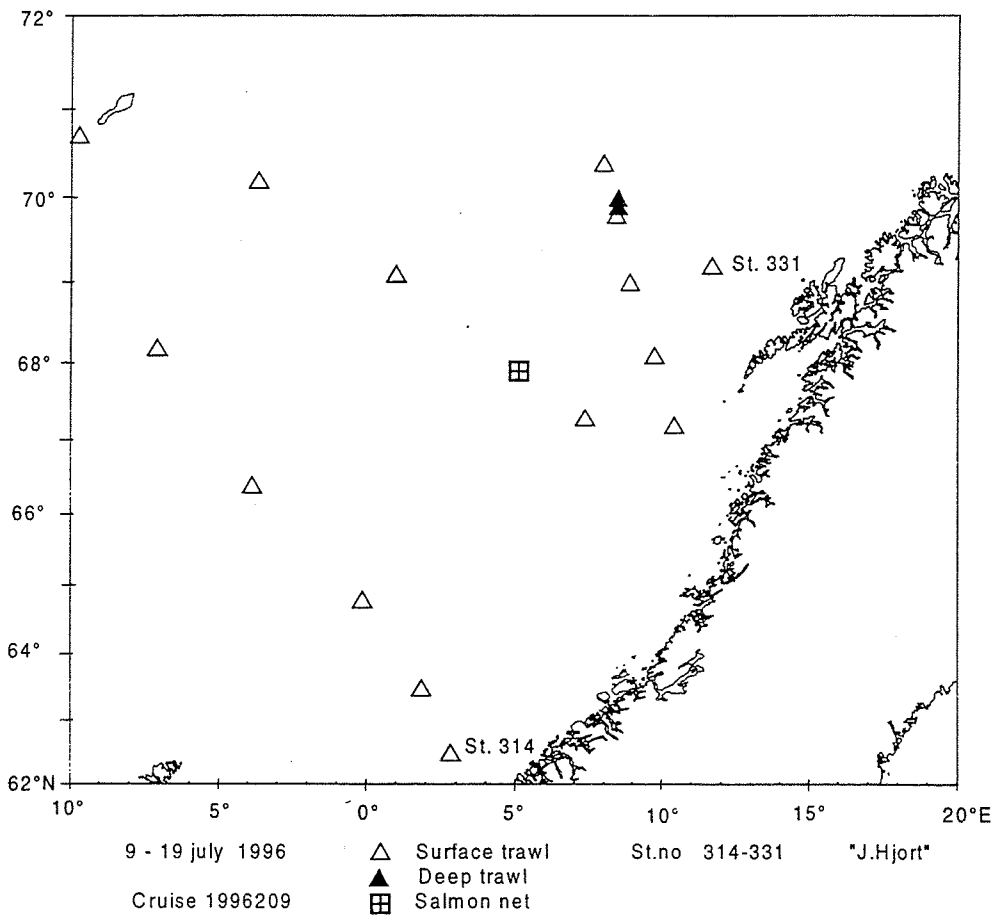
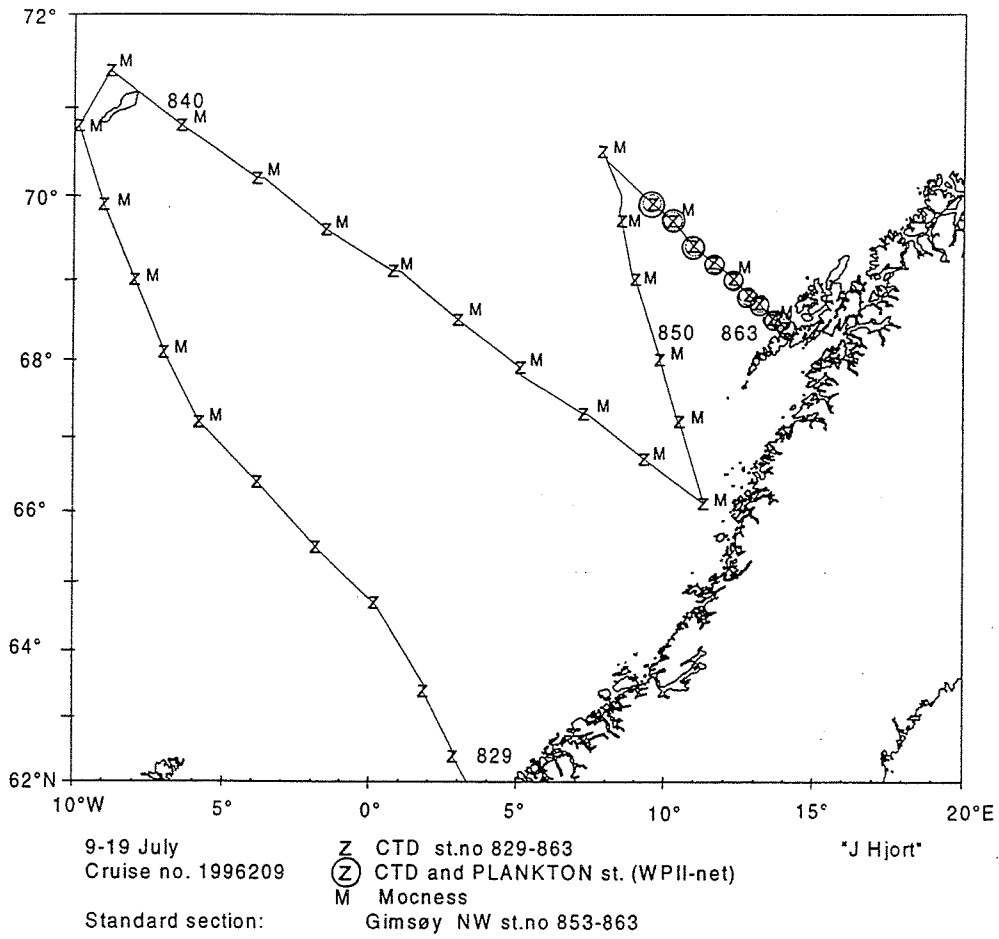


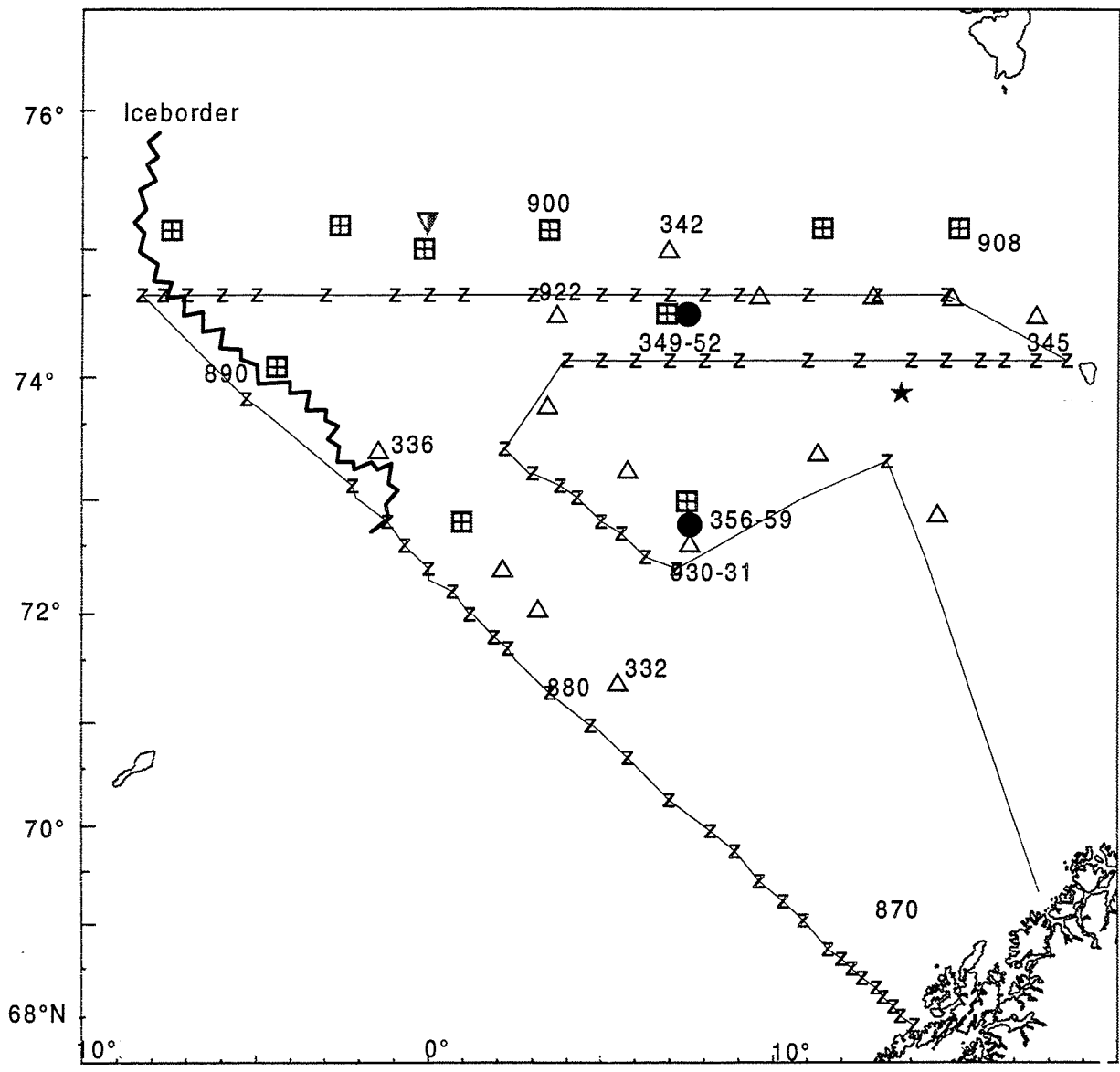
4 Jun - 7 Jul 1996

△ Pel. TRAWL st.no 228-313

"Johan Hjort"

Cruise no 1996208



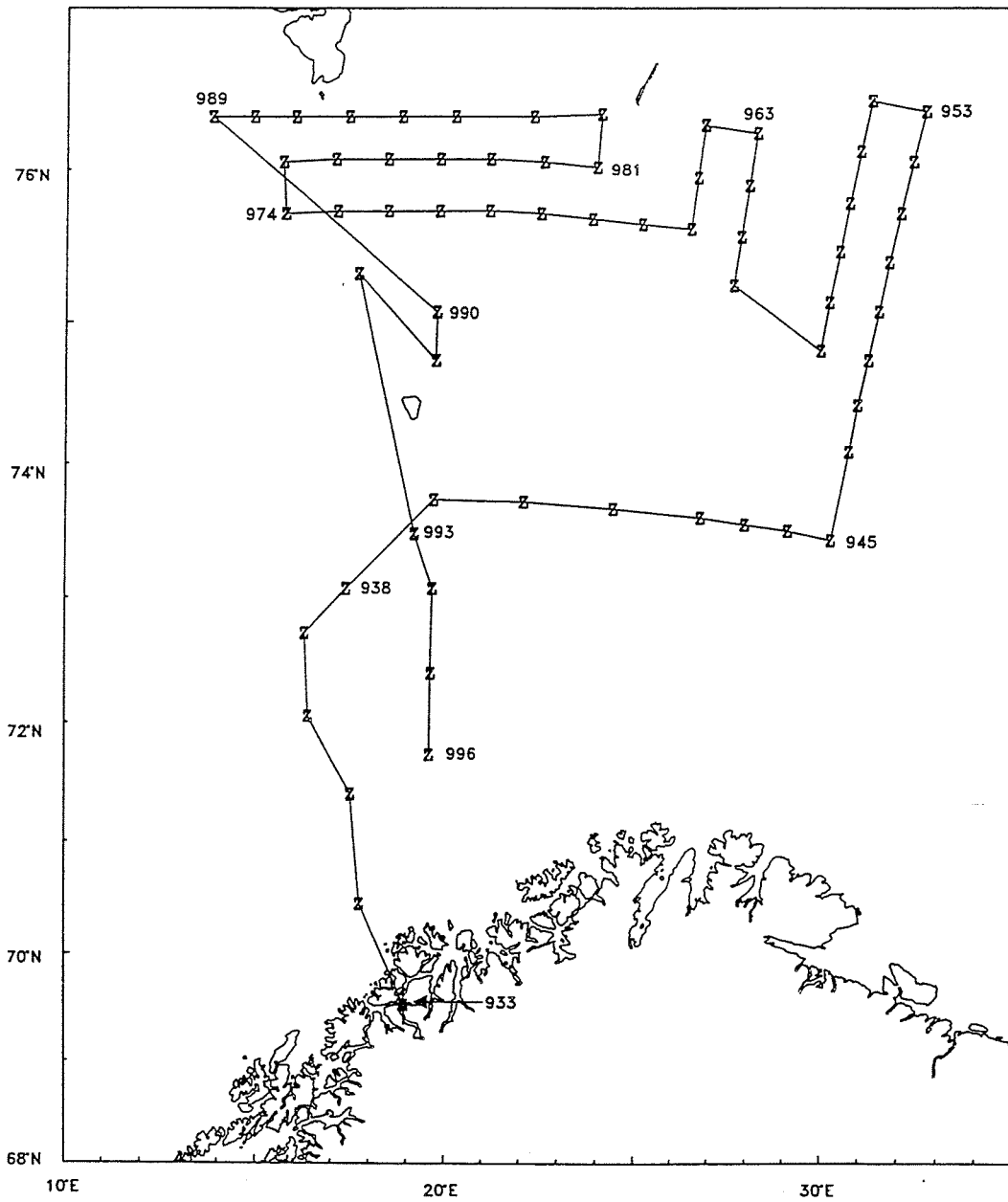


20 July - 5 Aug 1996
Cruise no. 1996210

- Z CTD st.no 864-932
- △ Pel. trawl st.no 332-361
- ▣ Driftnet/longline
- ▽ Sediment trap rig
- ★ Sediment grab
- 24-h time series station

"Johan Hjort"

Standard section Gimsøy NW: st.no 864-877

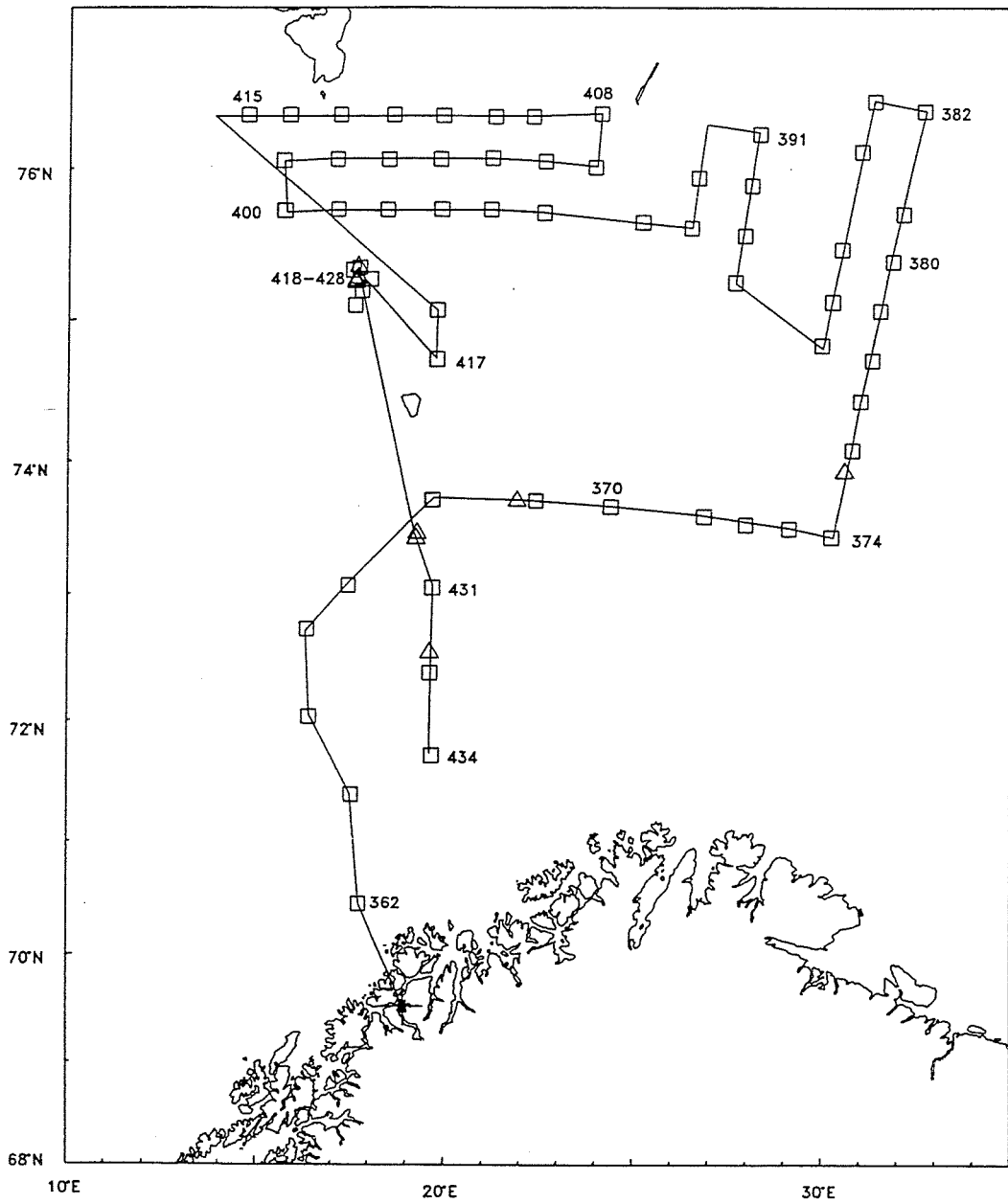


7 - 22 Aug 1996

z CTD st.no 933-996

"Johan Hjort"

Cruise no 1996903

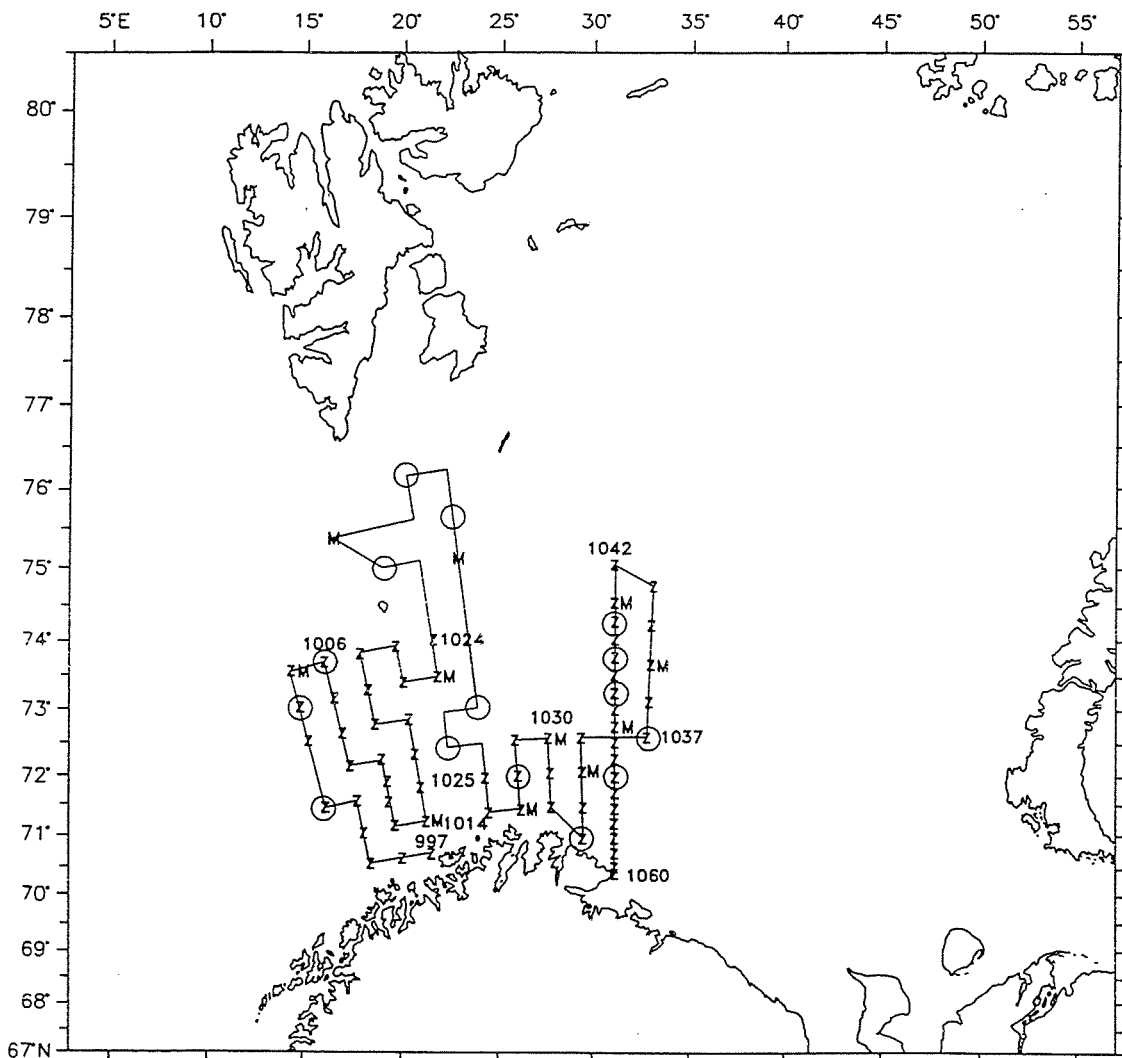


7 - 22 Aug 1996

Cruise no 1996903

△ □ TRAWL st.no 362-434
 □ Bottom tr.
 △ Pel. tr.

"Johan Hjort"



24 Aug - 10 Sep 1996
 Cruise no 1996902

z CTD st.no 997-1060

"Johan Hjort"

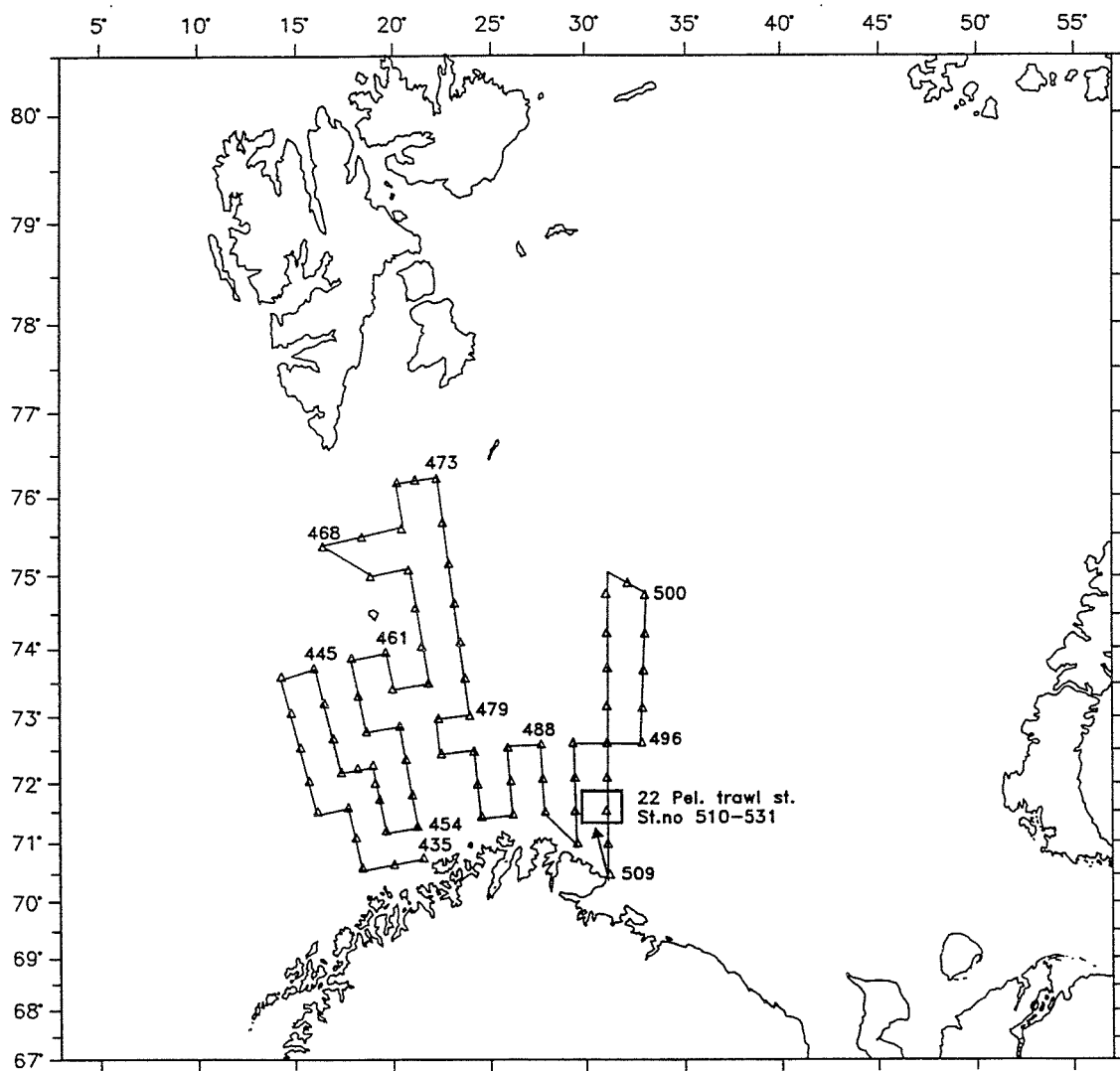
⊗ CTD and PLANKTON st. (WP-II-net)

○ PLANKTON st. (WP-II net)

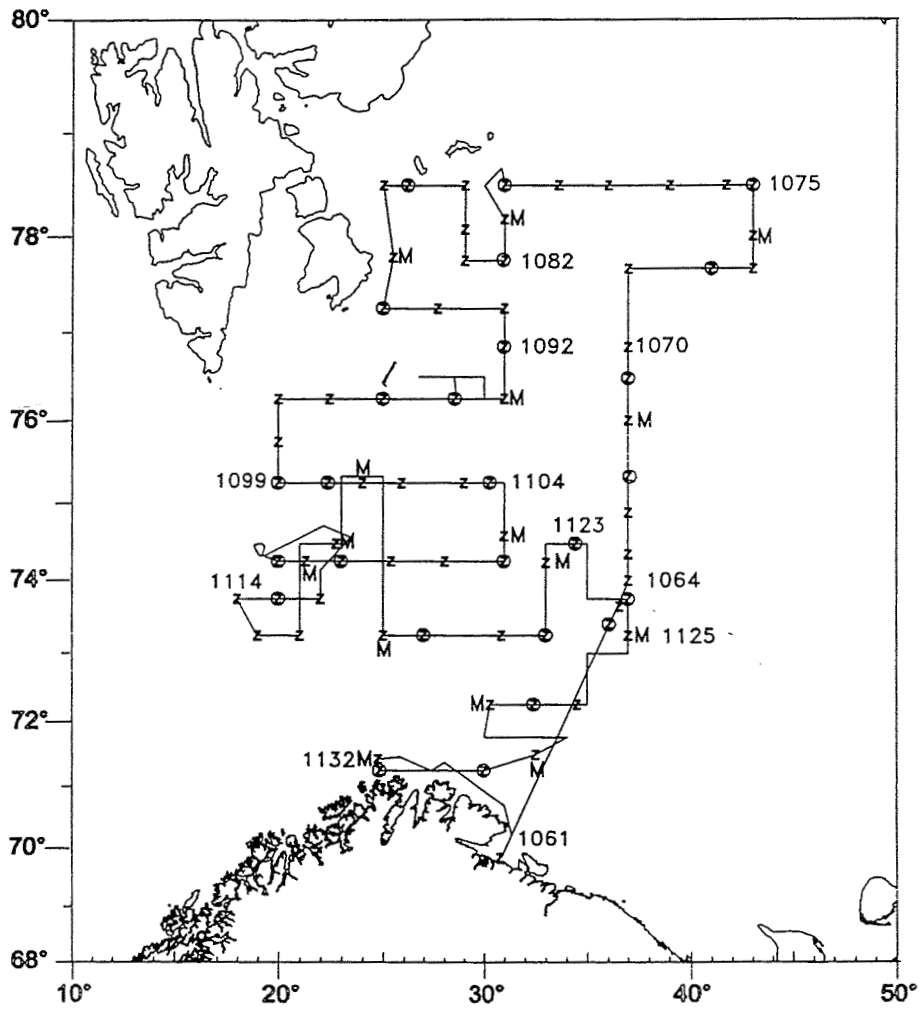
⊞ Mocness st. (Plankton)

Standard section Vardø N: st.no 1042-1060

(Northern part, see
 "G.O.Sars" st.no 685-686)



24 Aug - 10 Sep 1996 Δ Pel. TRAWL st.no 435-531 "Johan Hjort"
 Cruise no 1996902

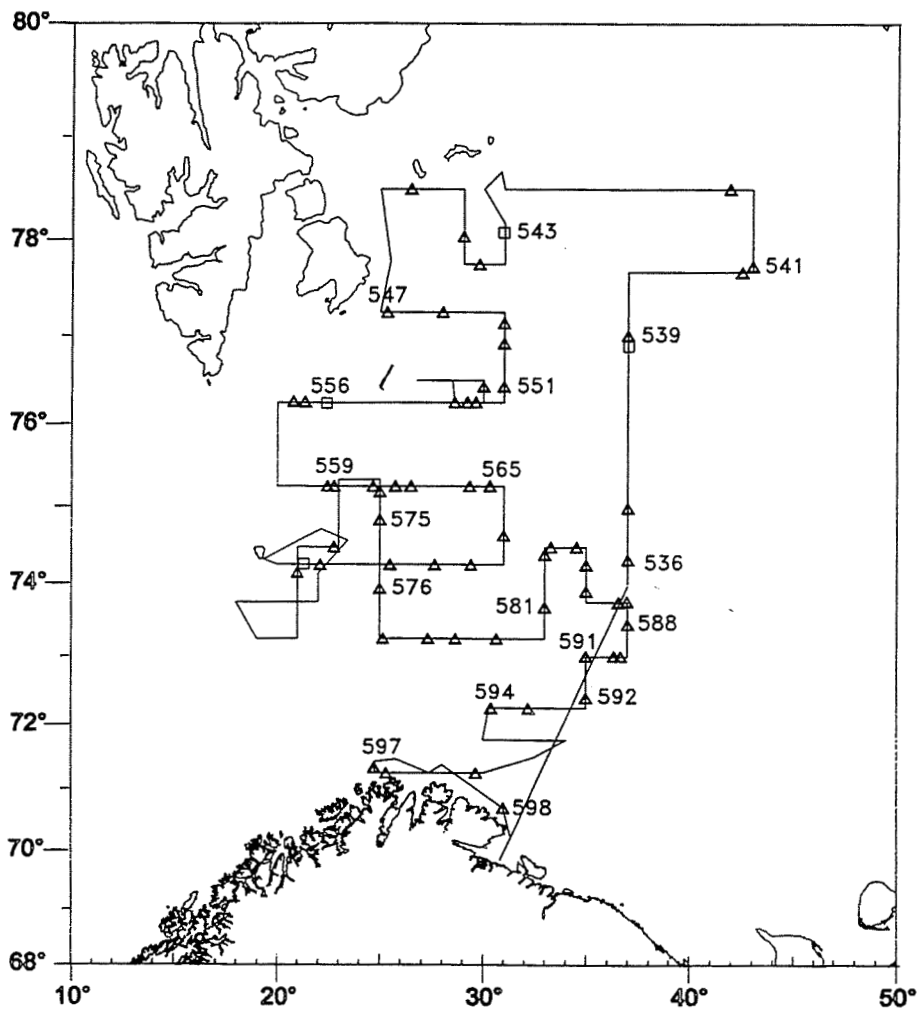


12 Sep - 2 Oct 1996 z CTD st.no 1061-1132 "Johan Hjort"

Cruise no 1996904

⓪ CTD and PLANKTON st. (WPII-net)

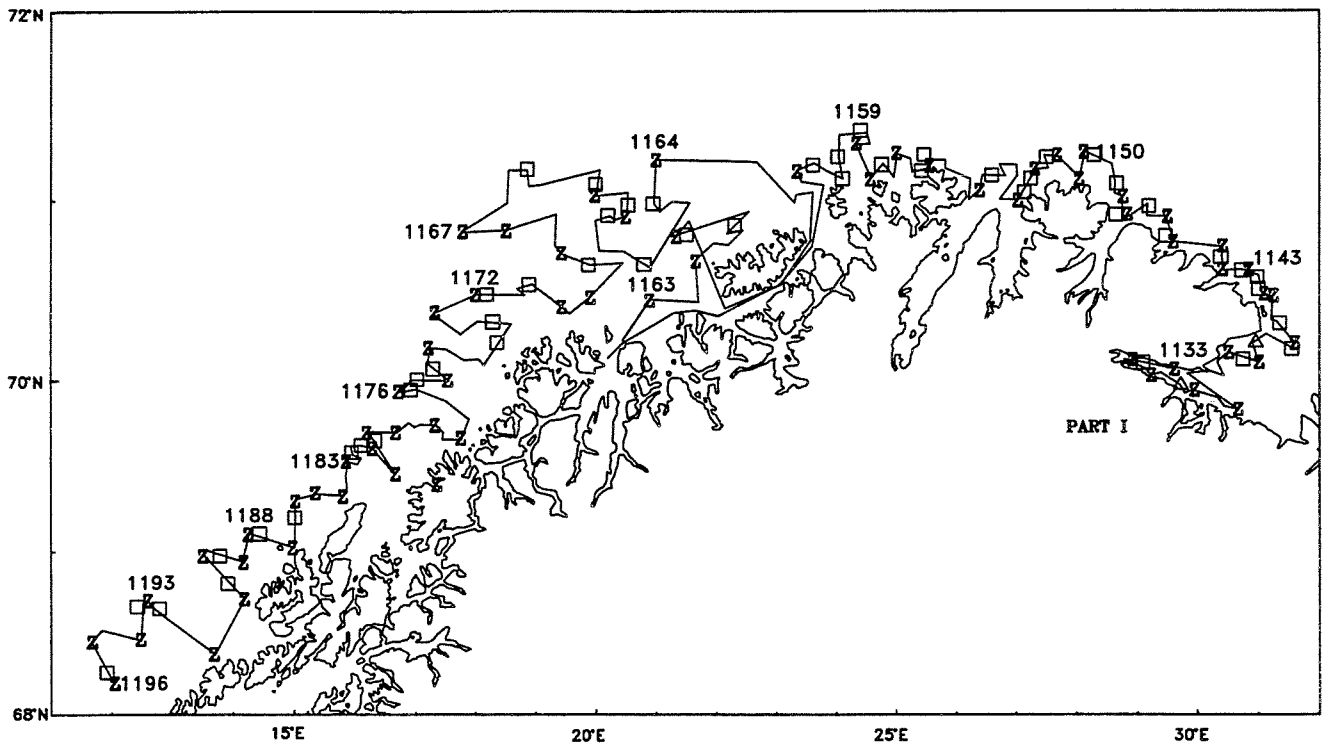
M MOCNESS st.



12 Sep - 2 Oct 1996 Δ \square TRAWL st.no 536-598 "Johan Hjort"

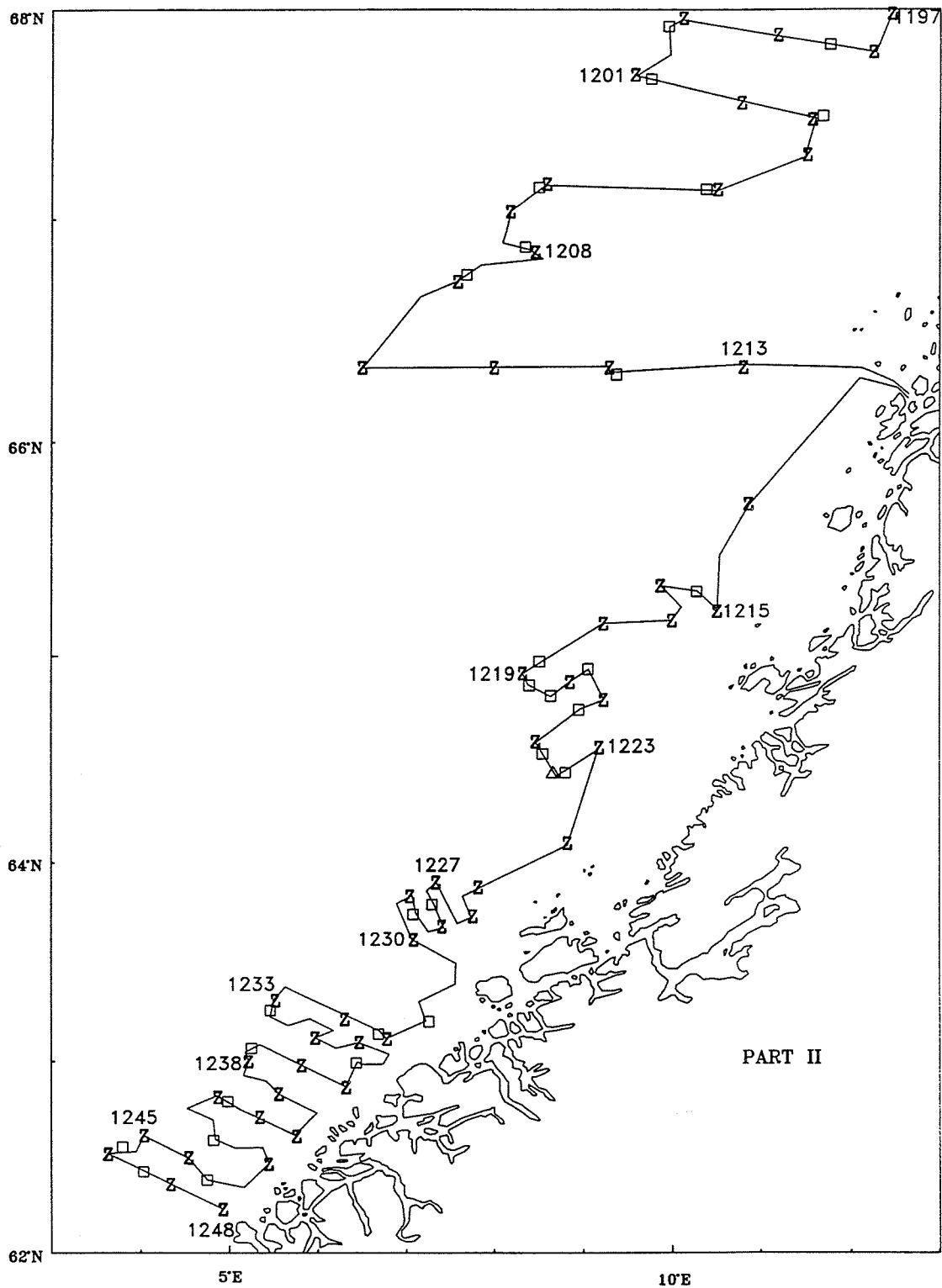
Cruise no 1996904

Δ Pel.trawl
 \square Bottom trawl

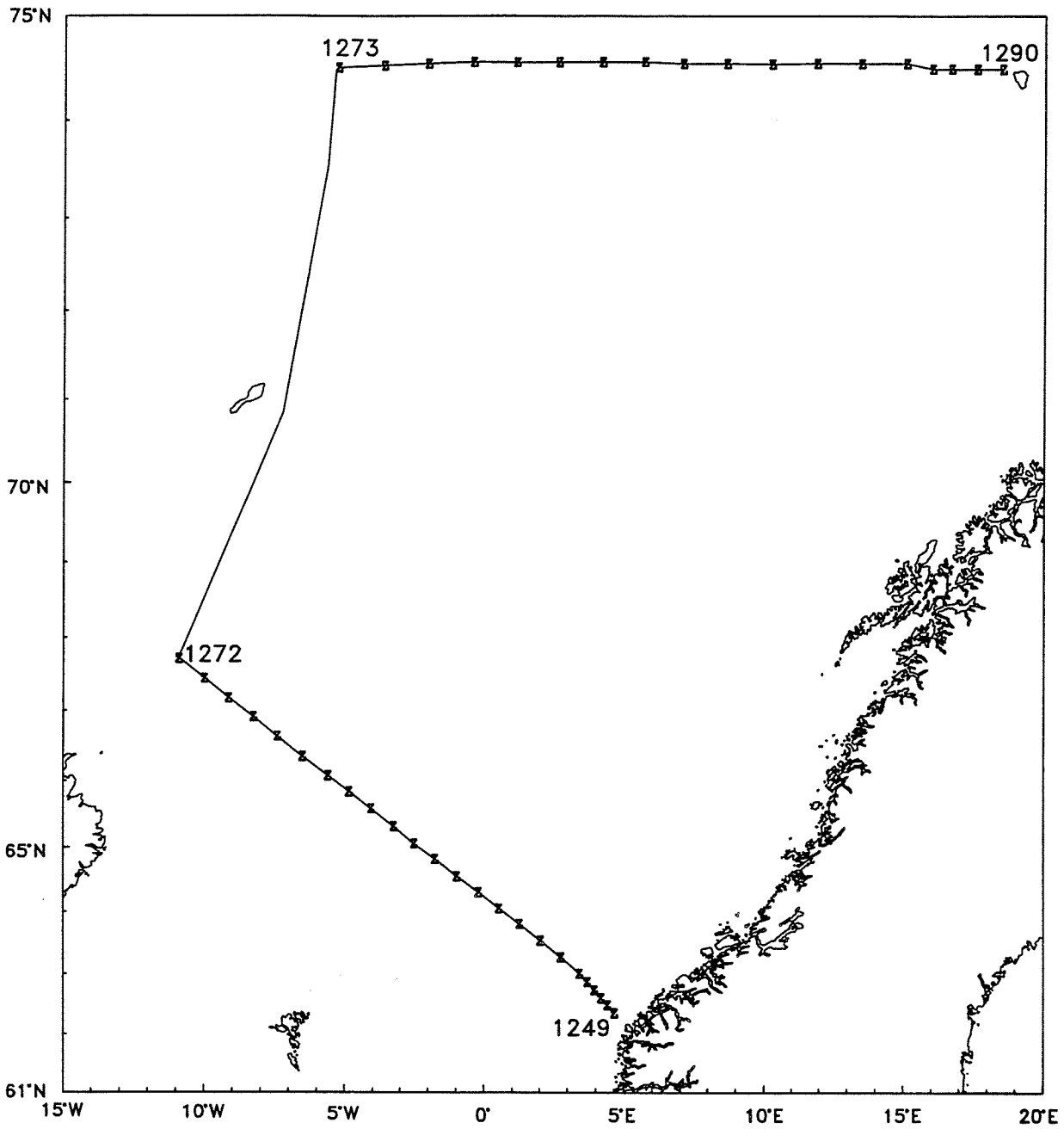


5 - 28 Oct 1996 PART I z CTD st.no 1133-1196
 Cruise no 1996214 □Δ TRAWL st.no 604-681
 □ Bottom tr.
 Δ Pel. tr.

"Johan Hjort"



5 - 28 Oct 1996 PART II z CTD st.no 1197-1248 "Johan Hjort"
 Cruise no 1996214 □△ TRAWL st.no 682-705
 □ Bottom tr.
 △ Pel. tr.



30 Oct - 10 Nov 1996

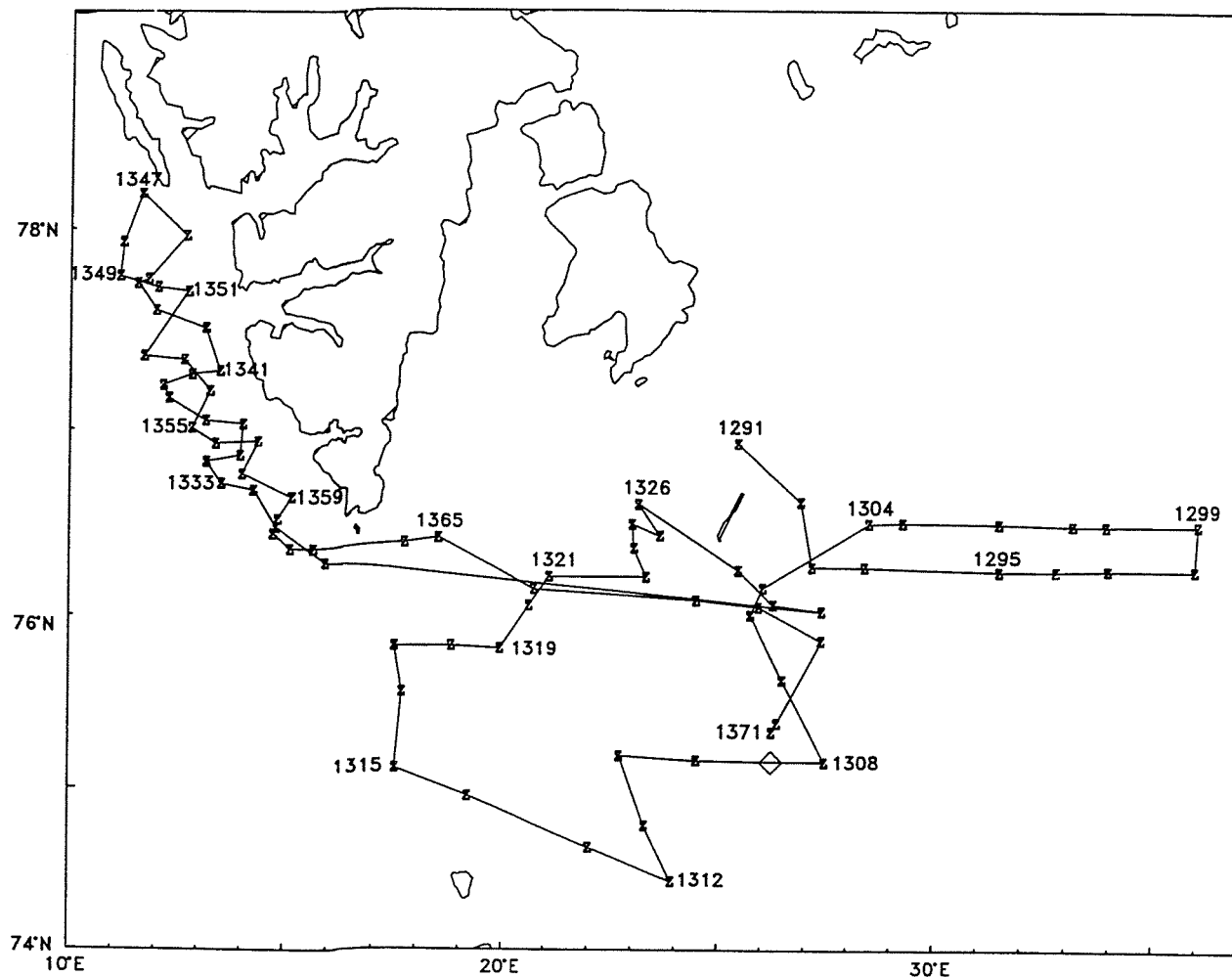
z CTD st.no 1249-1290

"Johan Hjort"

Cruise no 1996215

Standard section Svinøy NW: st.no 1249-1272

" " Bear Island W: st.no 1273-1290



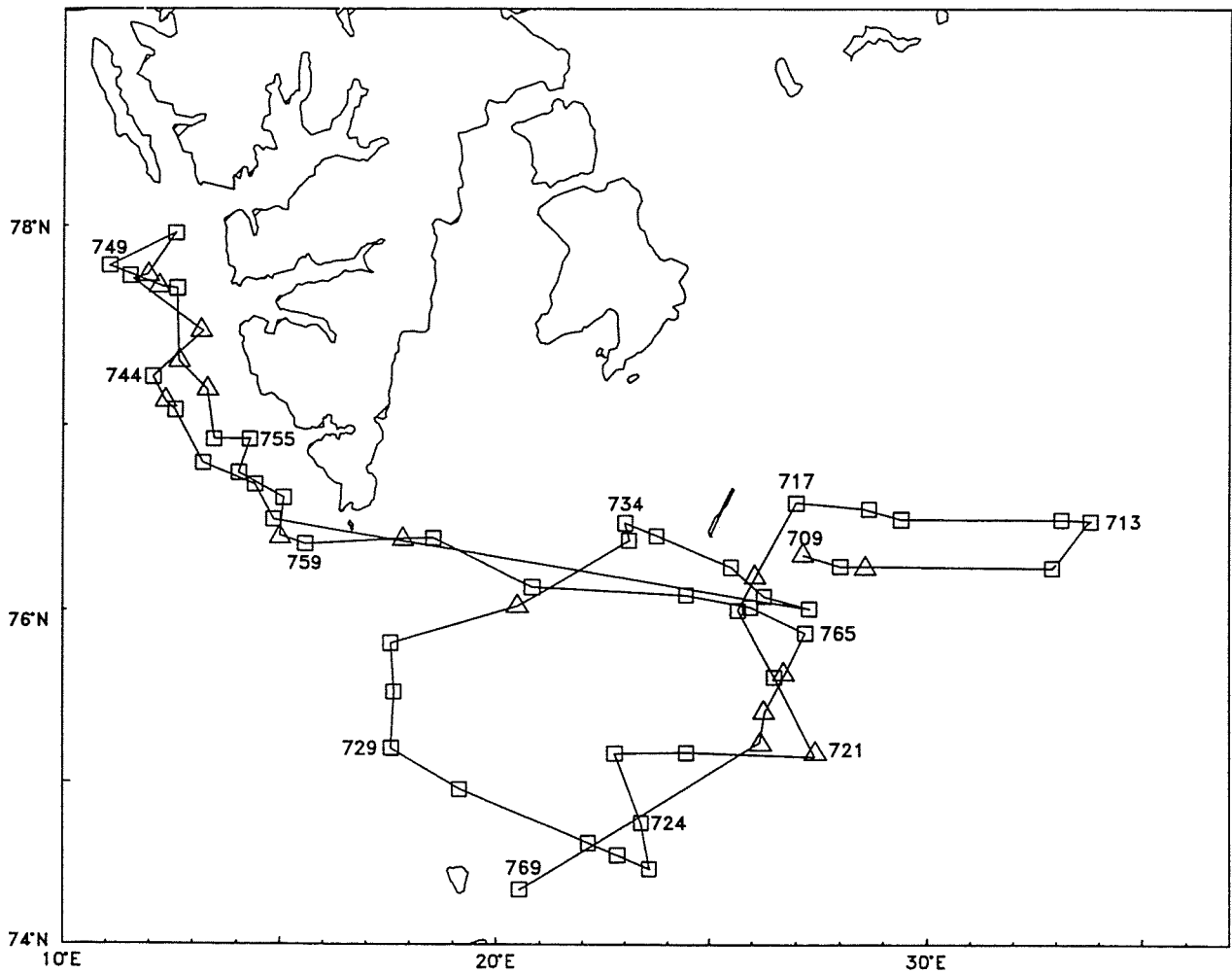
11 - 29 Nov 1996

z CTD st.no 1291-1371

"Johan Hjort"

Cruise no 1996216

◇ Mocness st. (Plankton)

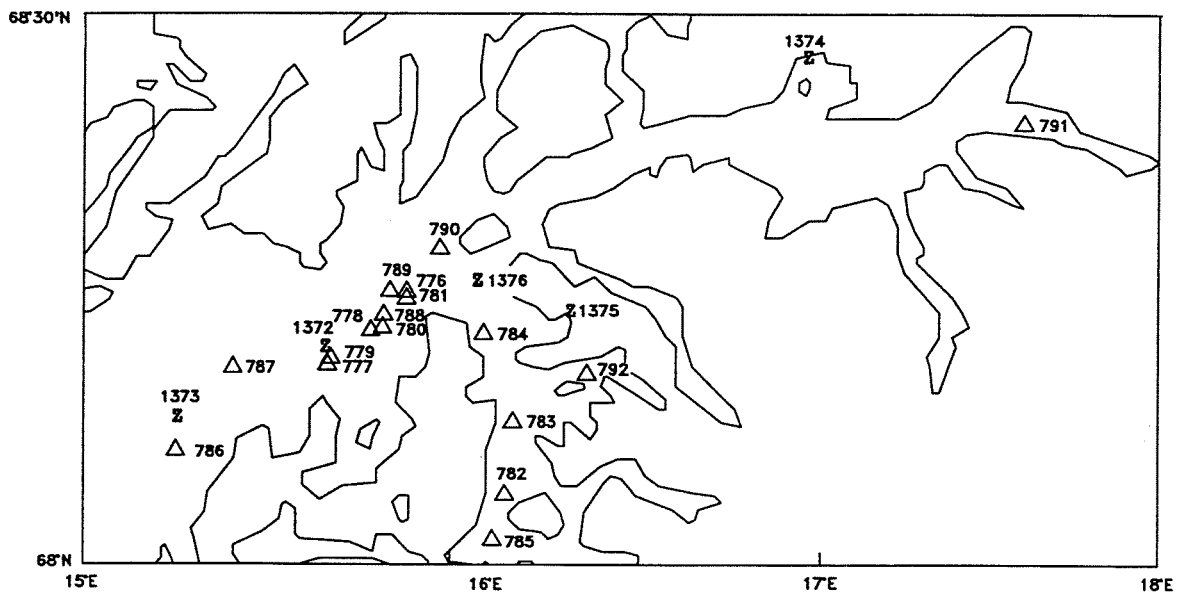


11 - 29 Nov 1996

Cruise no 1996216

□△ TRAWL st.no 709-769
 △ Pel tr.
 □ Bottom tr.

"Johan Hjort"



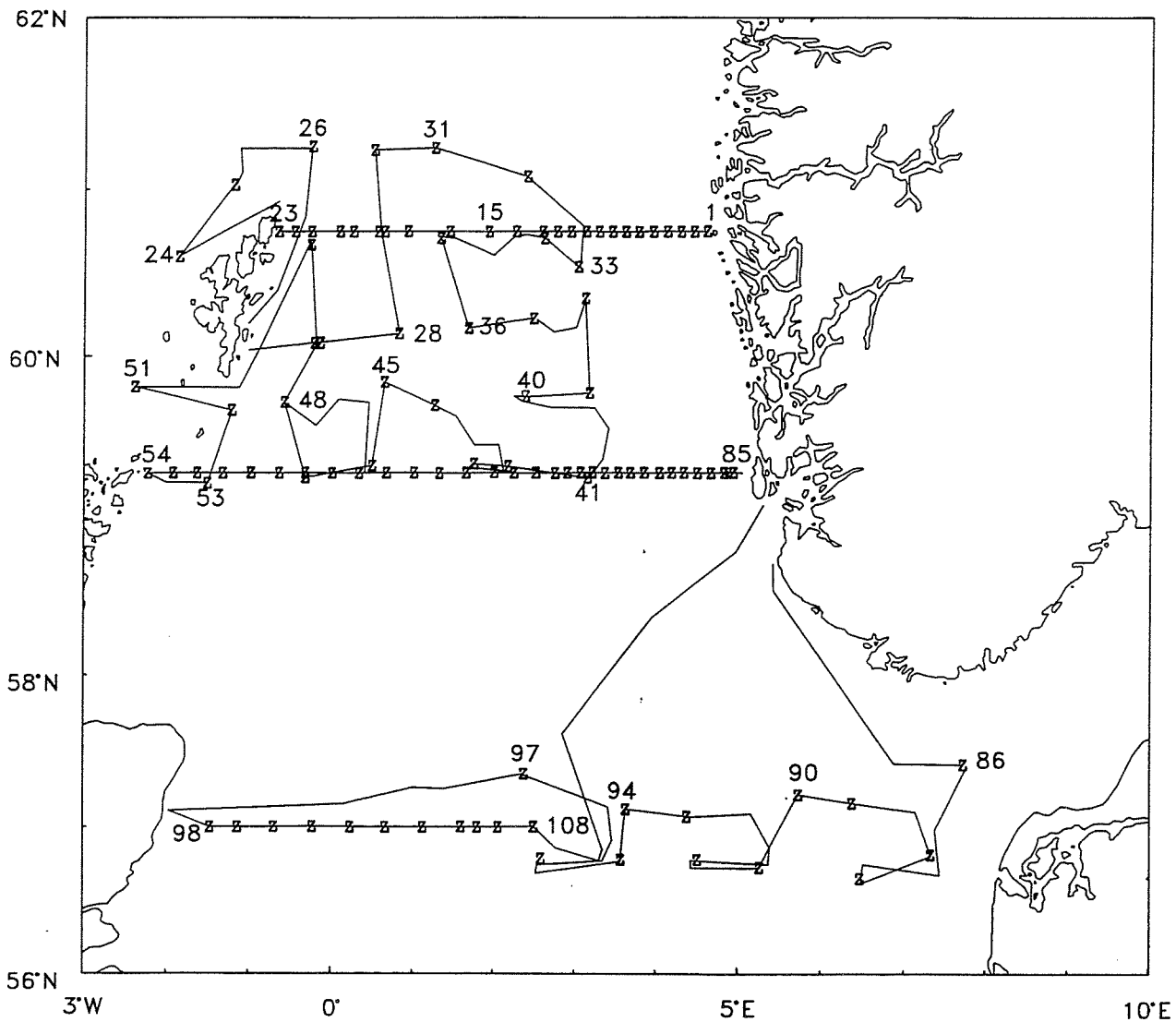
2 - 20 Dec 1998

Cruise no 1996217

z CTD st.no 1372-1376

△ Pel TRAWL st.no 776-792

"Johan Hjort"



13 Jan - 13 Feb 1996

z CTD st.no 1 - 108

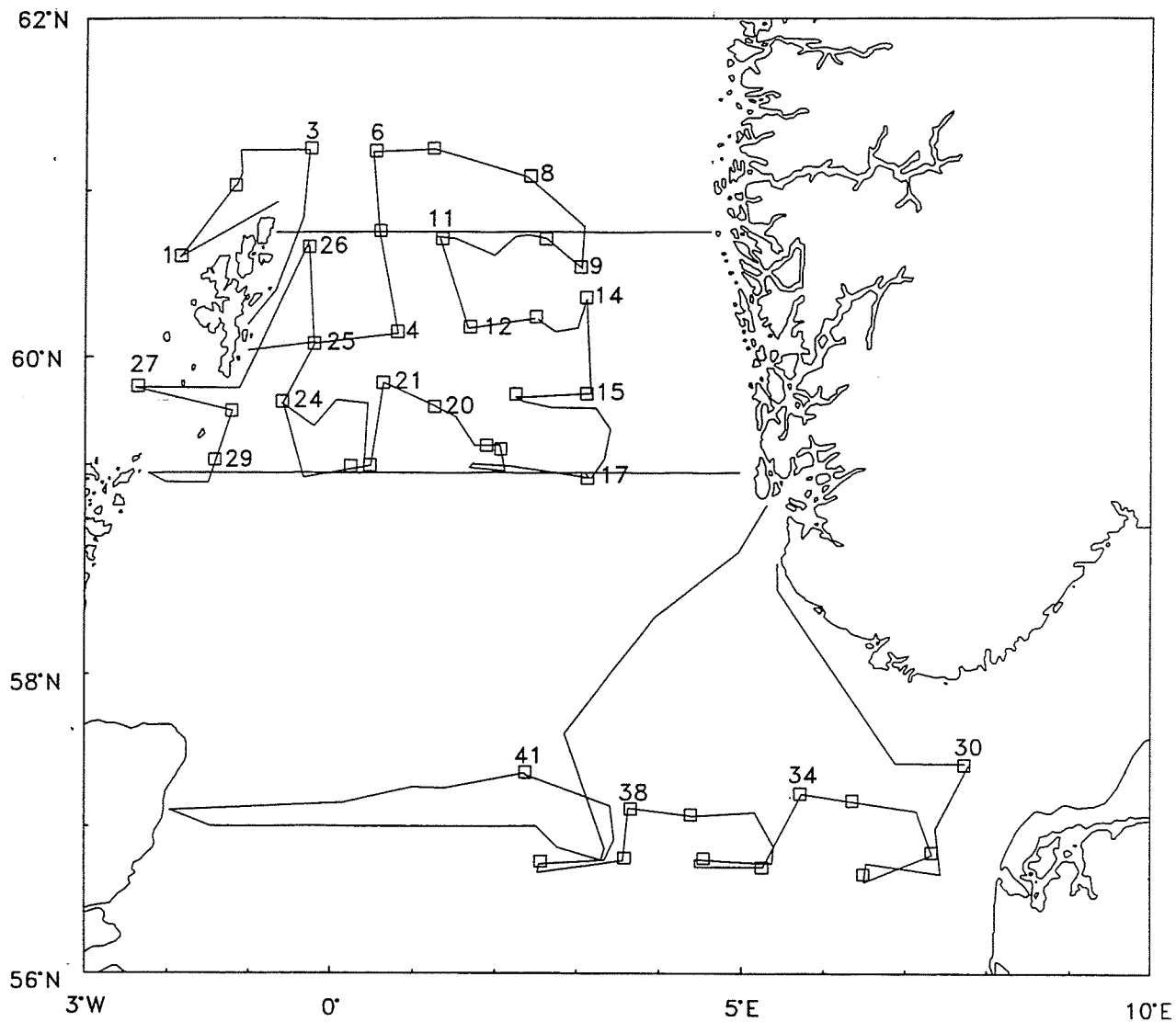
"Michael Sars"

(Cruise no 1996102)

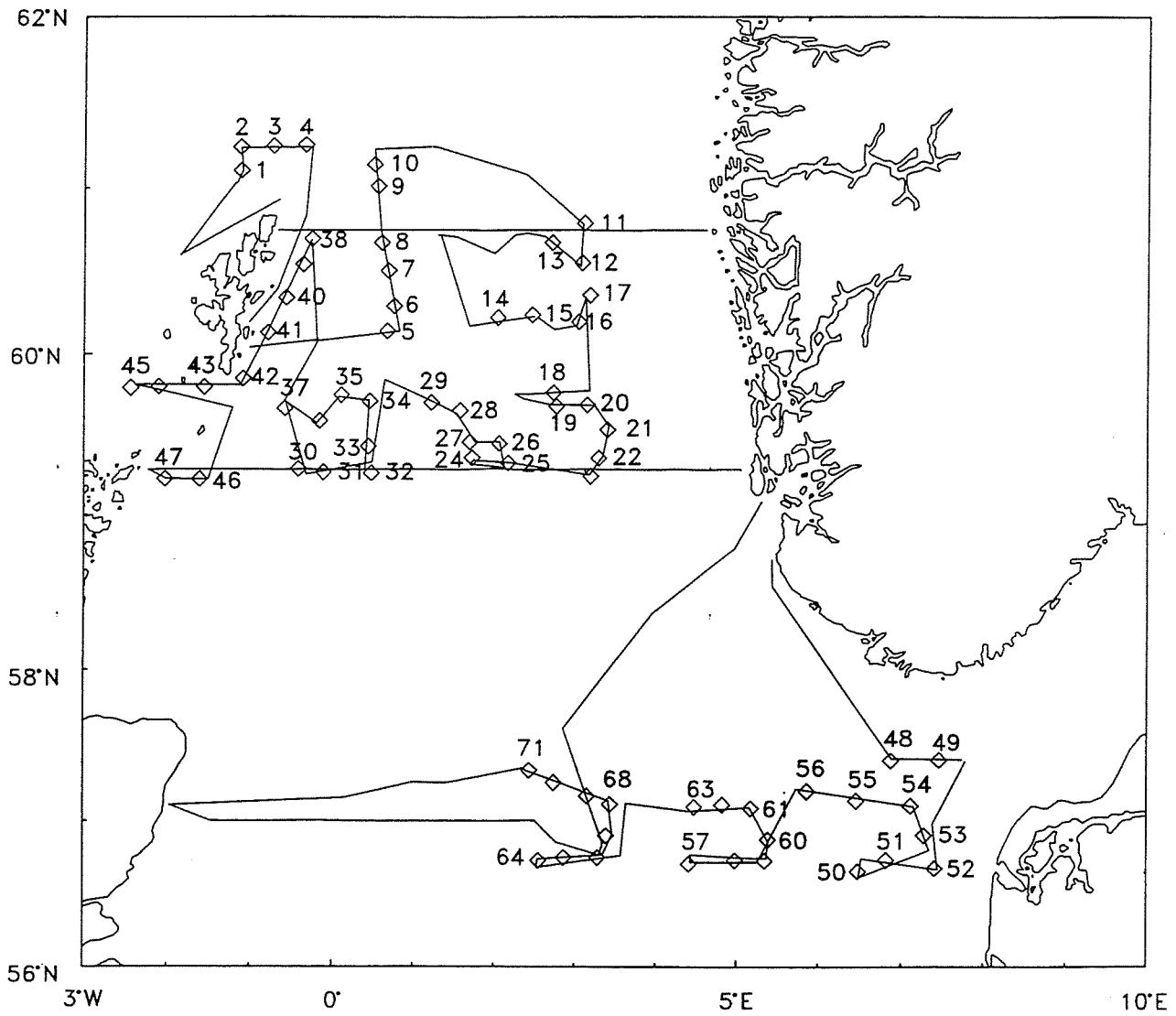
Standard section: Feie-Shetland st.no 1-23

Utsira-Start Point st.no 54-85

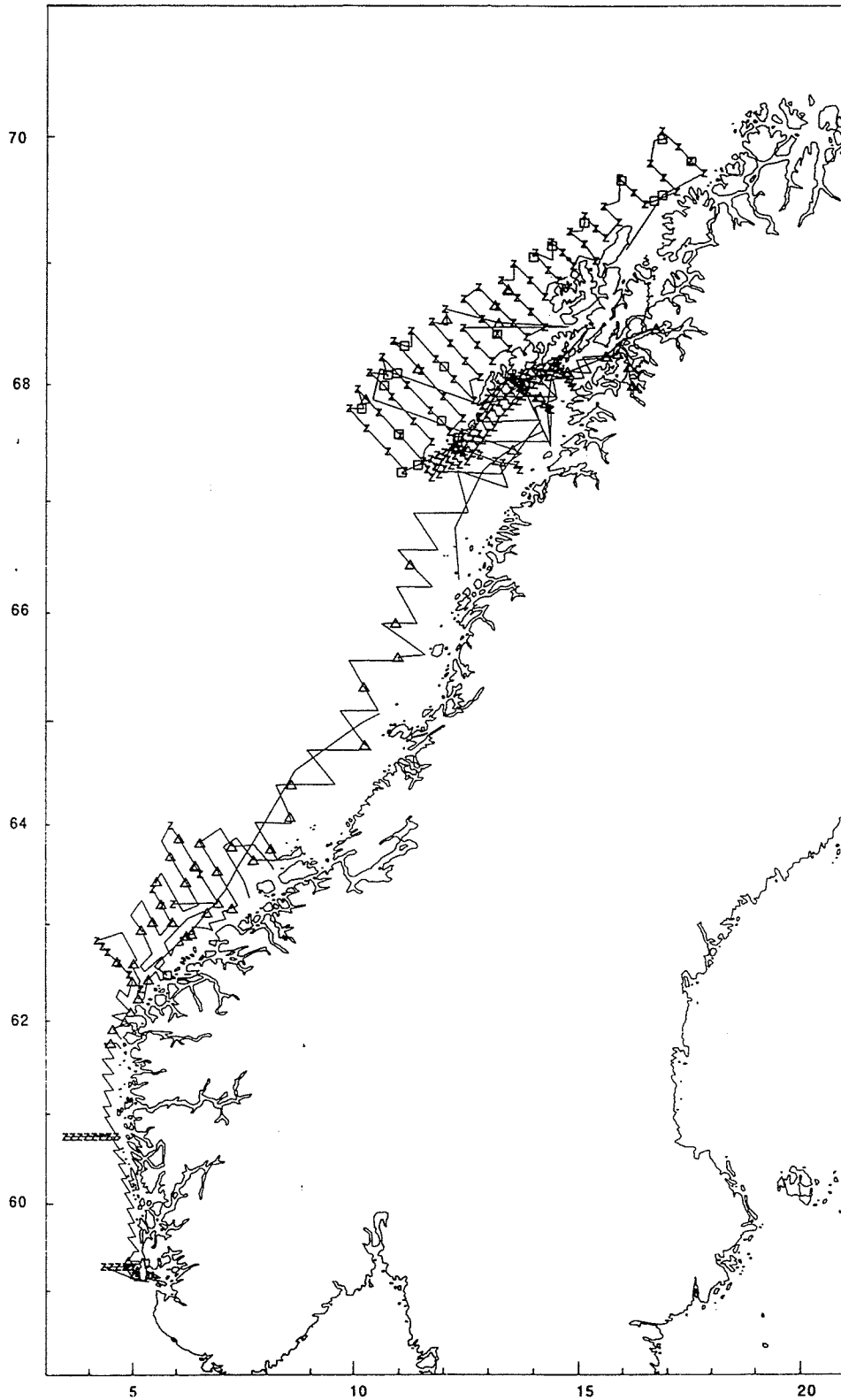
Hansthalm-Aberdeen st.no 98-108



13 Jan - 13 Feb 1996 □ Trawl st.no 1-41 (Dem.tr) "Michael Sars"
 (Cruise no 1996102)



13 Jan - 13 Feb 1996 ◇ PLANKTON net (MIK - Eggs/larvae) "Michael Sars"
 (Cruise no 1996102)



15 Feb - 30 Mar 1996

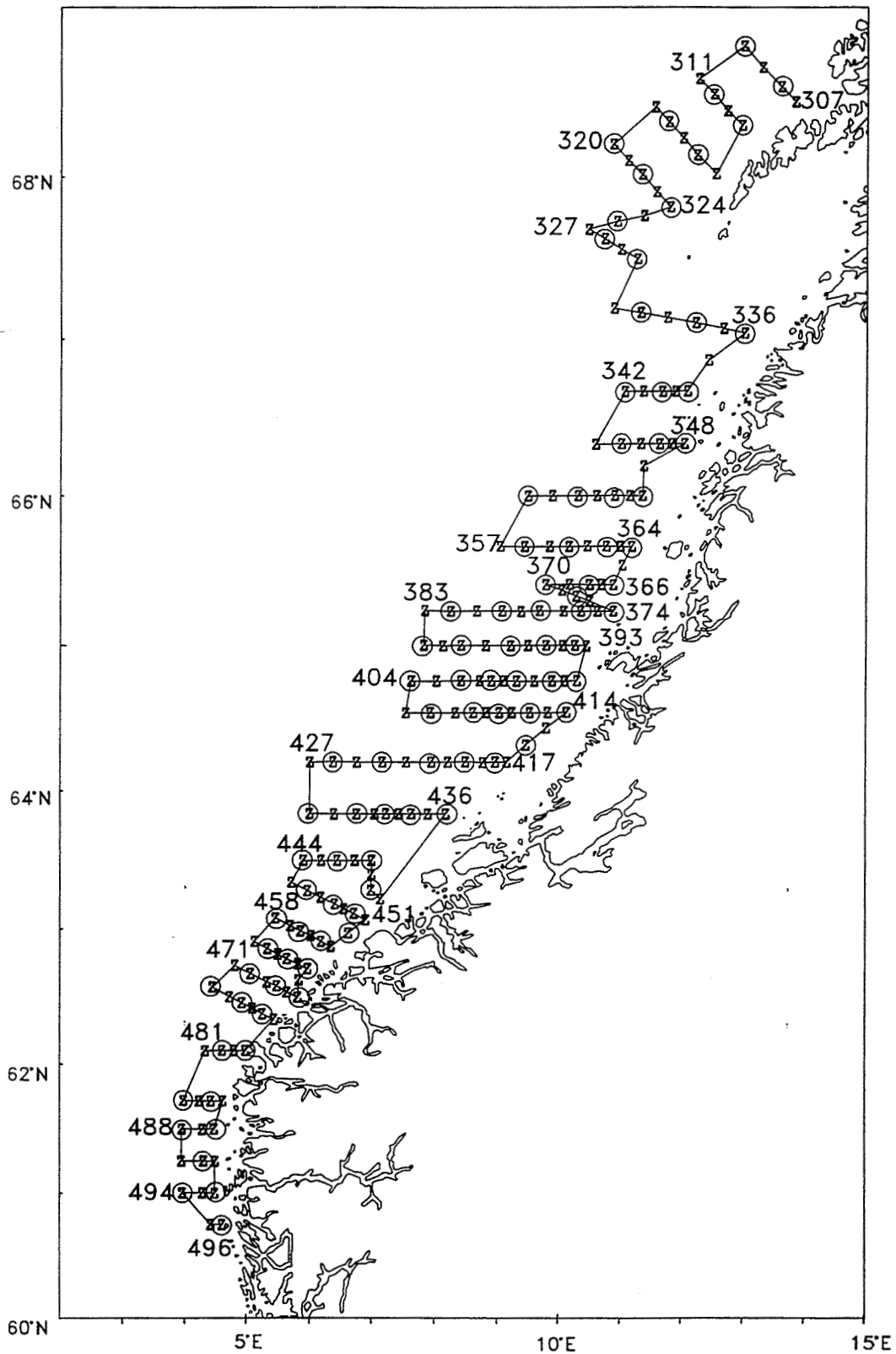
z CTD st.no 109-306

"M. Sars"

Cruise no 1996103

□△ TRAWL st.no 42-130

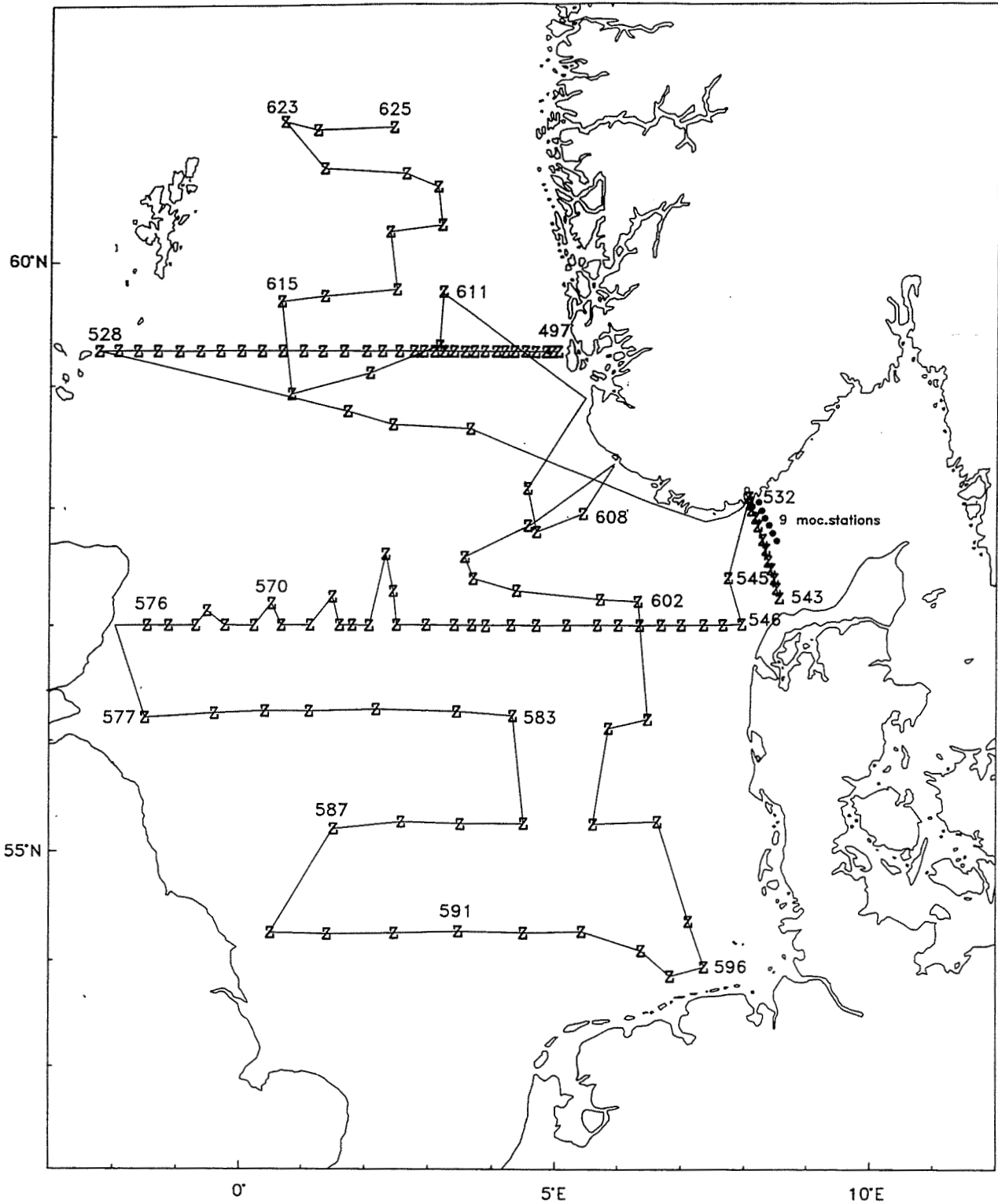
□ Bottom tr.
△ Pel. tr.



9 - 25 Apr 1996

"M. Sars"

Cruise no 1996104 z CTD and LARVAE st. (Gulf III) 307-496
 (z) CTD, LARVAE st. (Gulf III)
 and PLANKTON st. (WP II net)



29 Apr - 21 May 1996

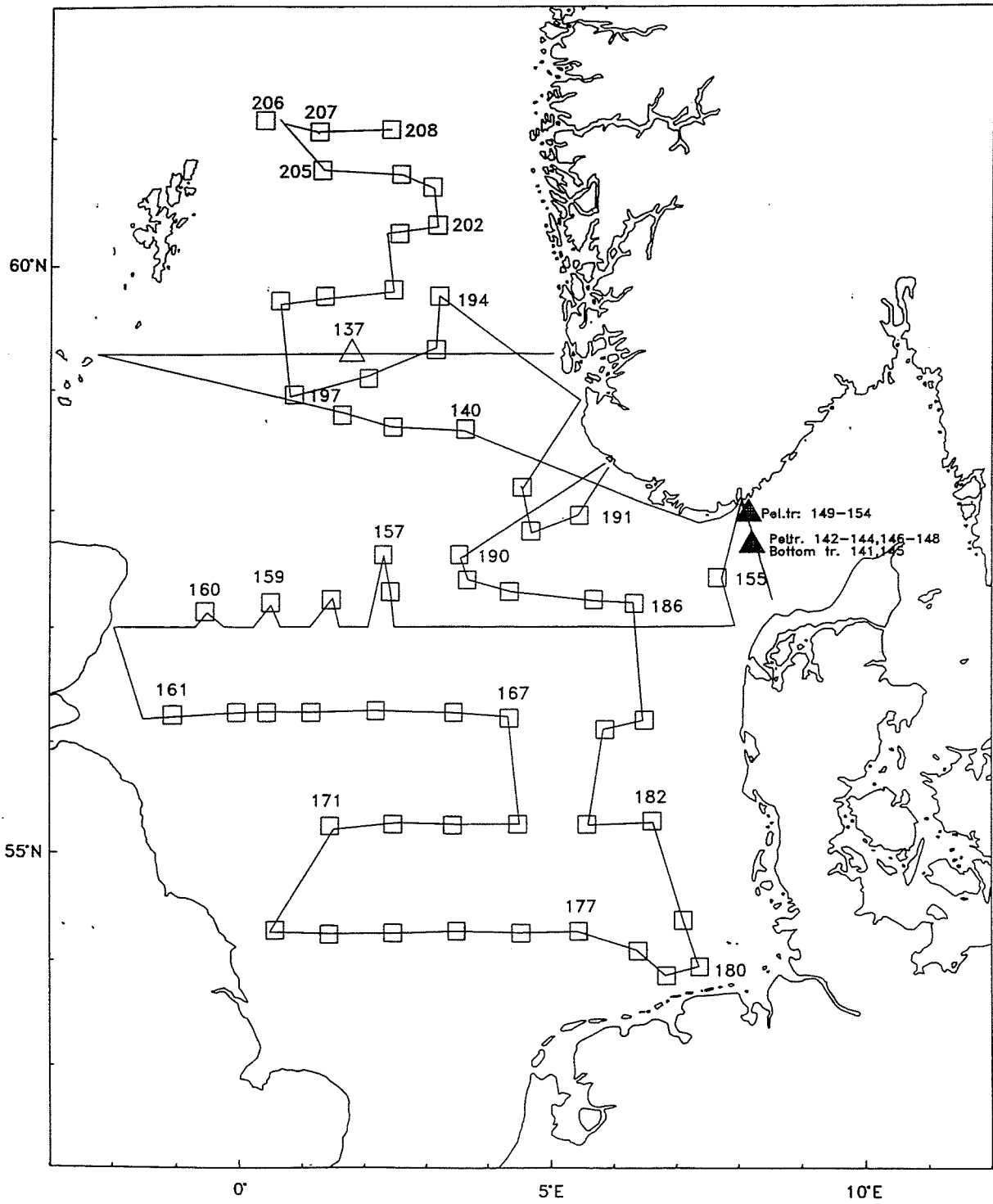
z CTD st.no 497-625

"Michael Sars"

Cruise no 1996105

• Moxness station

Standard section Utsira W: st.no 497-528
 " " Hanstholm-Aberdeen: st.no 546-576
 Okseøy-Hanstholm: st.no 532-543



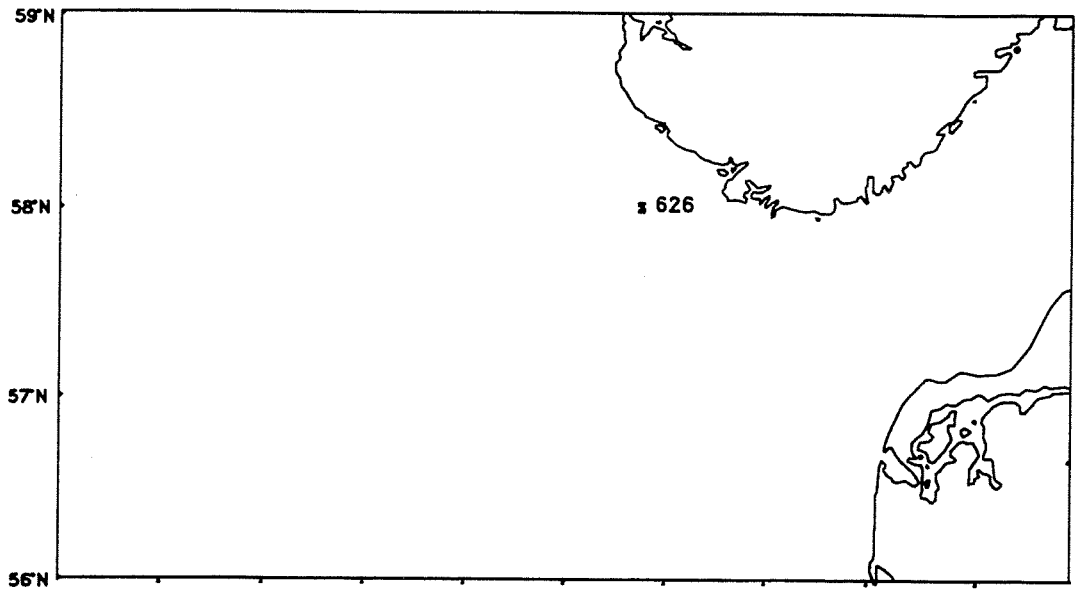
29 Apr - 21 May 1996

□ △ TRAWL st.no 137-208

"Michael Sars"

Cruise no 1996105

□ Bottom tr.
△ Pel. tr.



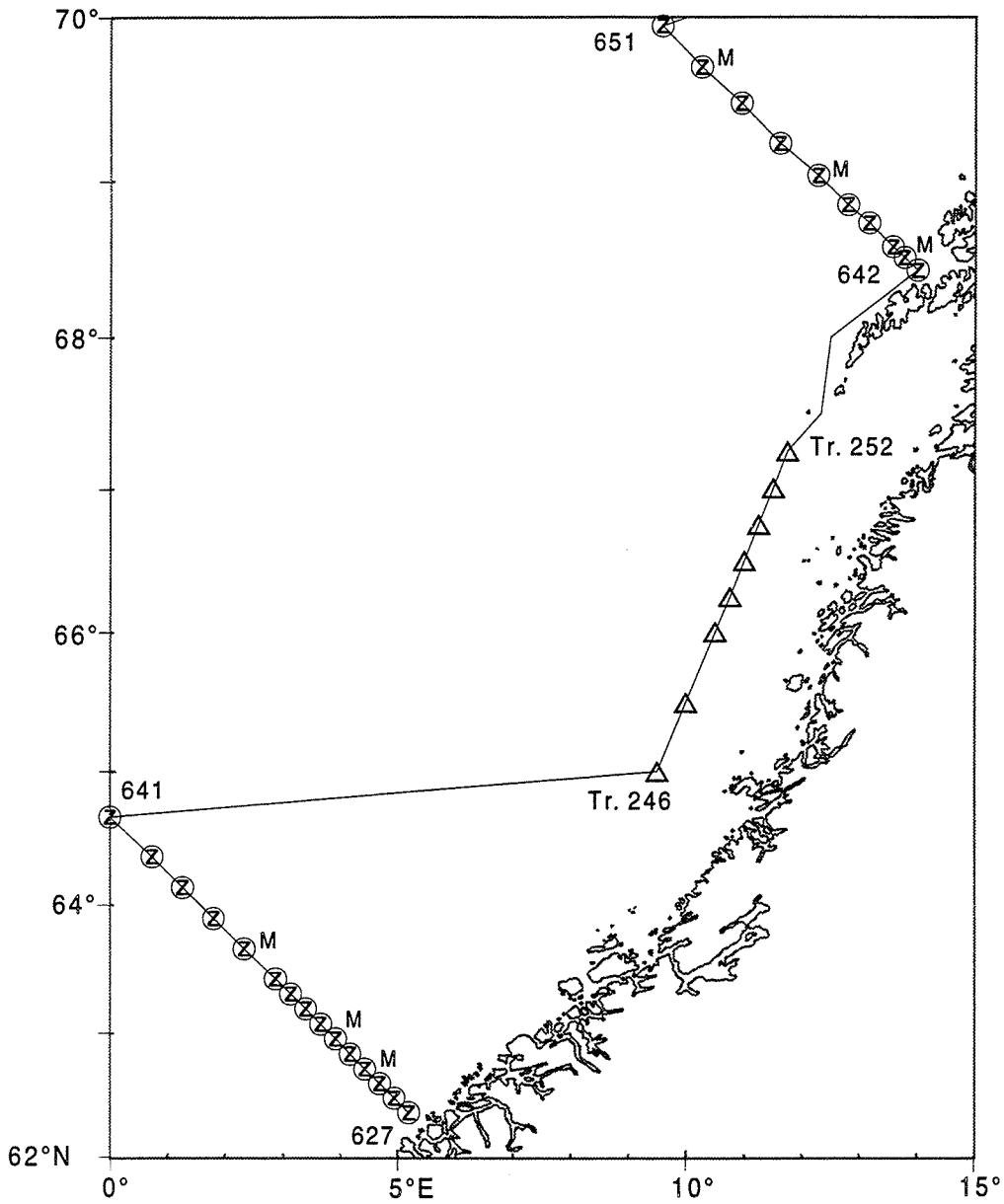
22 May - 5 June 1996

z CTD st.no 626

"Michael Sars"

Cruise no 1996114

(TRAWL st. not shown)

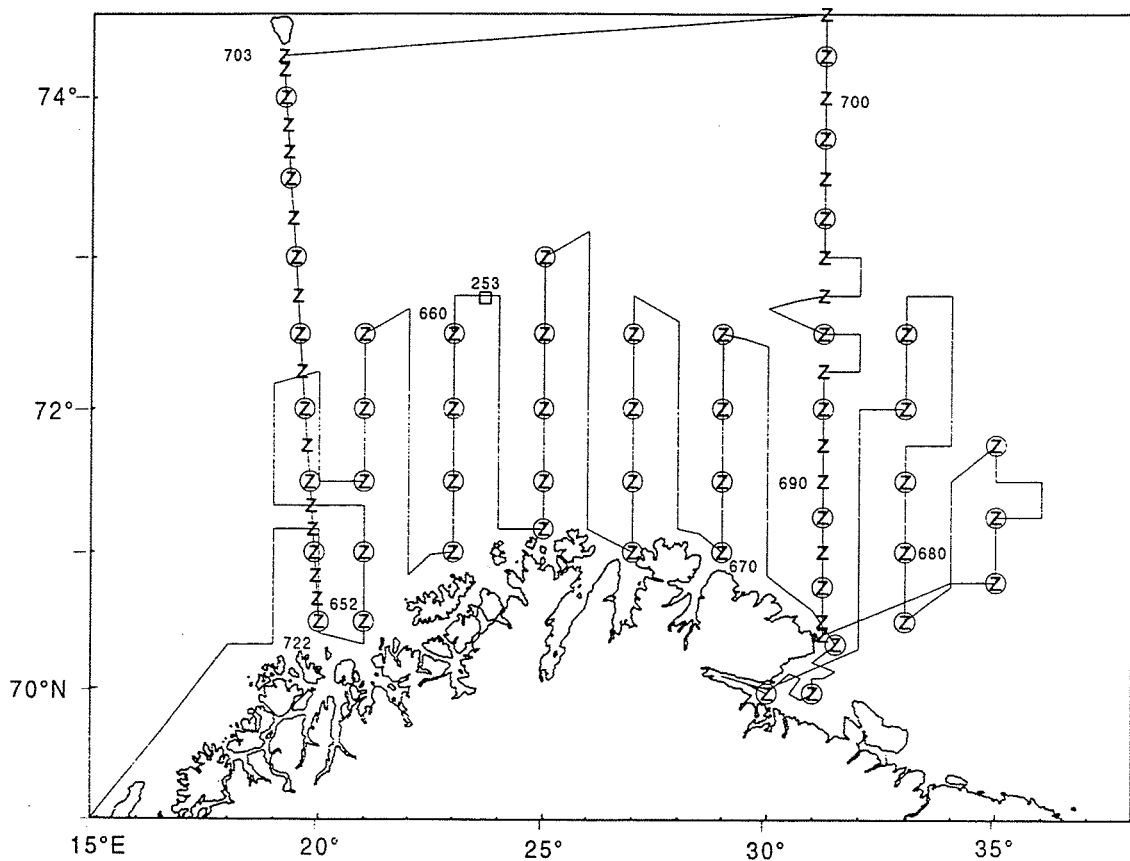


7 - 15 Jun 1996 (Part I)
 Cruise no. 1996115

⊙ CTD and Plankton st.no 627-651 "M Sars"
 △ Pel. trawl st.no 246-252
 M Mocness

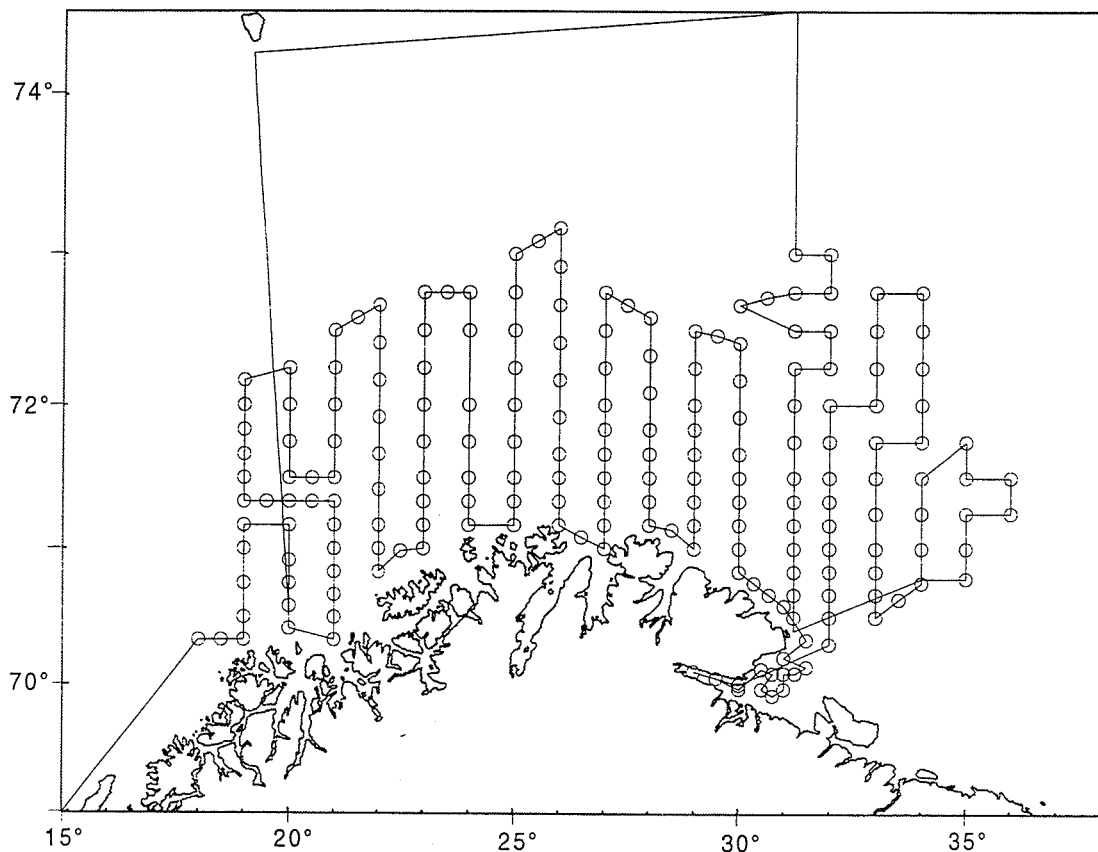
Standard section:

Svinøy NW st.no 627-641
 Gimsøy NW st.no 642-651

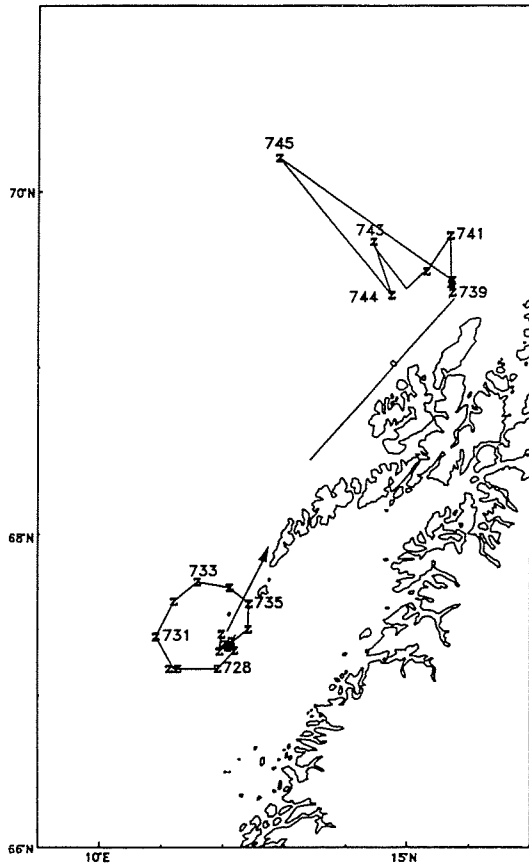


16 Jun - 7 Jul 1996 (Part II) z CTD st.no 652-722 "M Sars"
 Cruise no. 1996115 (Z) CTD and PLANKTON ST.(WP11-net)
 Standard sections : Vardø N st.no 685-702
 Bjørnøya Fugløya st.no 703-722

□ Bottom TRAWL no 253



16 Jun - 7 Jul 1996 (Part II) Gulf III st.no 1-200 "M Sars"
 Cruise no. 1996115

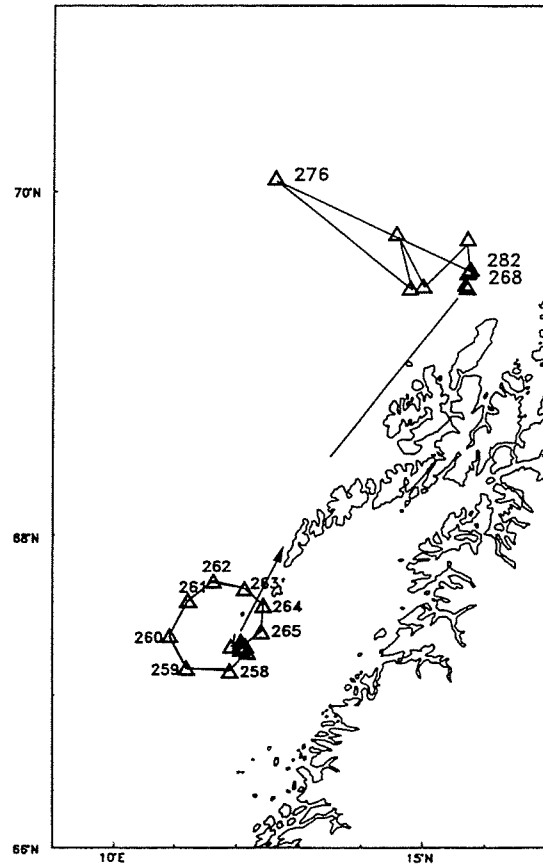


8 - 22 July 1996

"Michael Sars"

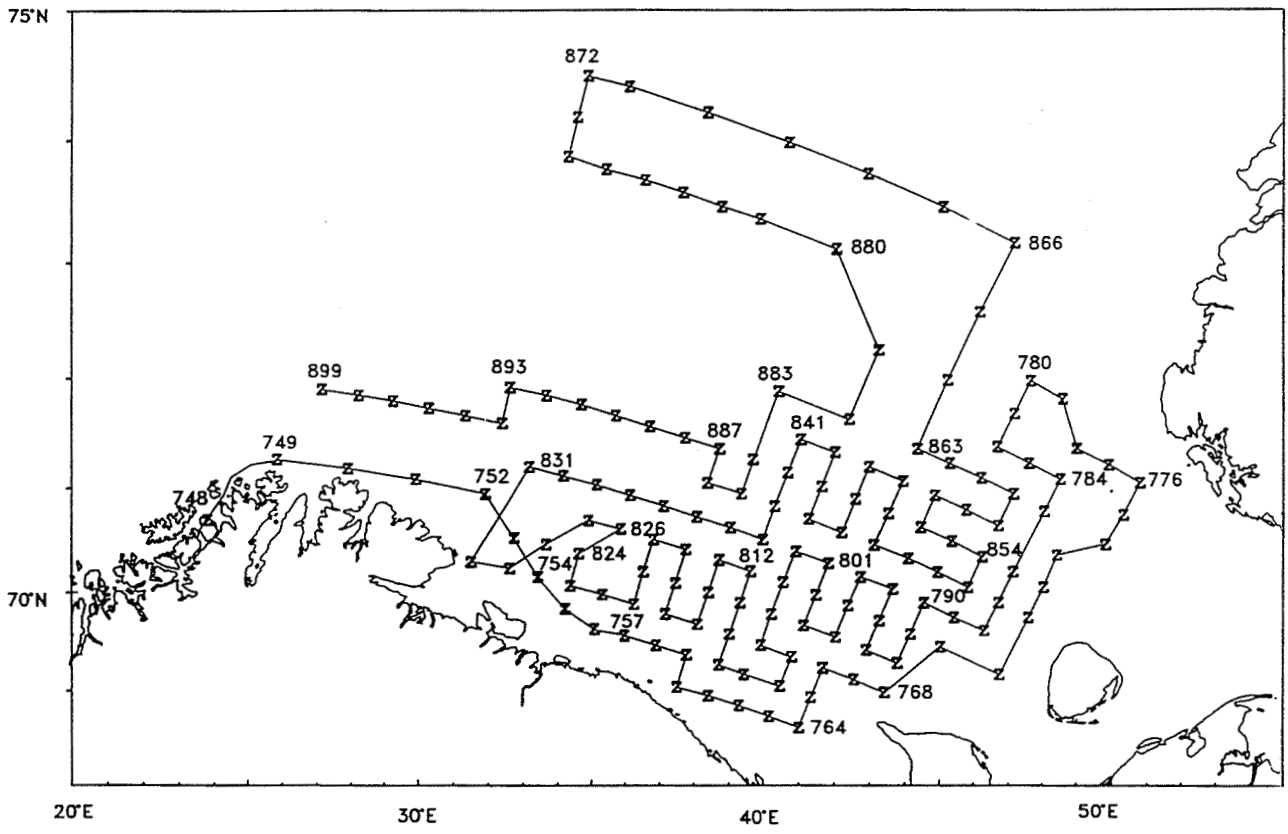
Cruise no 1996108

z CTD st.no 723-747



Δ Pel. TRAWL st.no 254-282

"Michael Sars"

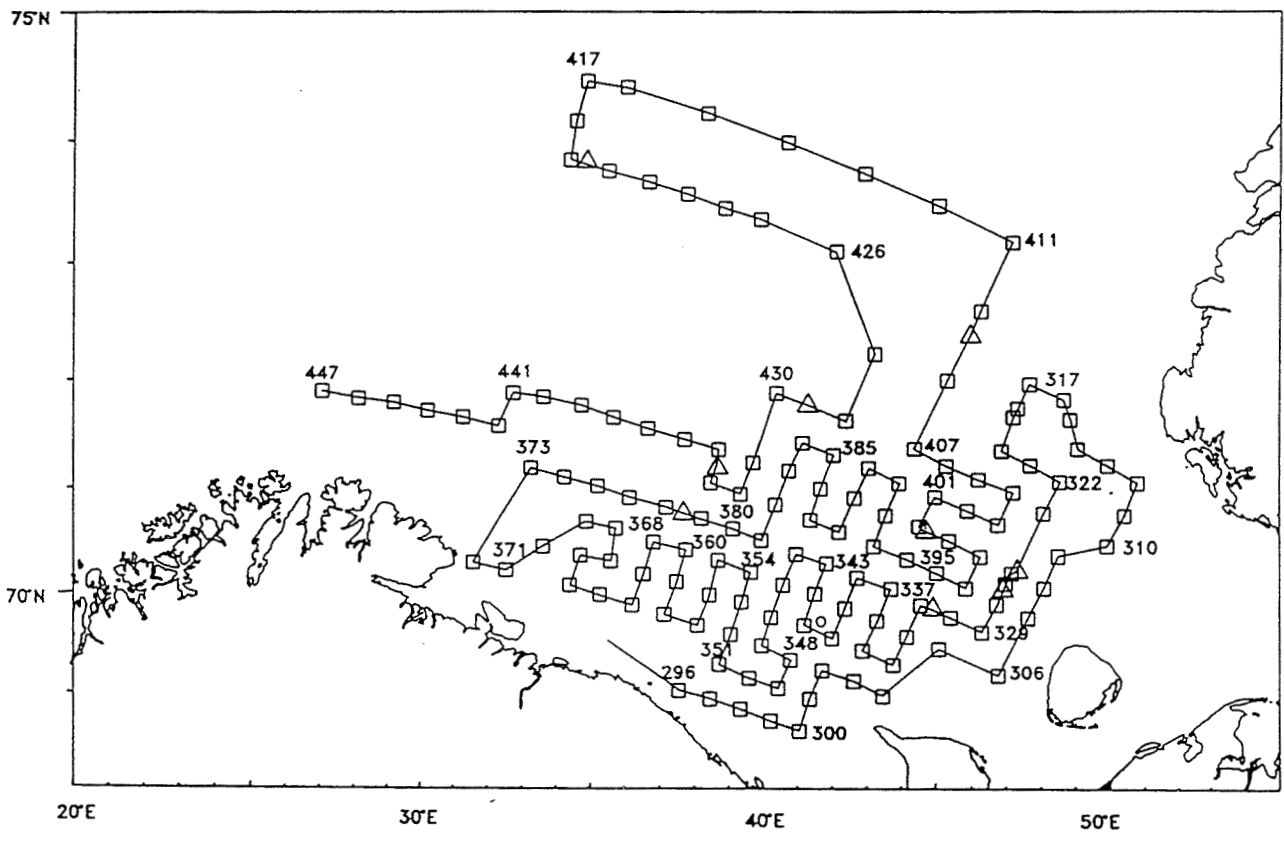


24 Jul - 20 Aug 1996

z CTD st.no 748-899

"Michael Sars"

Cruise no 1996903



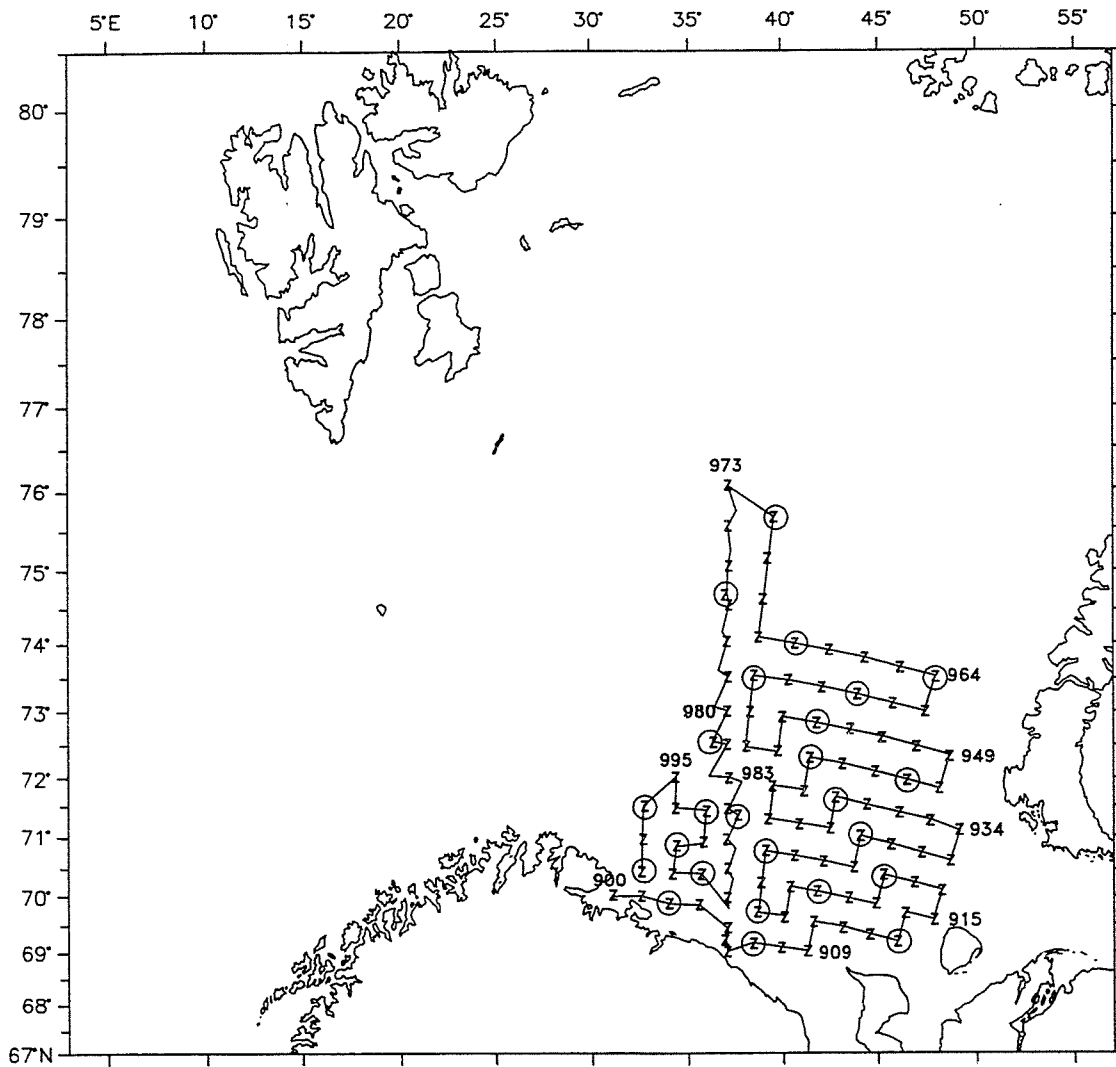
24 Jul - 20 Aug 1996

□ △ TRAWL st.no 296-447

"Michael Sars"

Cruise no 1996903

□ Bottom tr.
△ Pel. tr.



22 Aug - 10 Sep 1996

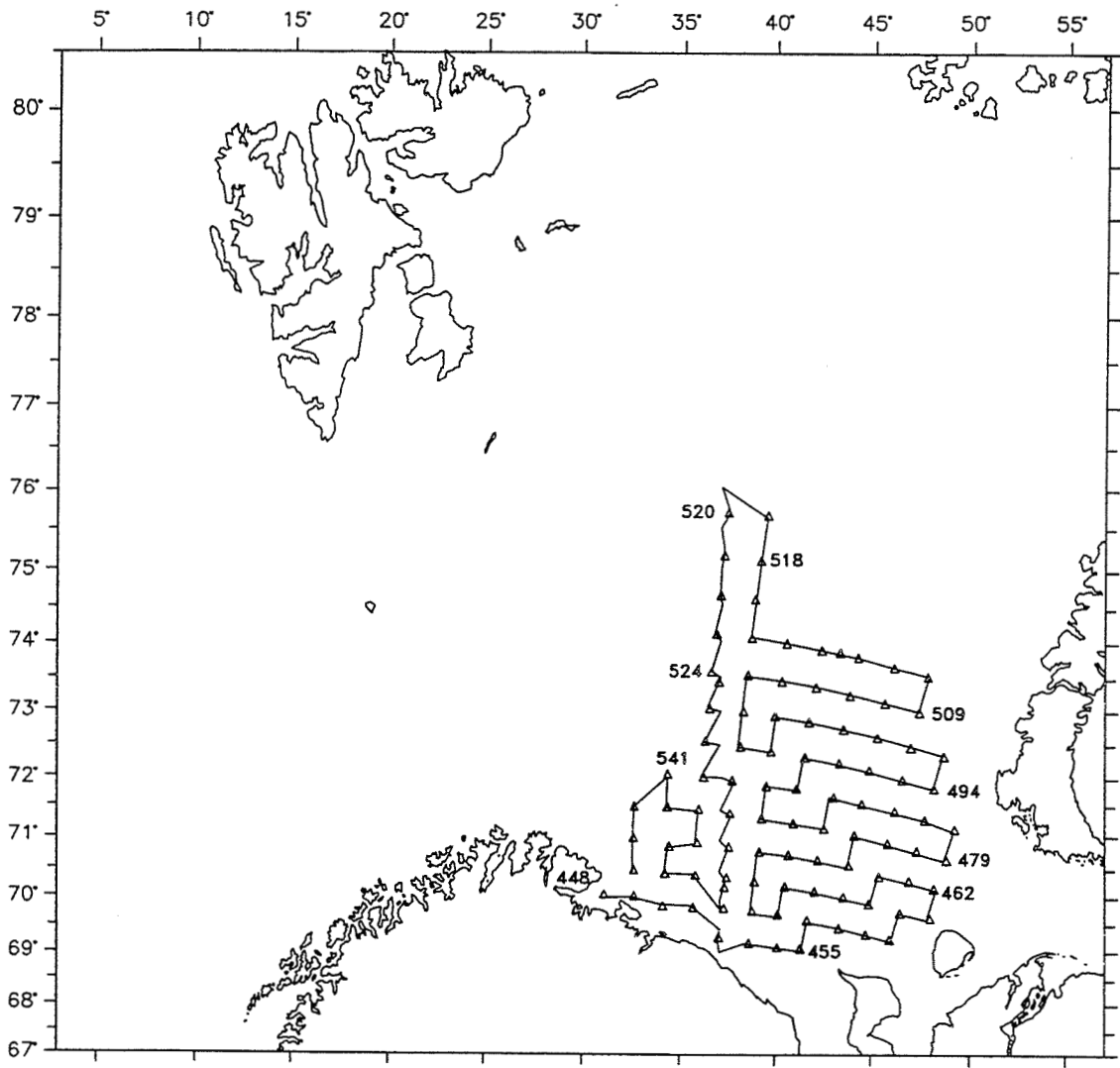
Cruise no 1996902

z CTD st.no 900-998

"Michael Sars"

⊙ CTD and PLANKTON st. (WPII-net)

Standard section Semøyene N: st.no 973-975
 977-980
 982-984
 986-988
 904-905

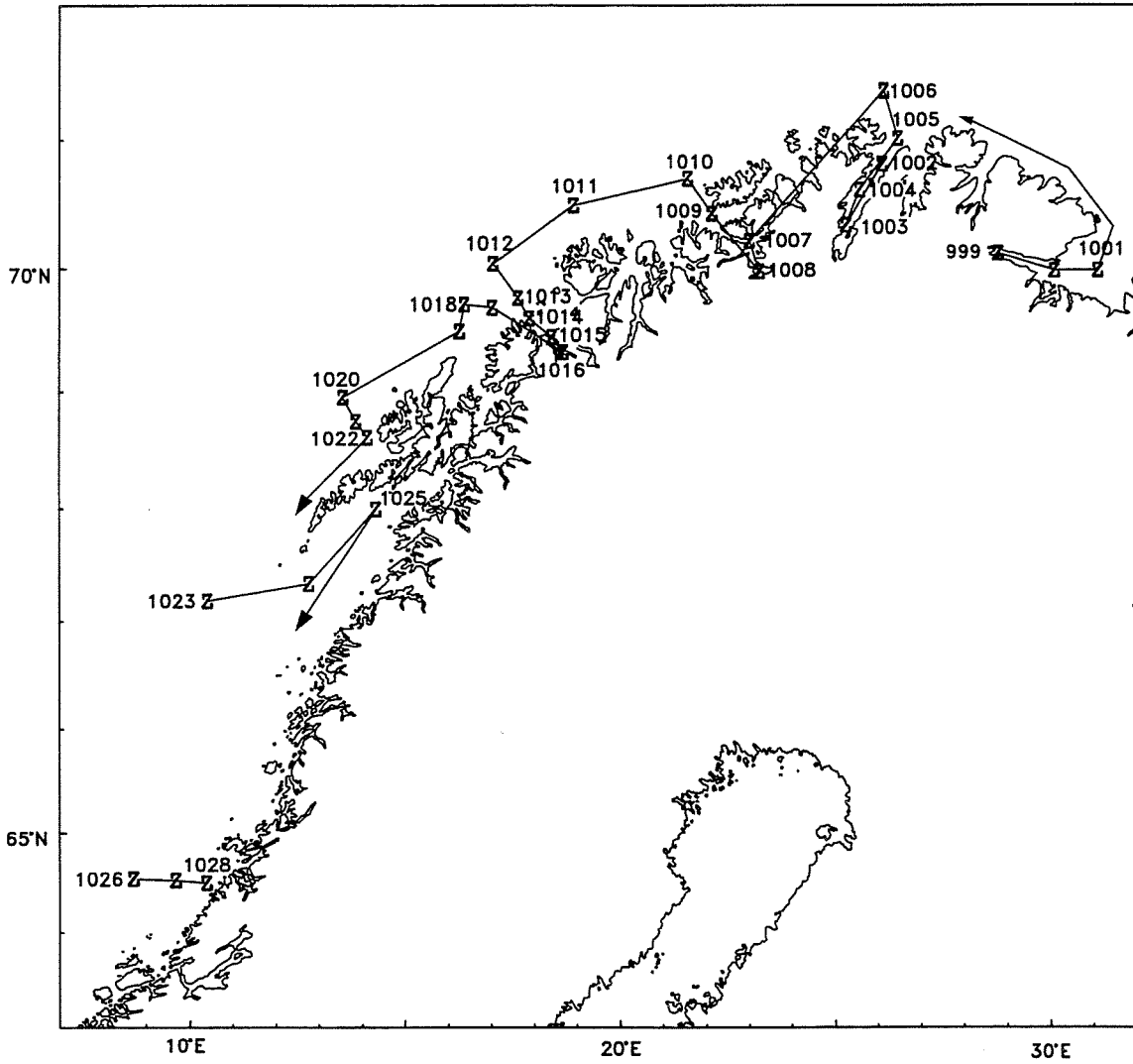


22 Aug - 10 Sep 1996

Δ Pel. TRAWL st.no448-544

"Michael Sars"

Cruise no 1996902



11 Sep - 8 Oct 1996

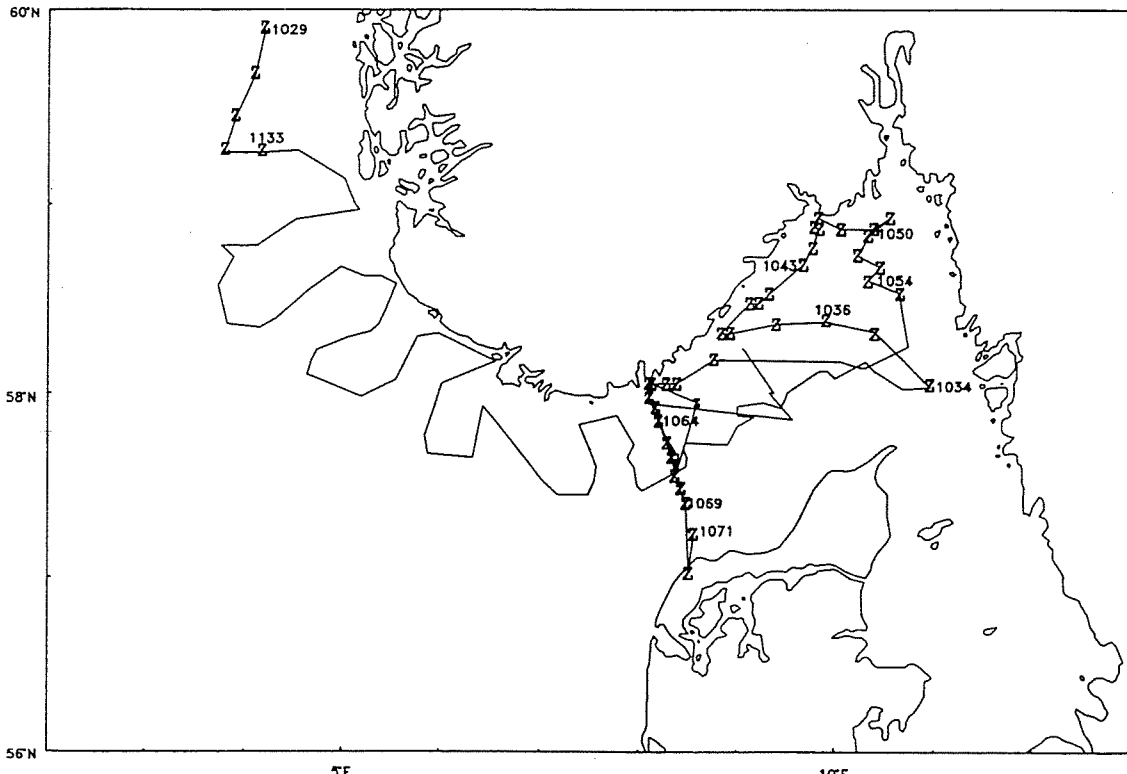
z CTD st.no 999-1028

"Michael Sars"

Cruise no 1996111

(TRAWL st.no 545-748 not shown)

Norwegian Inst. of Fish and Aquaculture



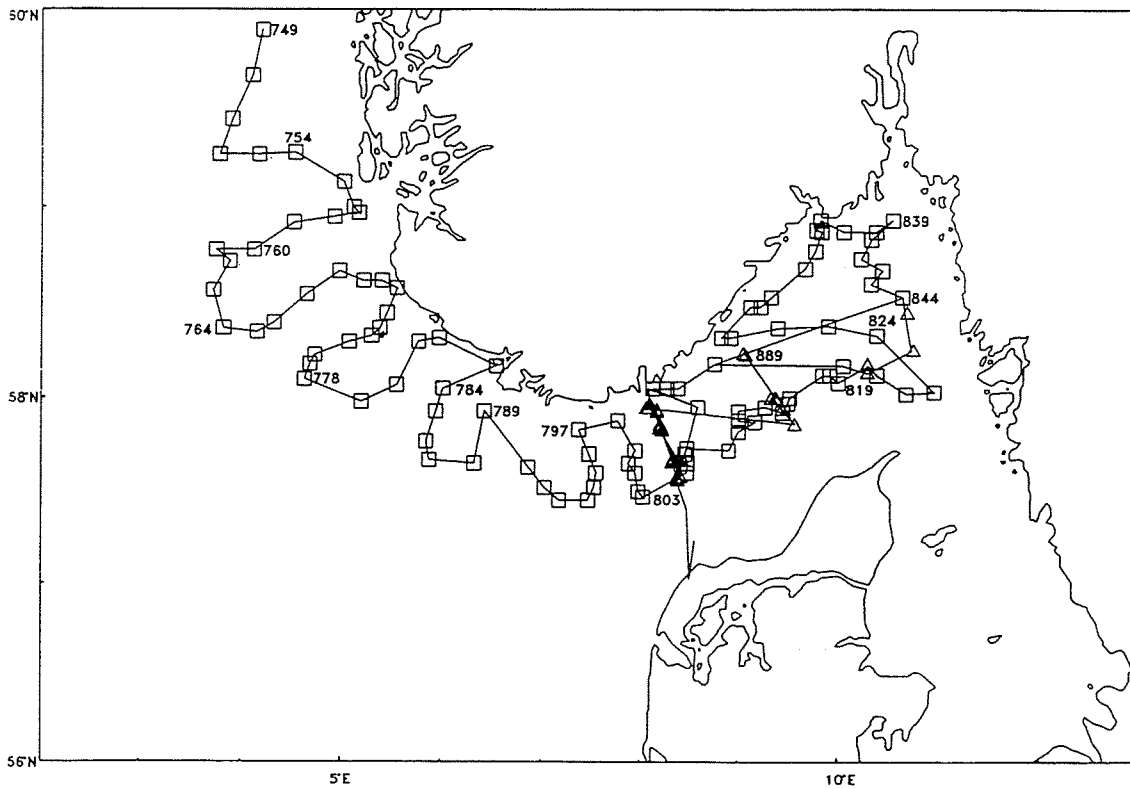
10 - 30 Oct 1996

z CTD st.no 1029-1071

"Michael Sars"

Cruise no 1996112

Standard section Okse-Hanstholm:st.no 1061-1071



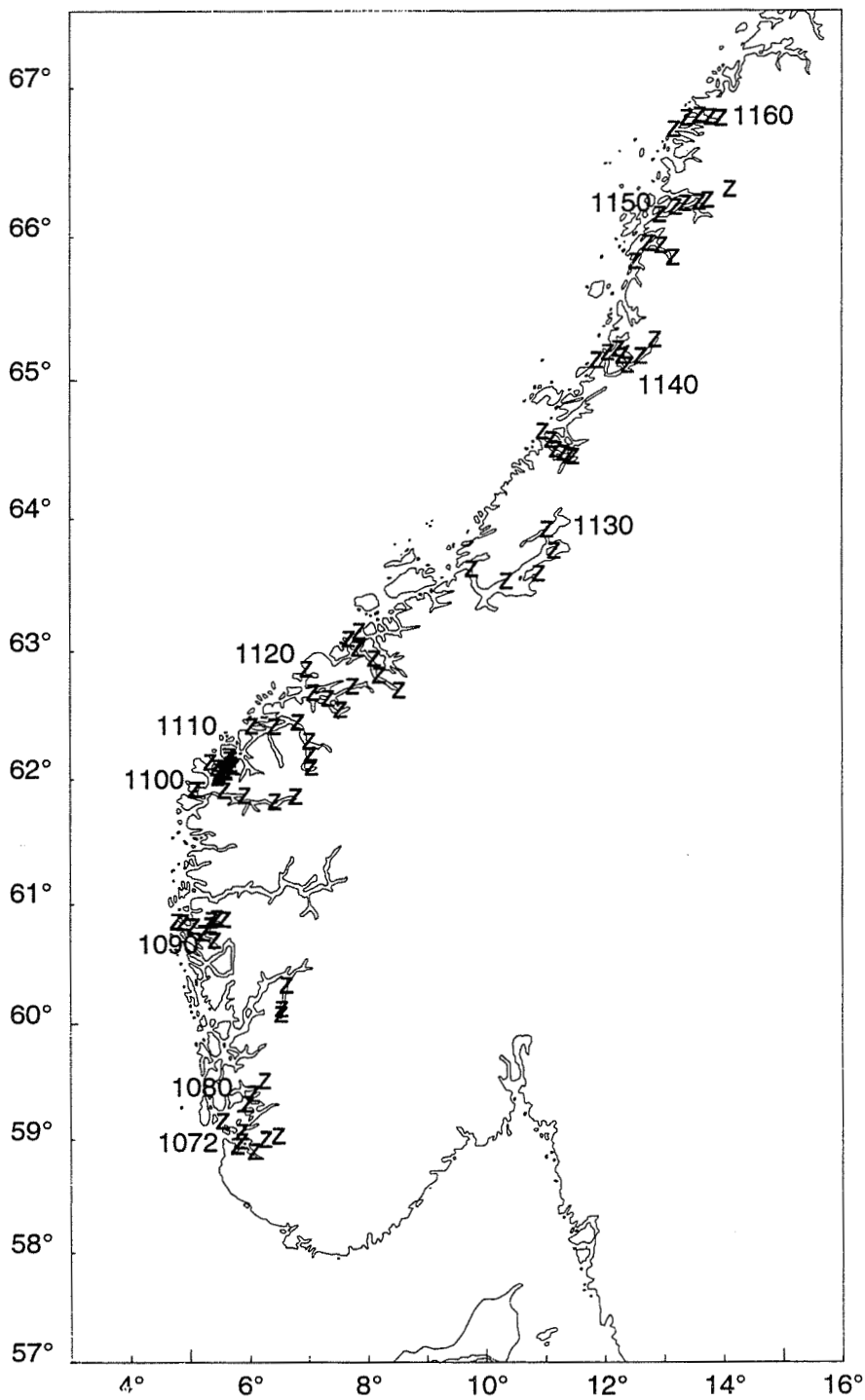
10-30 Oct 1996

□△TRAWL St.no 749-889

"Michael Sars"

Cruise no 1996112

□ Bottom tr.
△ Pel. tr.

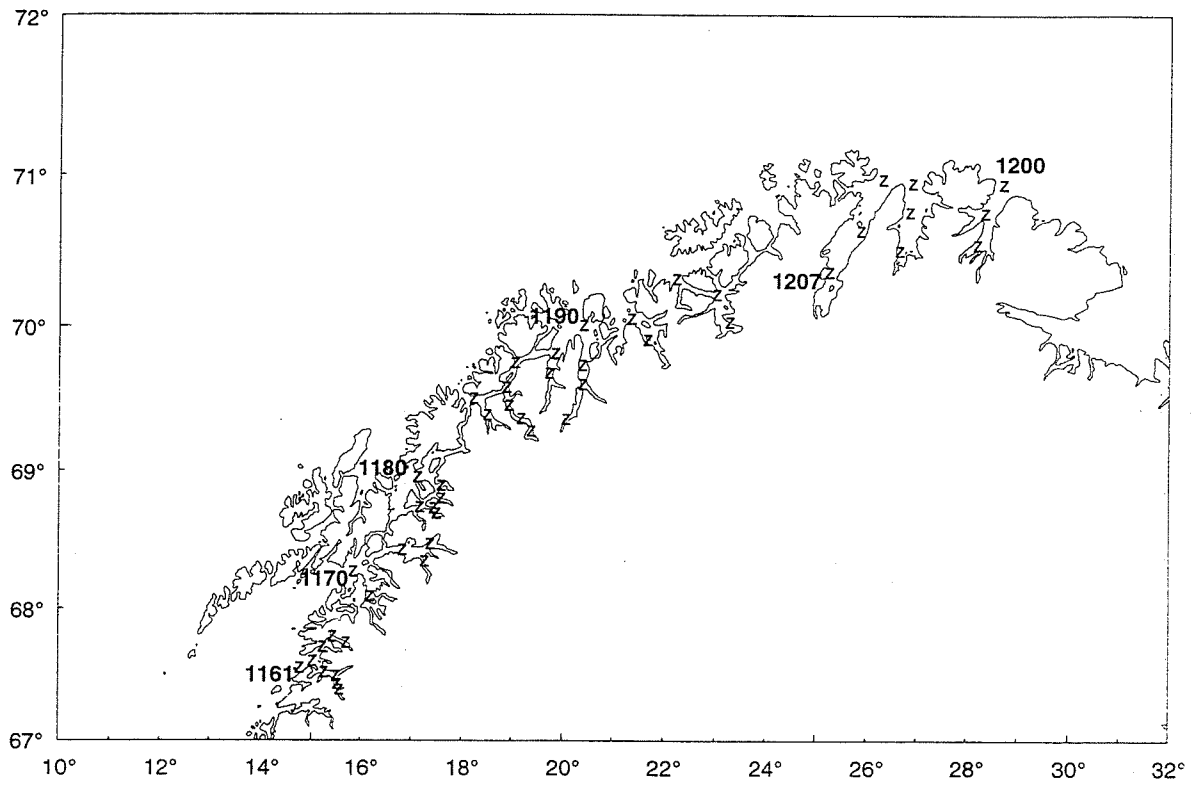


2 Nov. - 11 Dec 1996

I PART z CTD st.no 1072 - 1160

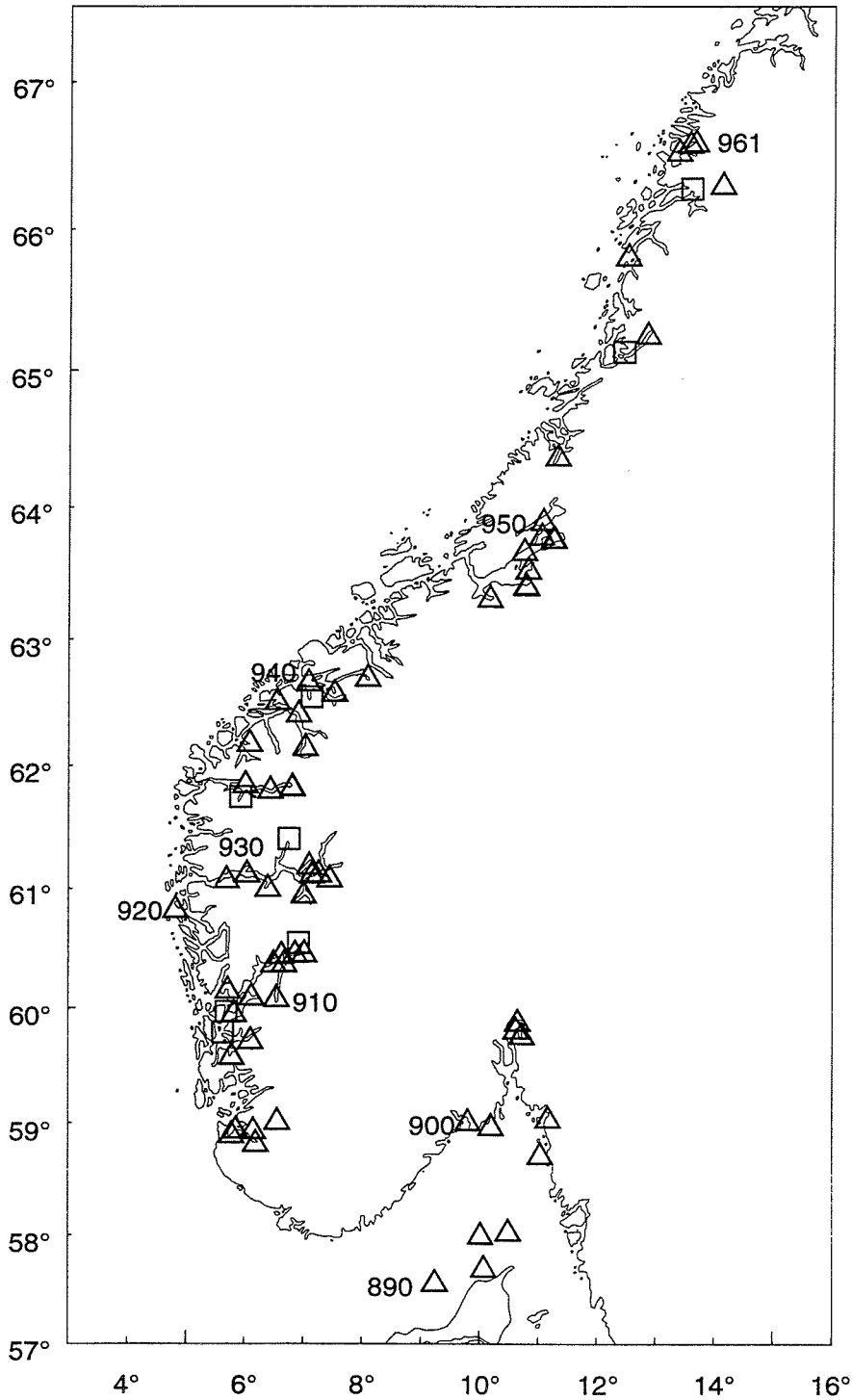
"Michael Sars"

Cruise no 1996113



II PART z CTD st.no 1161-1207

"Michael Sars"

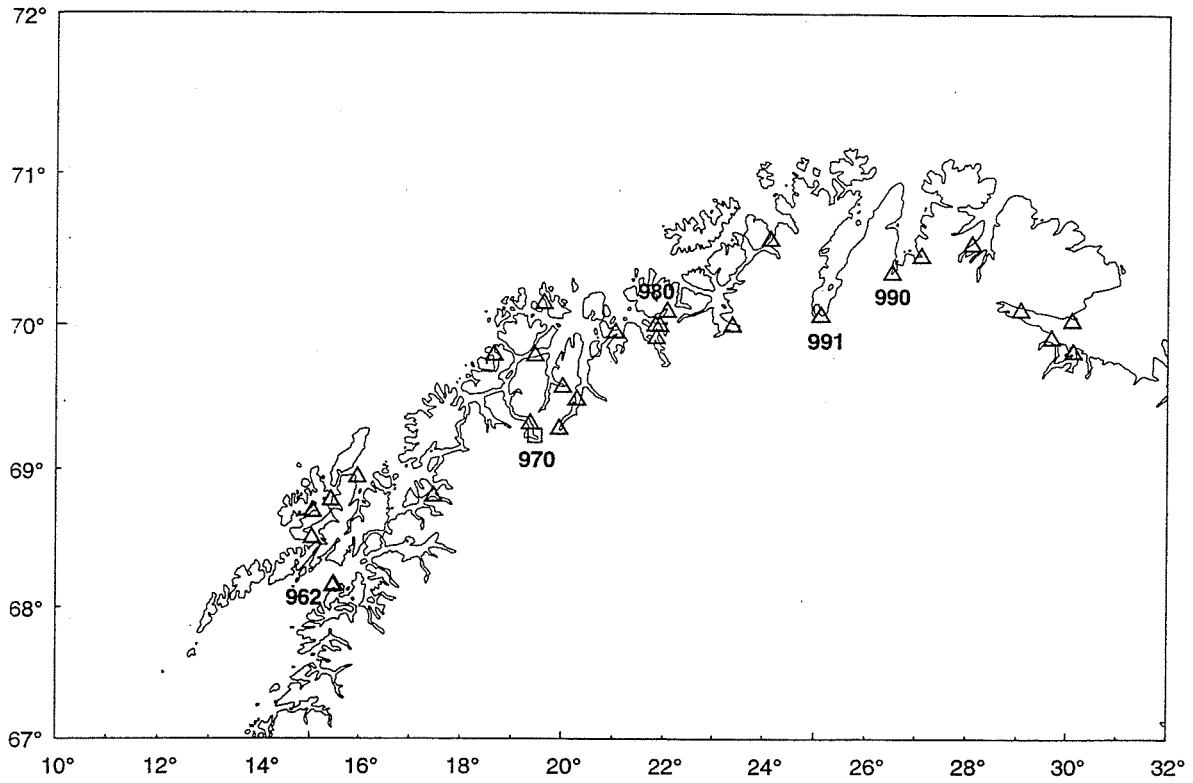


I PART

□△ TRAWL st.no 890-961 "Michael Sars"

Cruise no 1996113

△ Pel trawl
□ Bottom trawl

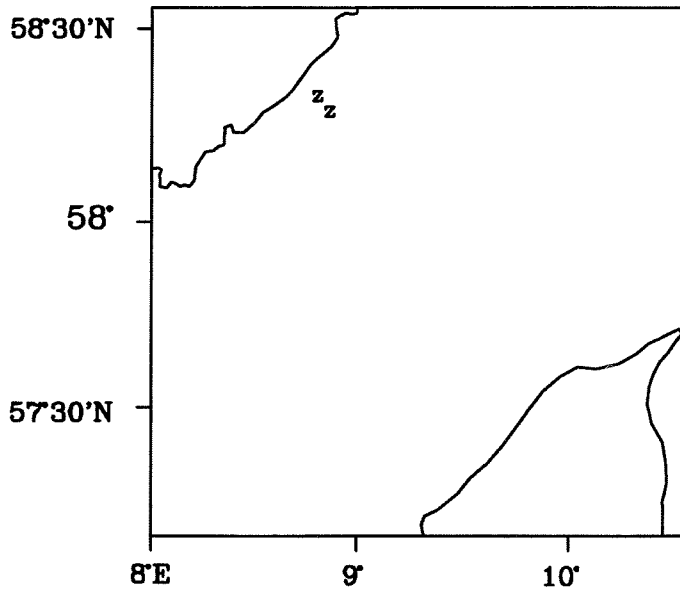


II PART Δ TRAWL st.no 962-991

"Michael Sars"

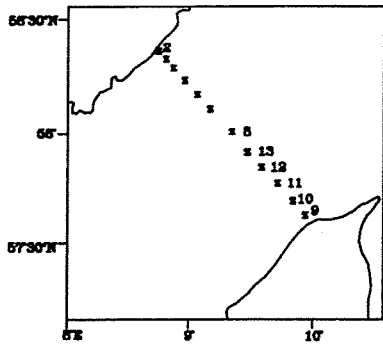
SFT:

St. 2 and 3
at Torungen - Hirtshals section

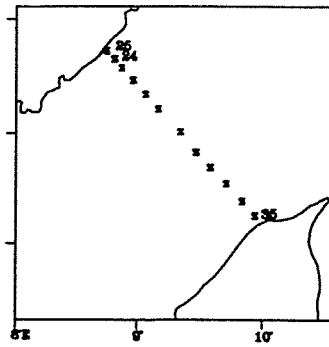


Date	st.no
8.1.	1
22.1.	22-23
5.2.	24
20.2.	36-37
29.2.	39
15.3.	60-61
1.4.	62
15.4.	64-65
13.5.	172-173
24.5.	192
10.6.	194-195
24-26.6.	205-214
8.7.	215-226
5.8.	228
19.8.	248-249
9.9.	251
19.9.	278
7.10	322+324
19.10	351
4.11.	352+355
27.11.	374
13.12	375
19.12.	378

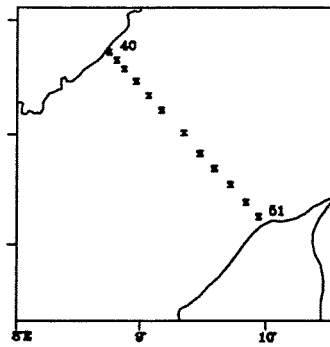
TORUNGEN - HIRTSHALS - 1996



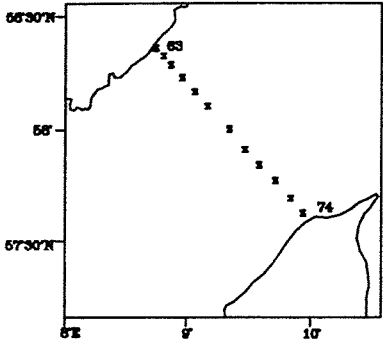
9-10 Jan CTD st.no 2-13



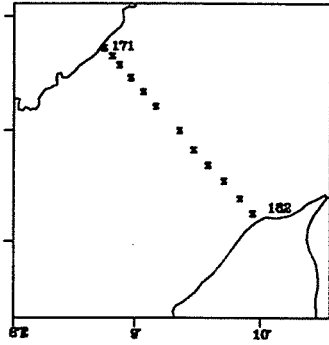
5-6 Feb CTD st.no 24-35



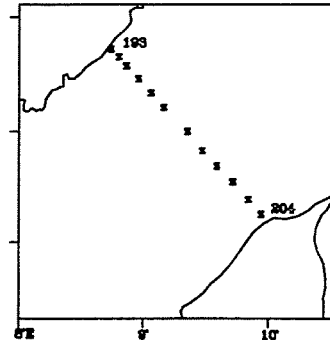
4-5 Mar CTD st.no 40-51



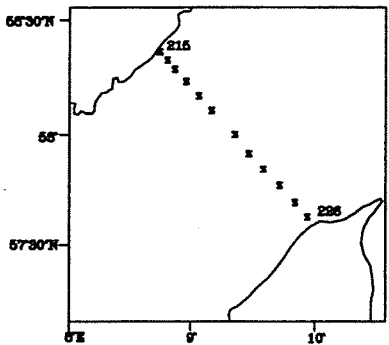
16-17 Apr CTD st.no 63-74



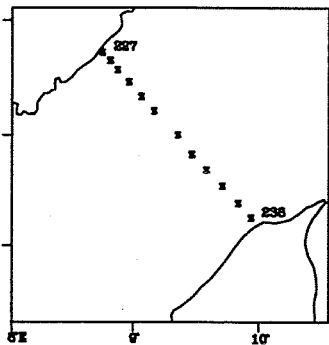
13-14 May CTD st.no 171-182



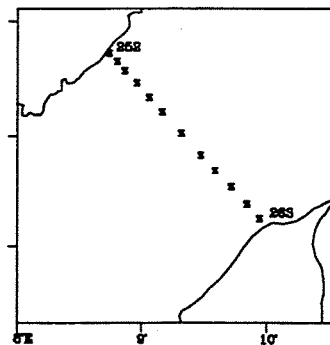
9-10 Jun CTD st.no 193-204



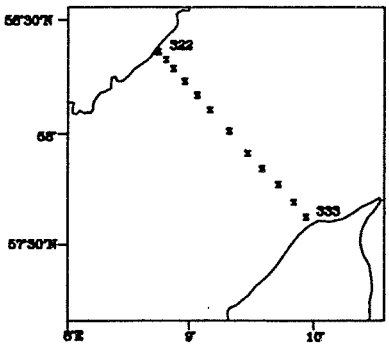
8-9 Jul CTD st.no 215-226



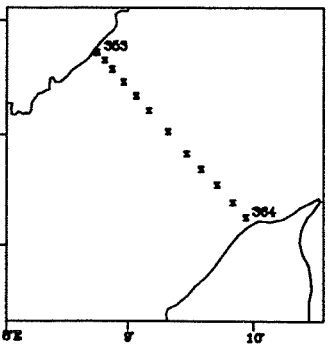
5-6 Aug CTD st.no 227-238



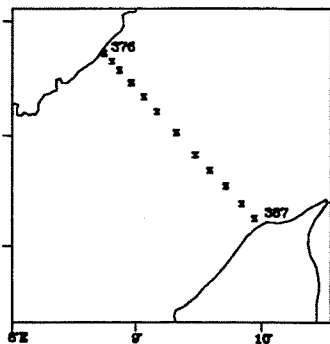
9-10 Sep CTD st.no 252-263



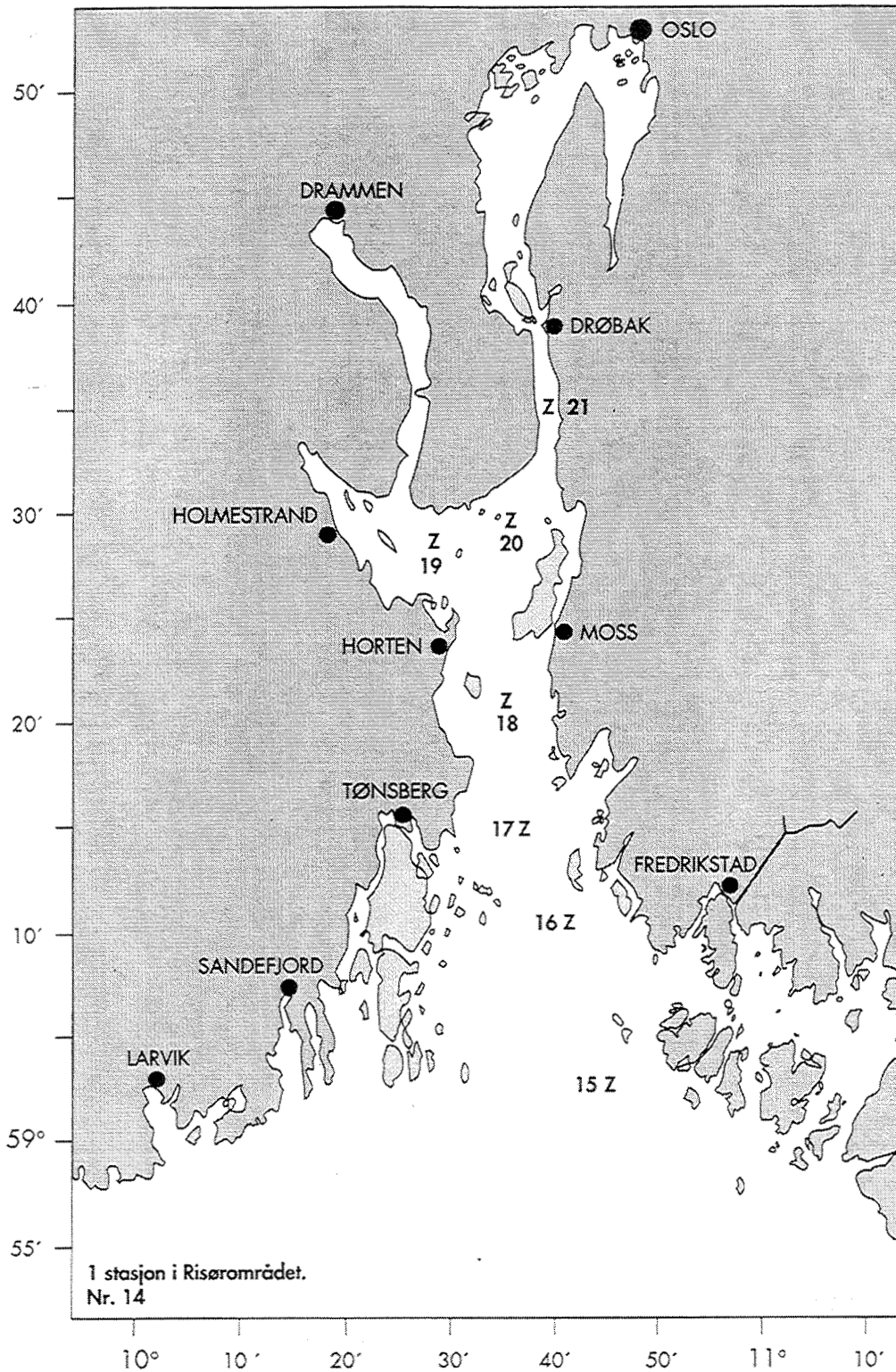
6-7 Oct CTD st.no 322-333



5-6 Nov CTD st.no 353-364



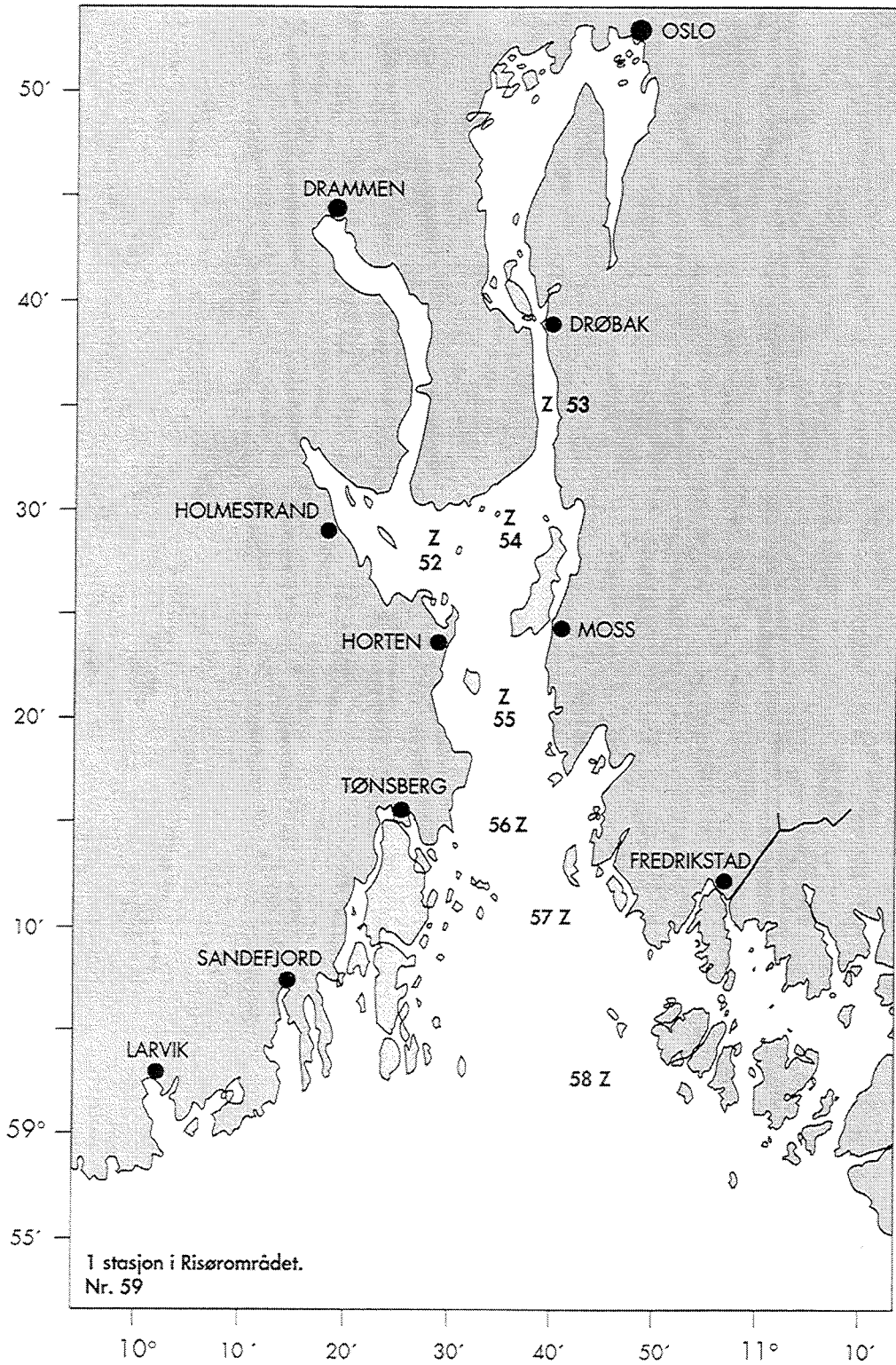
19 Dec CTD st.no 376-387



11 - 13 Jan 1996
Cruise no 1996302

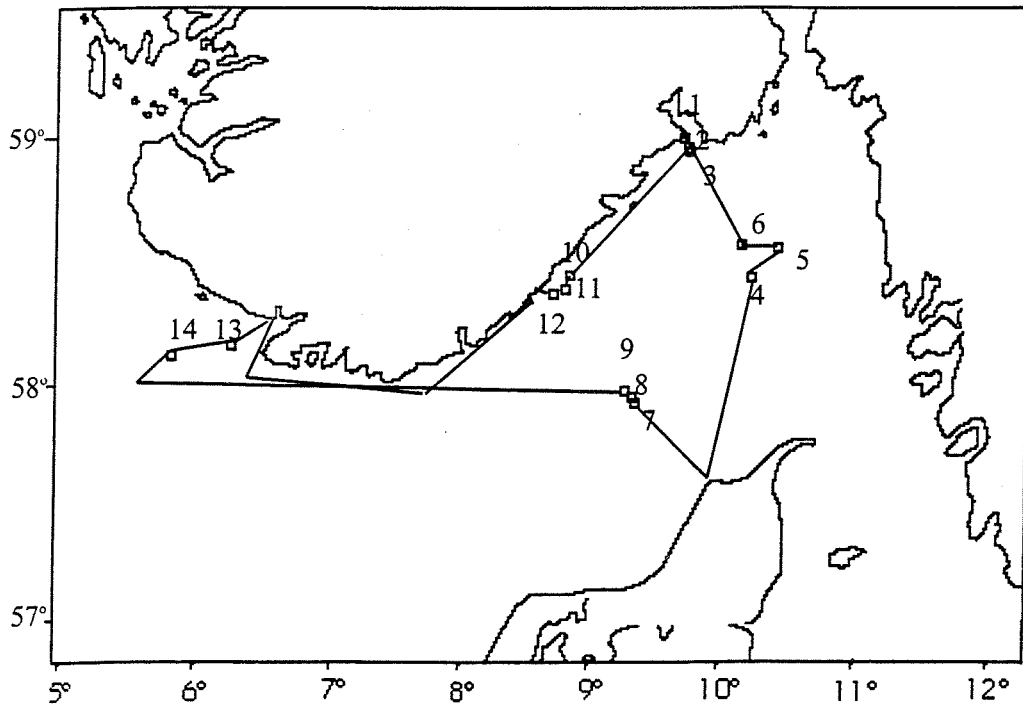
Z CTD.st.no 14-21

"G.M. Dannevig"



7 - 8 Mar 1996
Cruise no 1996307

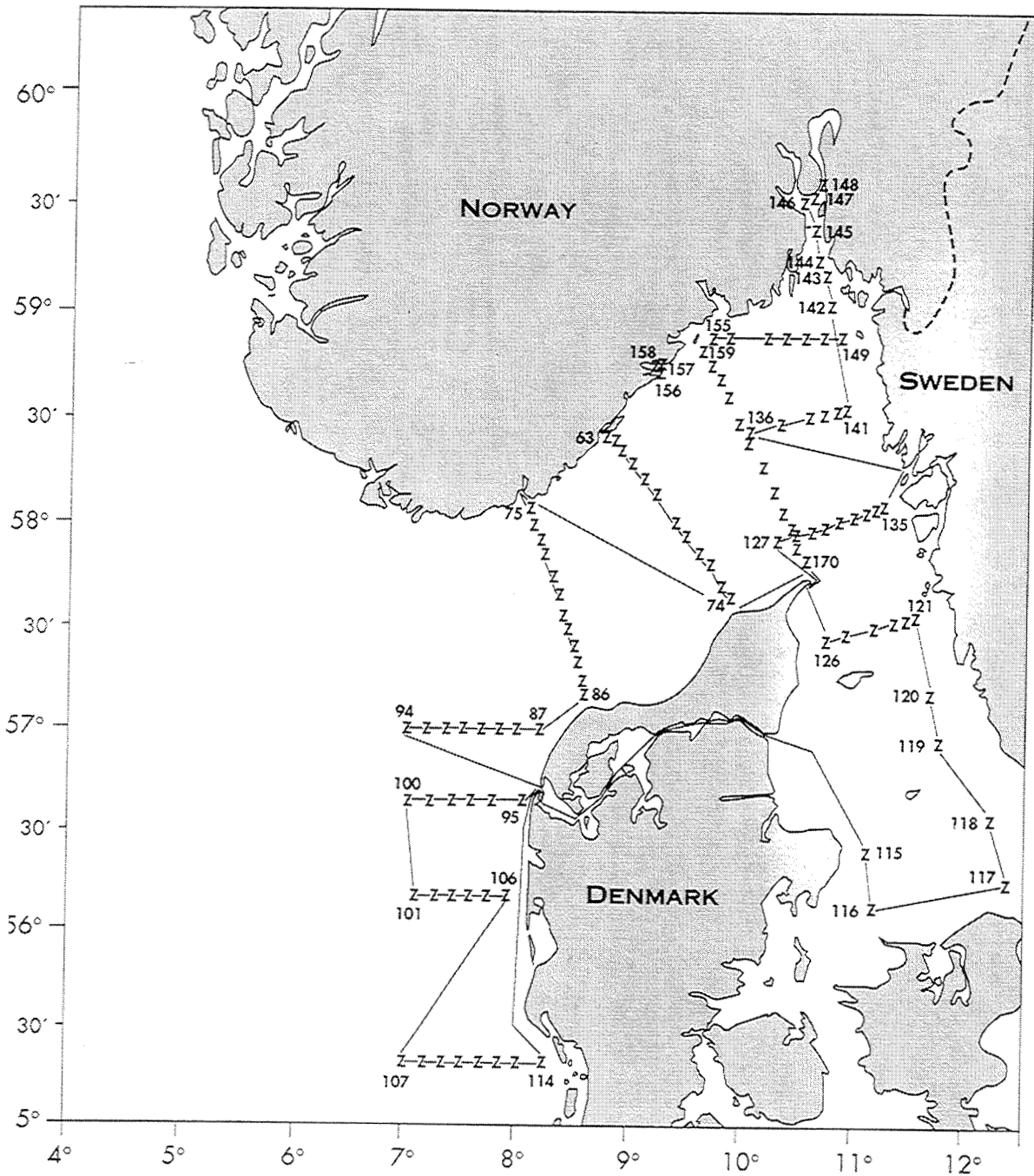
Z CTD.st.no 52-59 "G.M. Dannevig"



21 - 27 Mar 1996
Cruise no 1996308

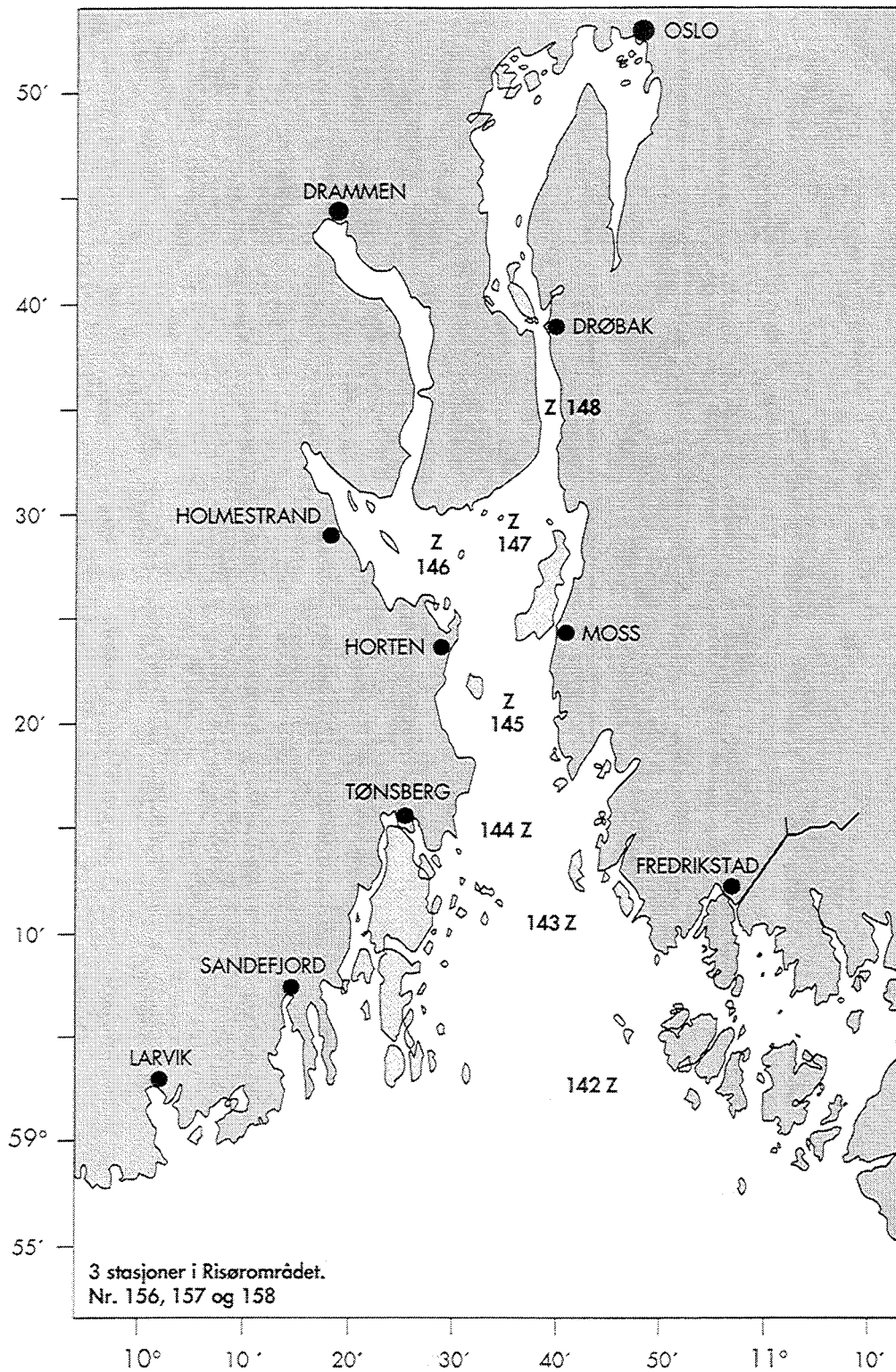
TRAWL st.no 1-14

"G.M. Dannevig"



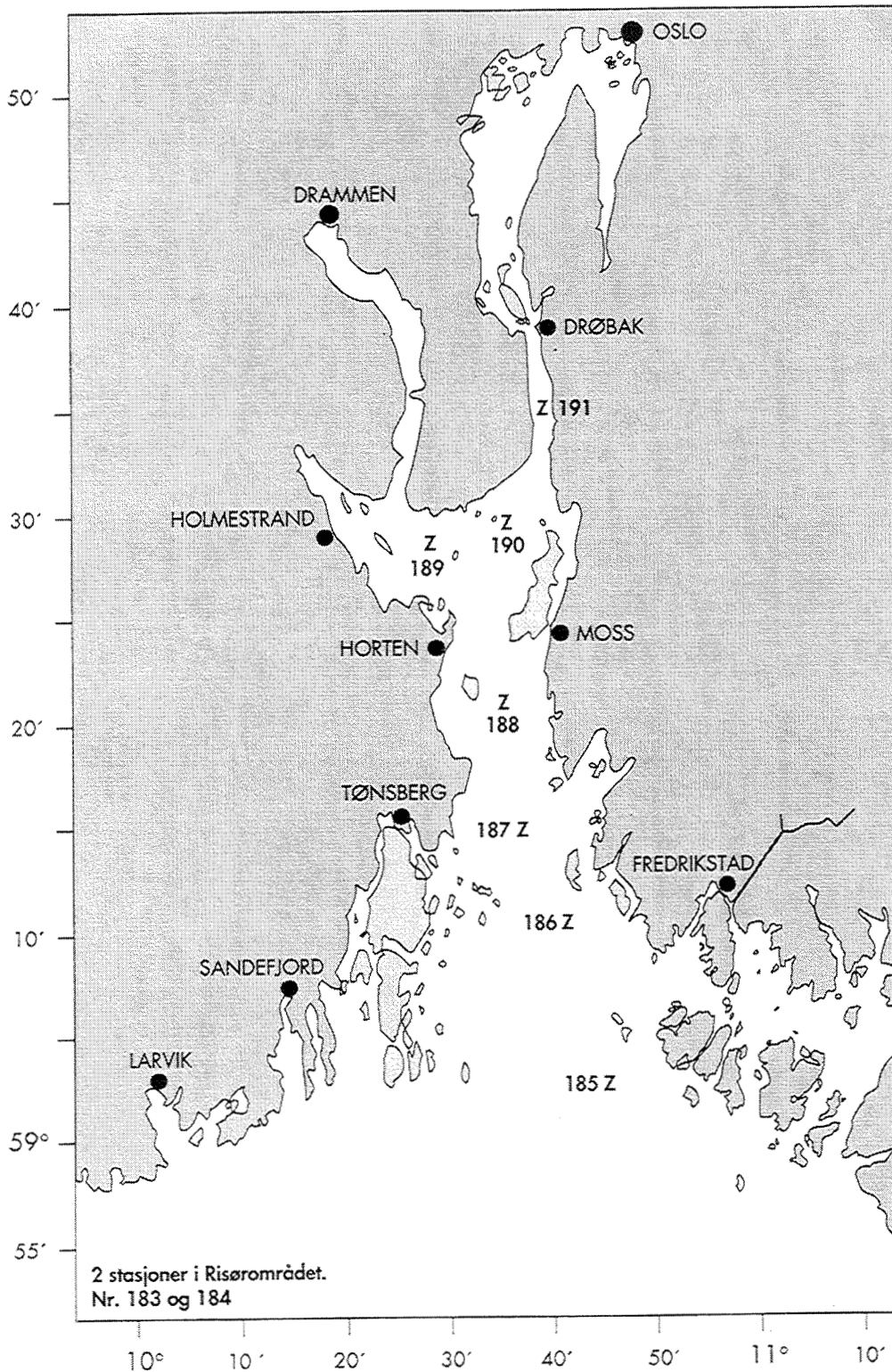
15 Apr - 4 May 1996 Z CTD.st.no 63-170
 Cruise no 1996309\310

"G.M. Dannevig"



28 - 30 Apr 1996
 Cruise no 1996310

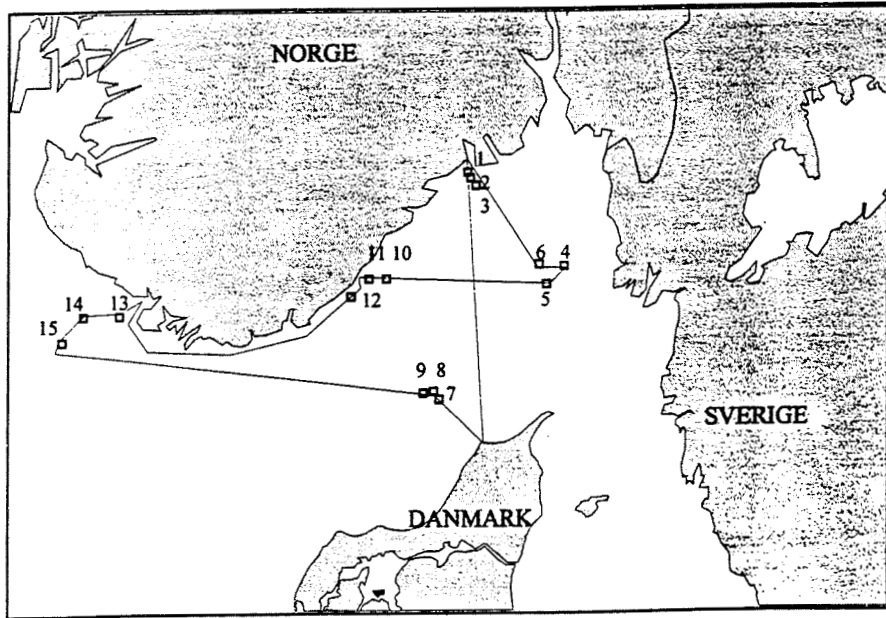
Z CTD.st.no 142-158 "G.M. Dannevig"



22 - 24 May 1996
 Extra Cruise 3

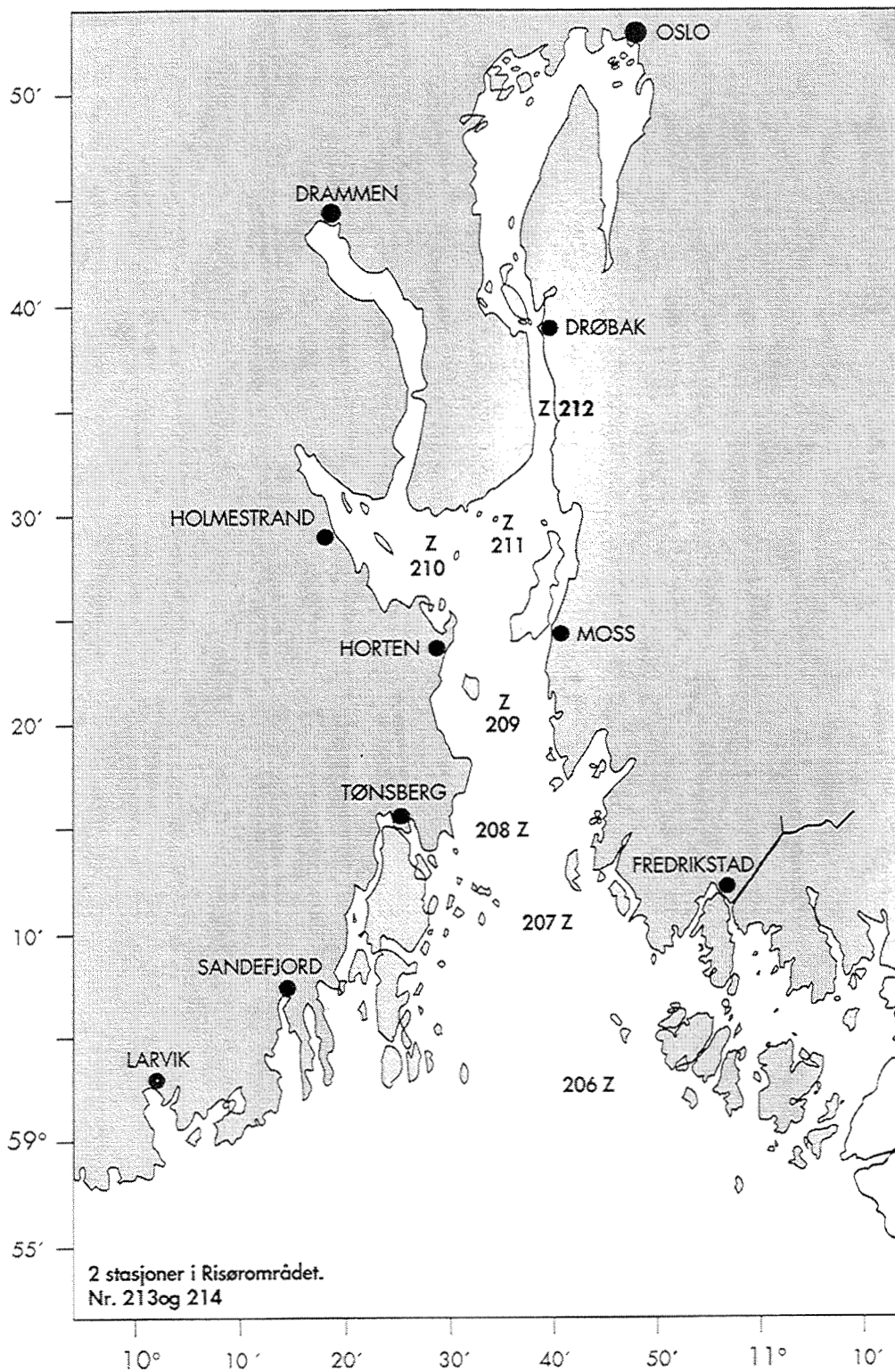
Z CTD.st.no 183-191

"G.M. Dannevig"



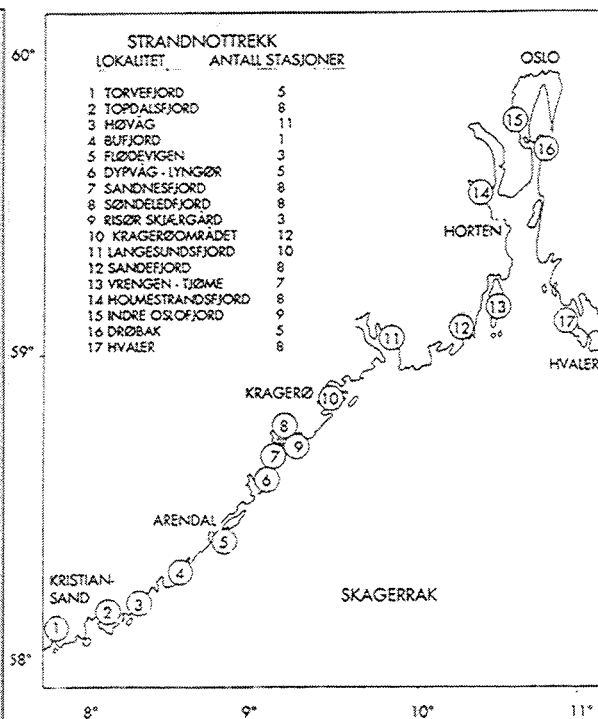
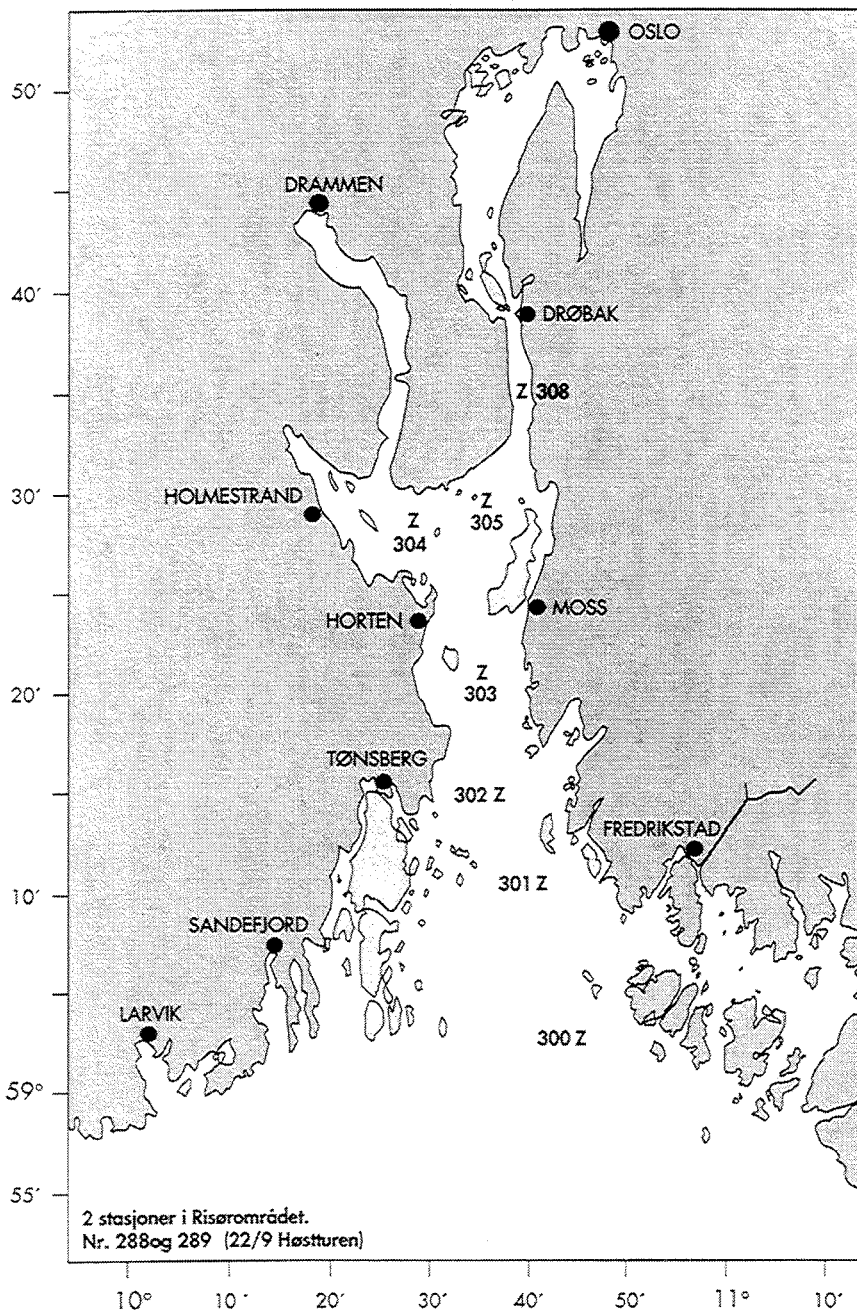
13 - 20 Jun 1996
Cruise no 1996316

TRAWL st.no 1-15 "G.M. Dannevig"

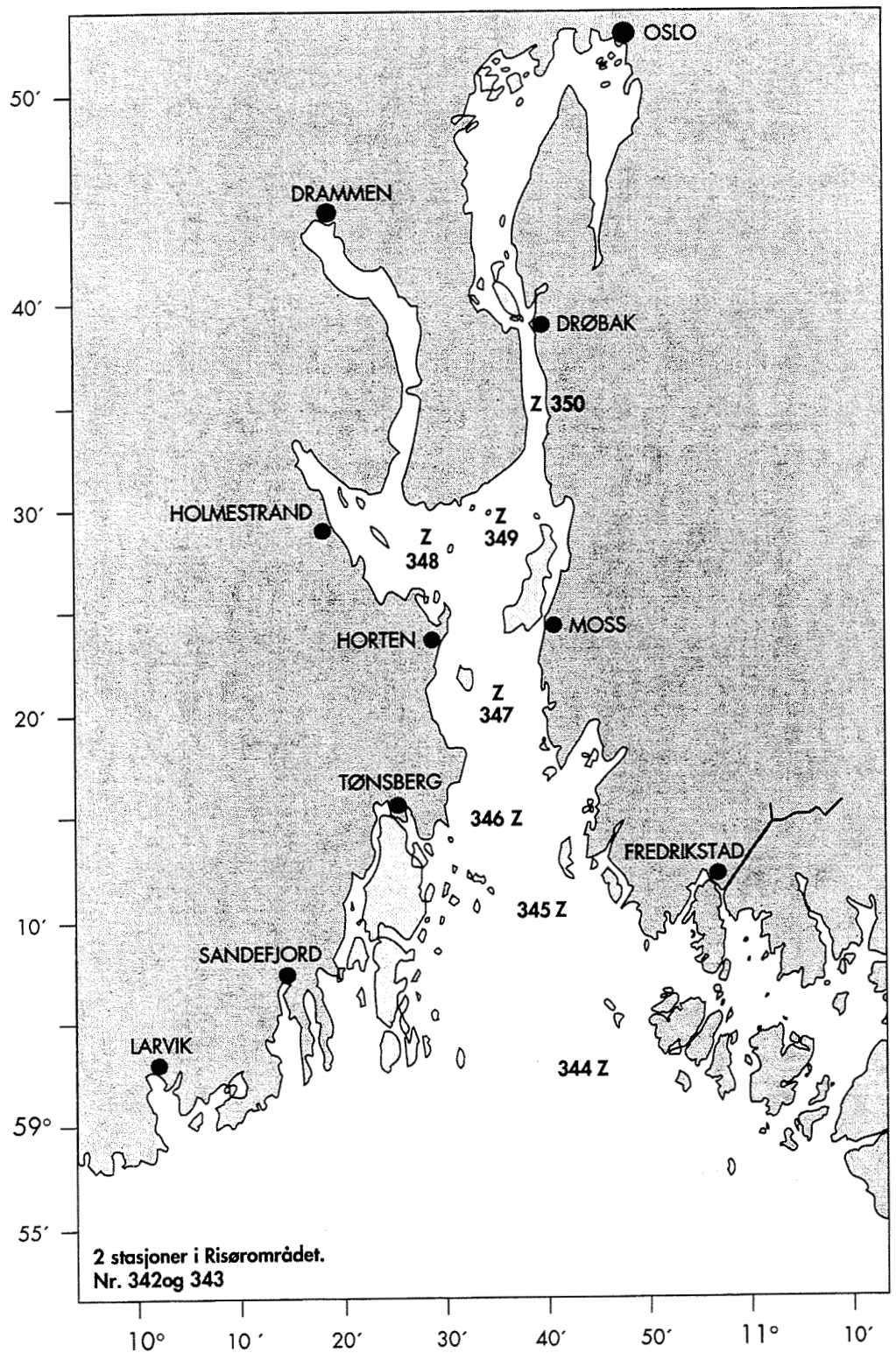


24 - 26 Jun 1996
 Cruise no 1996362

z CTD st.no 206-214 "G.M. Dannevig"



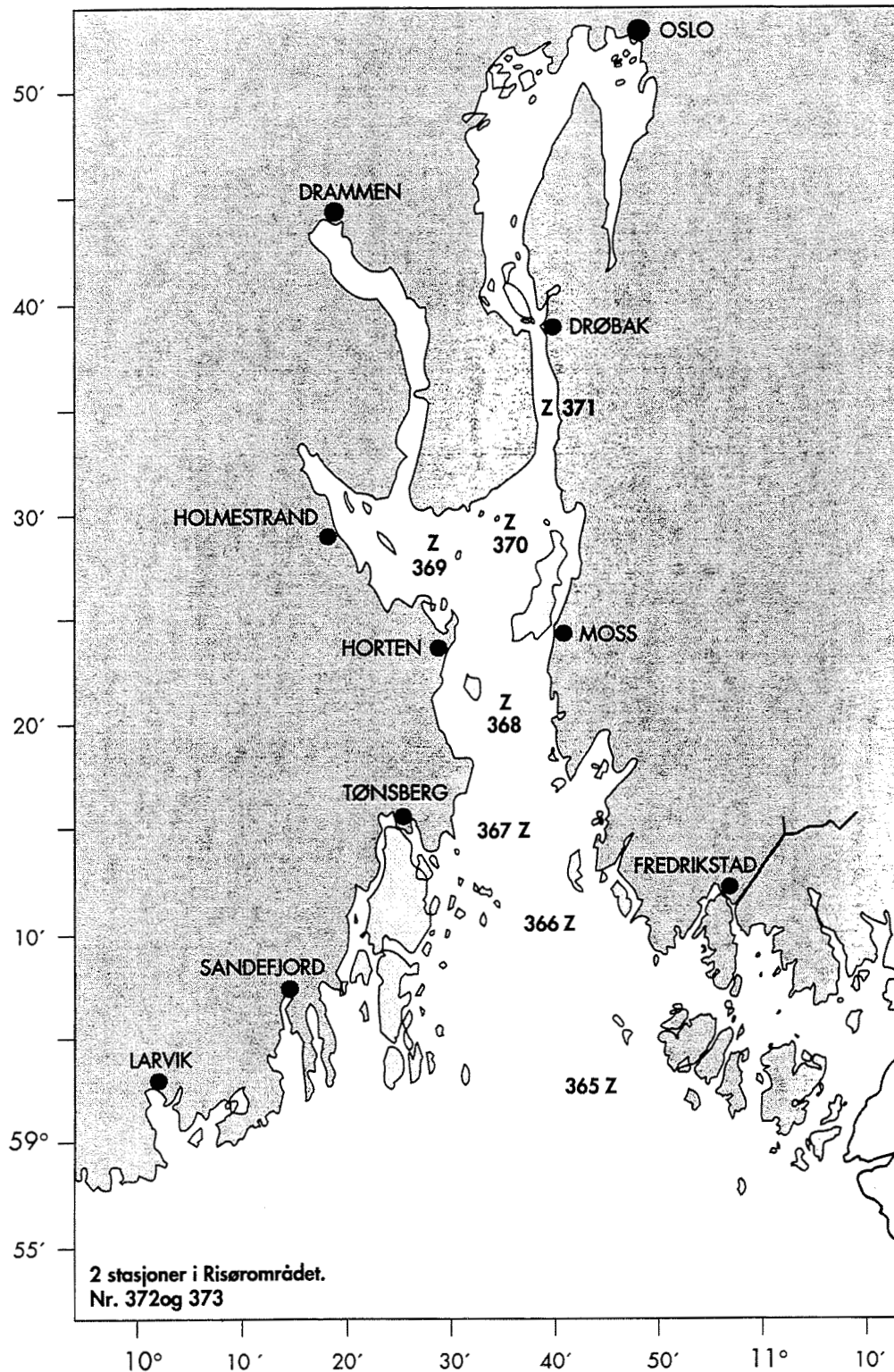
26 - 27 Sep 1996 Z CTD.st.no 288-308 "G.M. Dannevig"
Cruise no 1996327



17 - 18 Oct 1996
 Cruise no 1996330

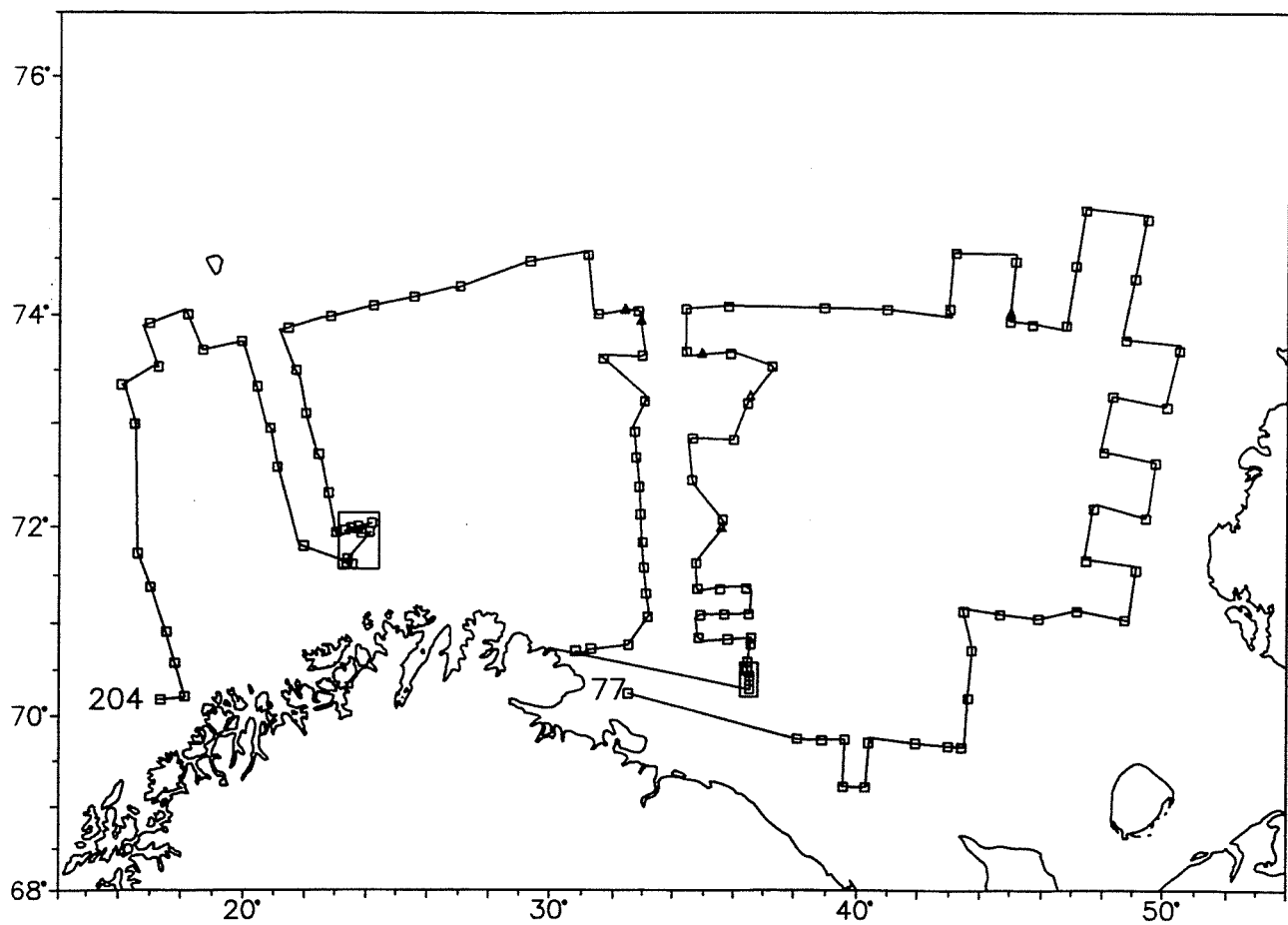
Z CTD.st.no 342-350

"G.M. Dannevig"



18 - 26 Nov 1996
 Cruise no 1996333

z CTD st.no 365-373 "G.M. Dannevig"

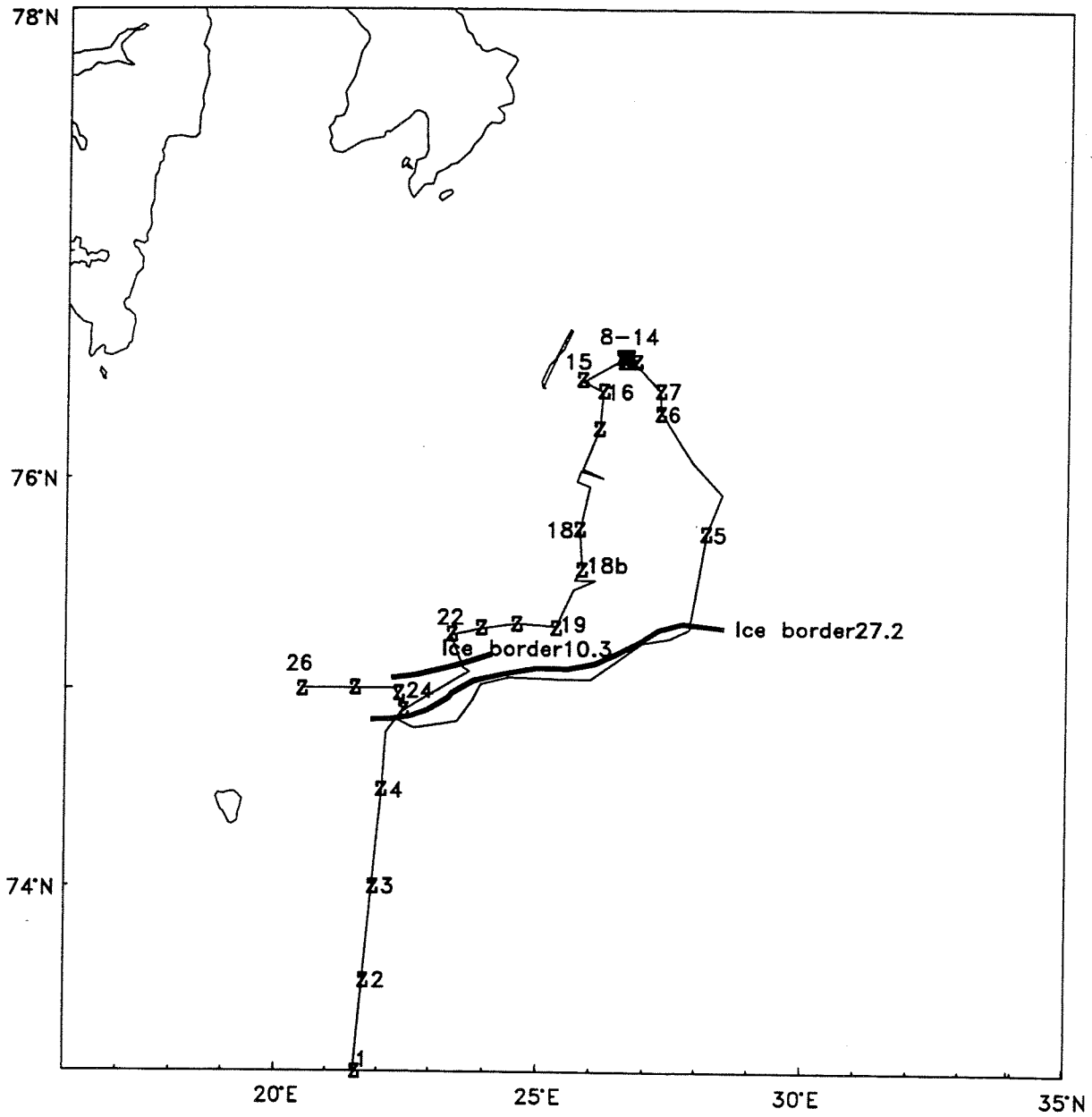


5 - 29 Feb 1996

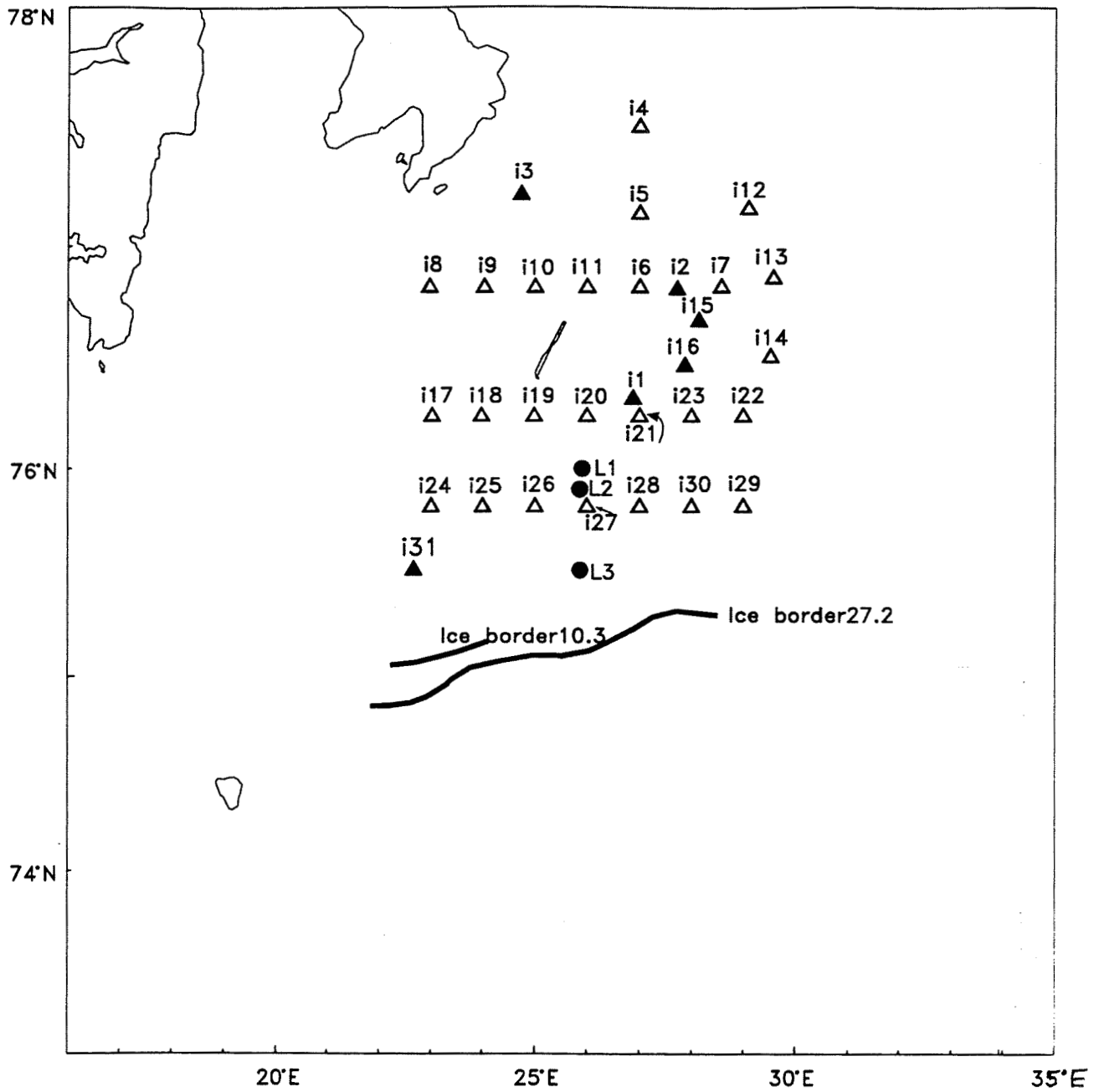
TRAWL st.no 77-204

"Jan Mayen"

Cruise no 996901



23 Feb-14 Mar 1996 z CTD and PLANKTON st.no 1-26 "Lance"
 Cruise no 1996806 (st. 18b-without CTD, st. 13-only CTD with waterbottles)



23 Feb-14 Mar 1996

"Lance"

Cruise no 1996806

- △ Small ice station st i4-i14 and i7-i31
- ▲ Large ice station st i1-i3 and i15-i16
- Large boat station st L1-L3