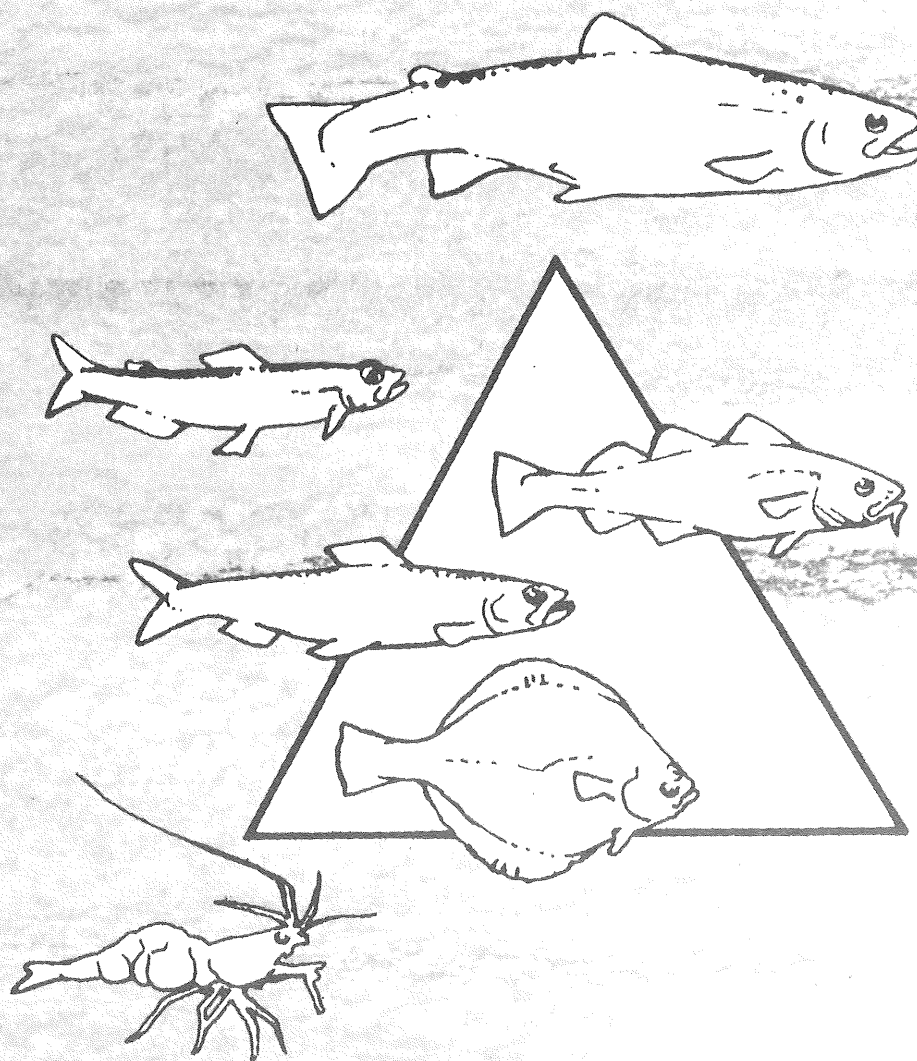


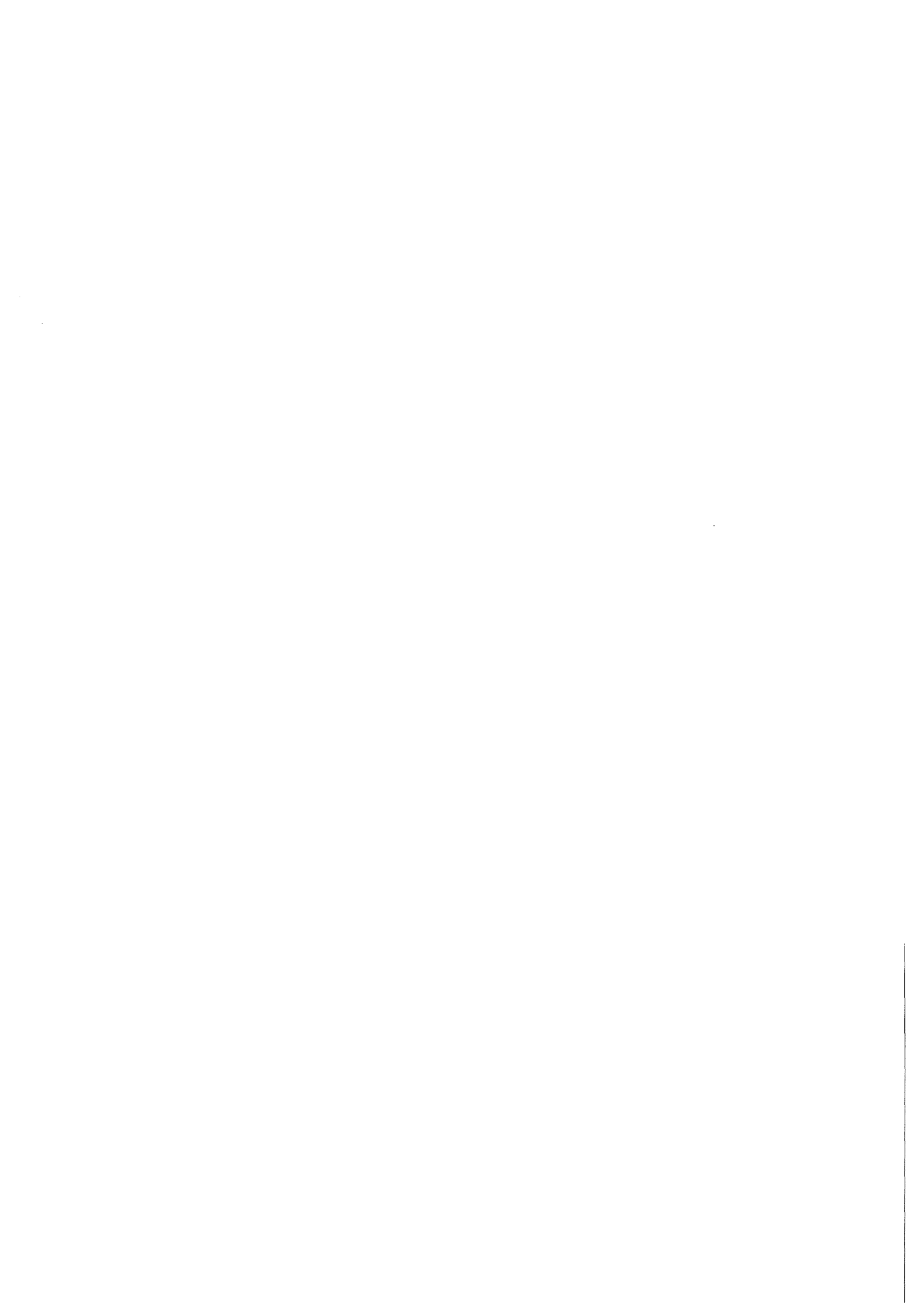
HAVFORSKNINGSINSTITUTTET
RAPPORT FRA SENTER FOR MARINT MILJØ 1993 NR. 1

**REPORT ON
OCEANOGRAPHIC CRUISES
AND DATA STATIONS
1992**



HAVFORSKNINGSINSTITUTTET

RAPPORT FRA SENTER FOR MARINT MILJØ



Karen Gjertsen (red.)

**REPORT ON
OCEANOGRAPHIC CRUISES
AND DATA STATIONS
1992**

Guidelines:

- z Vertical Oceanogr. st., CTD
- △ Pelagic Trawl Station
- Bottom Trawl Station

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY.

Year: 1992

Ship: G.O. Sars

Ship no: 15

Cruise and Ship number.	Period of Cruises.	Number of stations.														Cont. obs.					Page of track chart								
		Classical Oceanogr. st. COS	Vertical Oceanogr. st. CTD	ARGOS Drifters	Current Meters	Radioactivity.	Other dissolved gases	Bottle Cast (Niskin)	Oxygen	Nutrients	Chlorophyll	POC/PON, POP, PS	Pelagic Trawl	Bottom Trawl	Mocness Trawl	Pelagic Eggs and Larvae	Zooplankton	Phytoplankton	Shrimp Trawl	Grab		Gear research	Optics	Acoustic refl. on mar.org.	ADCP	Surface temperature	Transparency	Echo sounding	Echo integration
1/15	3-19.1		20				10	20	20	15	20	6		33		53								x	x	x	x	x	11
2/15	20.1-12.2		96						96				49			66								x	x	x	x	x	13
3/15	12-20.2		20									1	7											x	x	x	x	x	14
4/15	20.2-7.3		51									20	51											x	x	x	x	x	15
5/15	7-29.3		111				4	44	44		27	1	12		58									x	x	x	x	x	16
6A/15	30.3-18.4		165					158	43		3	3	34	189	189									x	x	x	x	x	18
6B/15	21-27.4										2	2												x	x	x	x	x	20
7A/15	28.4-15.5		112					112	56		114				56	56								x	x	x	x	x	21
7B/15	16-25.5		64					53	50		34		9	58	58									x	x	x	x	x	22
8/15	26.5-21.6		165					54		21	39	3	7		116									x	x	x	x	x	23
9/15	16-28.7		18								19													x	x	x	x	x	24
10/15	29.7-16.8		74								76													x	x	x	x	x	25
11/15	17.8-8.9		88	2							127	37												x	x	x	x	x	26
12/15	9.9-7.10		94					46	29		77	19	18											x	x	x	x	x	27
13/15	15.10-10.11		65								11	70												x	x	x	x	x	28
14/15	12.11-7.12		323					8	323	213	17	3			16									x	x	x	x	x	29
15/15	8-13.12		7																					x	x	x	x	x	

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY.

Year: 1992

Ship: 'Johan Hjort'

Ship no: 12

Cruise and Ship number.	Period of Cruises.	Number of stations.															Cont. obs.					Page of track chart								
		Classical Oceanogr. st. COS	Vertical Oceanogr. st. CTD	ARGOS Drifters	Current Meters	Radioactivity.	Other dissolved gases	Bottle Cast (Niskin)	Oxygen	Nutrients	Chlorophyll	POC/PON, POP, PS	Pelagic Trawl	Bottom Trawl	Mocness Trawl	Pelagic Eggs and Larvae	Zooplankton	Phytoplankton	Shrimp Trawl	Grab	Gear research		Optics	Acoustic refl. on mar.org.	ADCP	Surface temperature	Transparency	Echo sounding	Echo integration	
1/12	16-31.1		64										27												x	x	x	x	x	31
2/12	2.2-4.3		156										22	103											x	x	x	x	x	32
3/12	5-9.3		9				9	4	6	2	1	1				9	6								x	x	x	x	x	33
4/12	10.3-6.4		81										25	14											x	x	x	x	x	34
5/12	8-23.4		84										21	34											x	x	x	x	x	35
6/12	24.4-6.5		209	2	2									1	208	47									x	x	x	x	x	37
7/12	11.5-1.6		126										27	54											x	x	x	x	x	40
8/12	6-23.6		189					111					18	2	135										x	x	x	x	x	41
9/12	24.6-8.7		11										48												x	x	x	x	x	42
10/12	13-27.7		51			8	46	30	44	12	6	1													x	x	x	x	x	43
11/12	17.8-2.9		97										78	29											x	x	x	x	x	44
12/12	4.9-12.10		186		2					88	53		64	13	13	42					22				x	x	x	x	x	45
13/12	14.10-3.11		119										7	72											x	x	x	x	x	46
14/12	5.11-1.12		91				45	67	39	3	2					34	8								x	x	x	x	x	47
15/12	3-12.12		8										6												x	x	x	x	x	48

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY.

Year: 1992

Ship: Michael Sars

Ship no: 11

Cruise and Ship number.	Period of Cruises.	Number of stations.														Cont. obs.				Page of track chart									
		Classical Oceanogr. st. COS	Vertical Oceanogr. st. CTD	ARGOS Drifters	Current Meters	Radioactivity.	Other dissolved gases	Bottle Cast (Niskin)	Oxygen	Nutrients	Chlorophyll	POC/PON, POP, PS	Pelagic Trawl	Bottom Trawl	Mocness Trawl	Pelagic Eggs and Larvae	Zooplankton	Phytoplankton	Shrimp Trawl		Grab	Gear research	Optics	Acoustic refl. on mar.org.	ADCP	Surface temperature	Transparency	Echo sounding	Echo integration
1/11	3-20.1		17					17	17			31				9									x	x	x	x	49
2/11	20.1-5.2		5									8	5												x	x	x	x	50
3/11	10.2-9.3		29					26	26			14	5	18		40									x	x	x	x	51
4/11	9-23.3											8													x	x	x	x	53
5/11	23.3-12.4		176									10	25												x	x	x	x	54
6/11	13-20.4		20					20	20	6	6	1	10			20	11								x	x	x	x	56
7A/11	21.4-4.5		56									18	26												x	x	x	x	57
7B/11	5-16.5		66									114			32	32									x	x	x	x	58
8A/11	18-24.5														41						41				x	x	x	x	
8B/11	24.5-6.6					1															31				x	x	x	x	
9/11	14-24.7		12									10		6	12							4	8		x	x	x	x	59
10/11	24.7-12.8		30		2							26				9									x	x	x	x	60
11/11	12.8-8.9		104									76	82			6									x	x	x	x	61
12/11	10.9-7.10		113						58	21		85	8			49									x	x	x	x	62
13/11	14-28.10		98											101											x	x	x	x	63
14/11	4.11-13.12		164					164	164			60													x	x	x	x	64

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY.

Year: 1992

Ship: G.M. Dannevig

Ship no: 16

Cruise and Ship number.	Period of Cruises.	Number of stations.														Cont. obs.				Page of track chart										
		Classical Oceanogr. st. COS	Vertical Oceanogr. st. CTD	ARGOS Drifters	Current Meters	Radioactivity.	Other dissolved gases	Bottle Cast (Niskin)	Oxygen	Nutrients	Chlorophyll	POC/PON, POP, PS	Pelagic Trawl	Bottom Trawl	Mocness Trawl	Pelagic Eggs and Larvae	Zooplankton	Phytoplankton	Shrimp Trawl		MIK	Gear research	Optics	Acoustic refl. on mar.org.	ADCP	Surface temperature	Transparency	Echo sounding	Echo integration	
1/16	4-8.1		17																	17						x	x	x	x	69
2/16	9-10.1		12				9	12	12																	x	x	x	x	68
3/16	13-24.1		11													88				88						x	x	x	x	69
4/16	29.1-1.2																									x	x	x	x	69
5/16	2-8.2		12												12					12						x	x	x	x	68
6/16	10-12.2		12				9	12	12						12		12			12						x	x	x	x	68
7/16	25-28.2		5										5		5	5				5						x	x	x	x	69
8/16	1-7.3		27													27				27						x	x	x	x	69
9/16	9-10.3		12				9	12	12																	x	x	x	x	68
10/16	12-23.3																	13								x	x	x	x	69
11/16	24-28.3																									x	x	x	x	70
12/16	29.3-3.4		21																	23						x	x	x	x	70
13/16	4-5.4																									x	x	x	x	
14/16	6-14.4		7																	62						x	x	x	x	70
15/16	22.4-9.5		80				80	80	80																	x	x	x	x	70
16/16	12.5		12				12	12	12																	x	x	x	x	68
17/16	12-24.5																									x	x	x	x	

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY.

Year: 1992

Ship: G.M. Dannevig

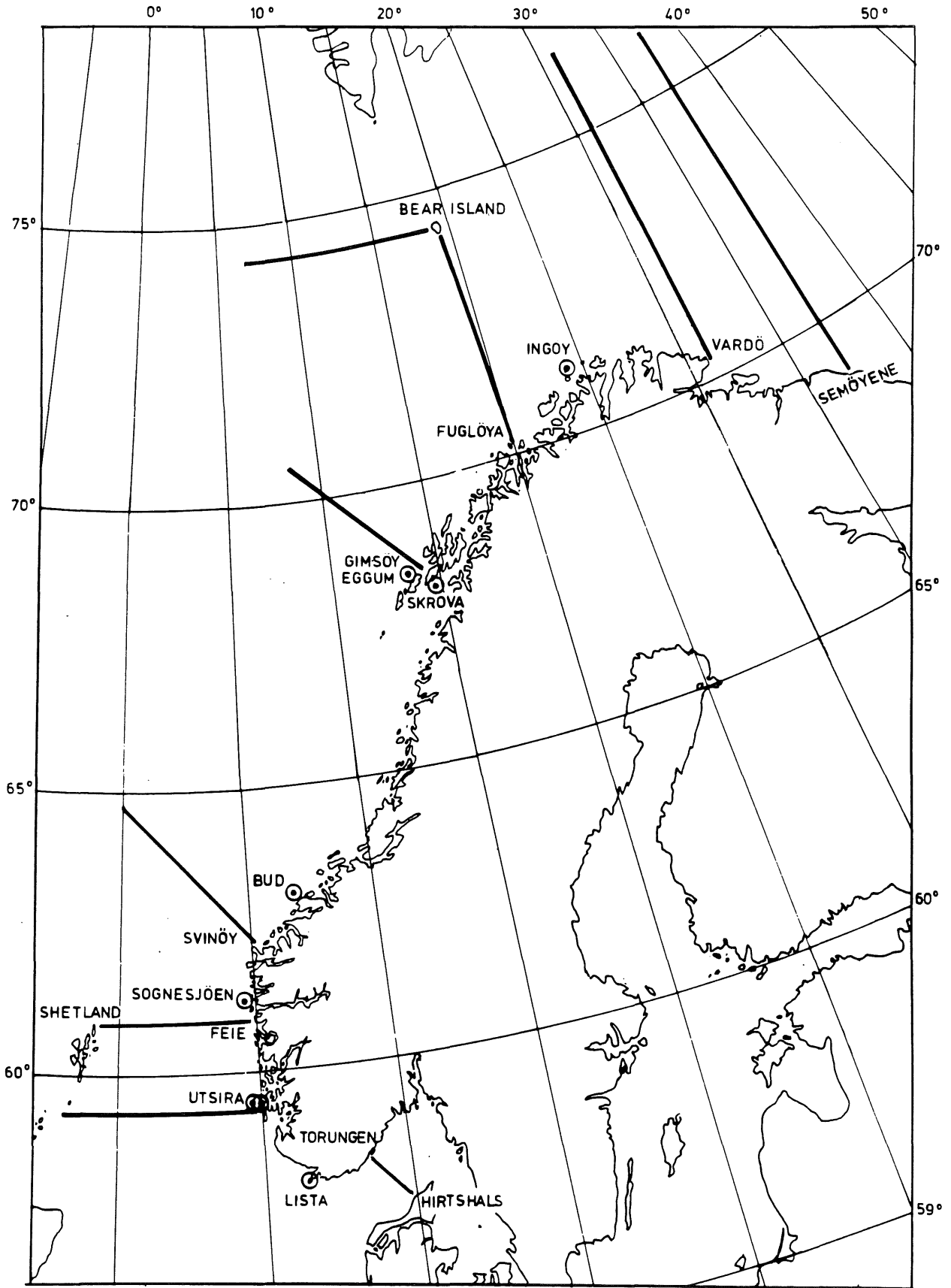
Ship no: 16

Cruise and Ship number.	Period of Cruises.	Number of stations.														Cont. obs.				Page of track chart									
		Classical Oceanogr. st. COS	Vertical Oceanogr. st. CTD	ARGOS Drifters	Current Meters	Radioactivity.	Other dissolved gases	Bottle Cast (Niskin)	Oxygen	Nutrients	Chlorophyll	POC/PON, POP, PS	Pelagic Trawl	Bottom Trawl	Mocness Trawl	Pelagic Eggs and Larvae	Zooplankton	Phytoplankton	Shrimp Trawl		MIK	Gear research	Optics	Acoustic refl. on mar.org.	ADCP	Surface temperature	Transparency	Echo sounding	Echo integration
18/16	25.5- 5.6											24													x	x	x	x	70
19/16	9-20.6														13			16							x	x	x	x	70
20/16	22.7		12				12	12	12								12								x	x	x	x	68
21/16	3-18.8		16								66					32			66						x	x	x	x	71
22/16	31.8-1.9		12				12	12	12								12								x	x	x	x	
23/16	1-2.9		12				12	12	12								12								x	x	x	x	68
24/16	4-11.9																								x	x	x	x	
25/16	15.9-4.10																								x	x	x	x	
26/16	5-6.10		12				12	12	12								12								x	x	x	x	68
27/16	20-23.10														5										x	x	x	x	71
28/16	26-31.10																								x	x	x	x	
29/16	9-11.11		12				12	12	12								12		12						x	x	x	x	71
30/16	1-6.12																								x	x	x	x	
31/16	4-7.12		1																6						x	x	x	x	71

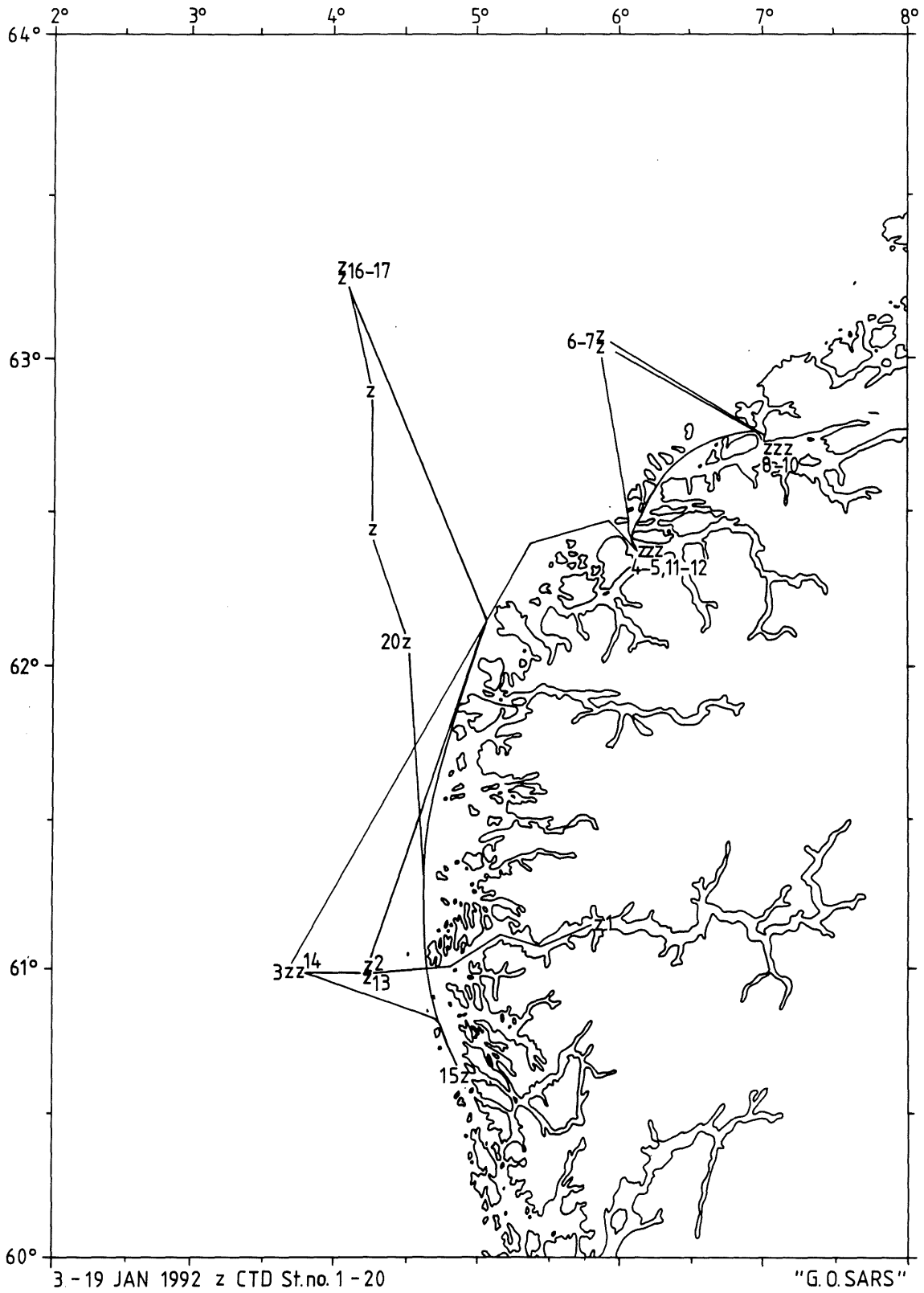
ICES Annual Report on Oceanographic Cruises and Data Stations.			
Country: NORWAY.		Year: 1992	Ship: Håkon Mosby
Cruise and Ship number.		Ship no: 1	
1/1	4-22.2		Page of track chart
2/1	27.4-8.5		Cont. obs.
			Echo integration
			Echo sounding
			Transparency
			Surface temperature
			ADCP
			Acoustic refl. on mar.org.
			Optics
			Gear research
			Grab
			Shrimp Trawl
			Phytoplankton
			Zooplankton
			Pelagic Eggs and Larvae
			Mocness Trawl
		1 28	Bottom Trawl
		1 70	Pelagic Trawl
			POC/PON, POP, PS
			Chlorophyll
			Nutrients
			Oxygen
			Bottle Cast (Niskin)
			Other dissolved gases
			Radioactivity.
			Current Meters
			ARGOS Drifters
		61	Vertical Oceanogr. st. CTD
		70	Classical Oceanogr. st. COS

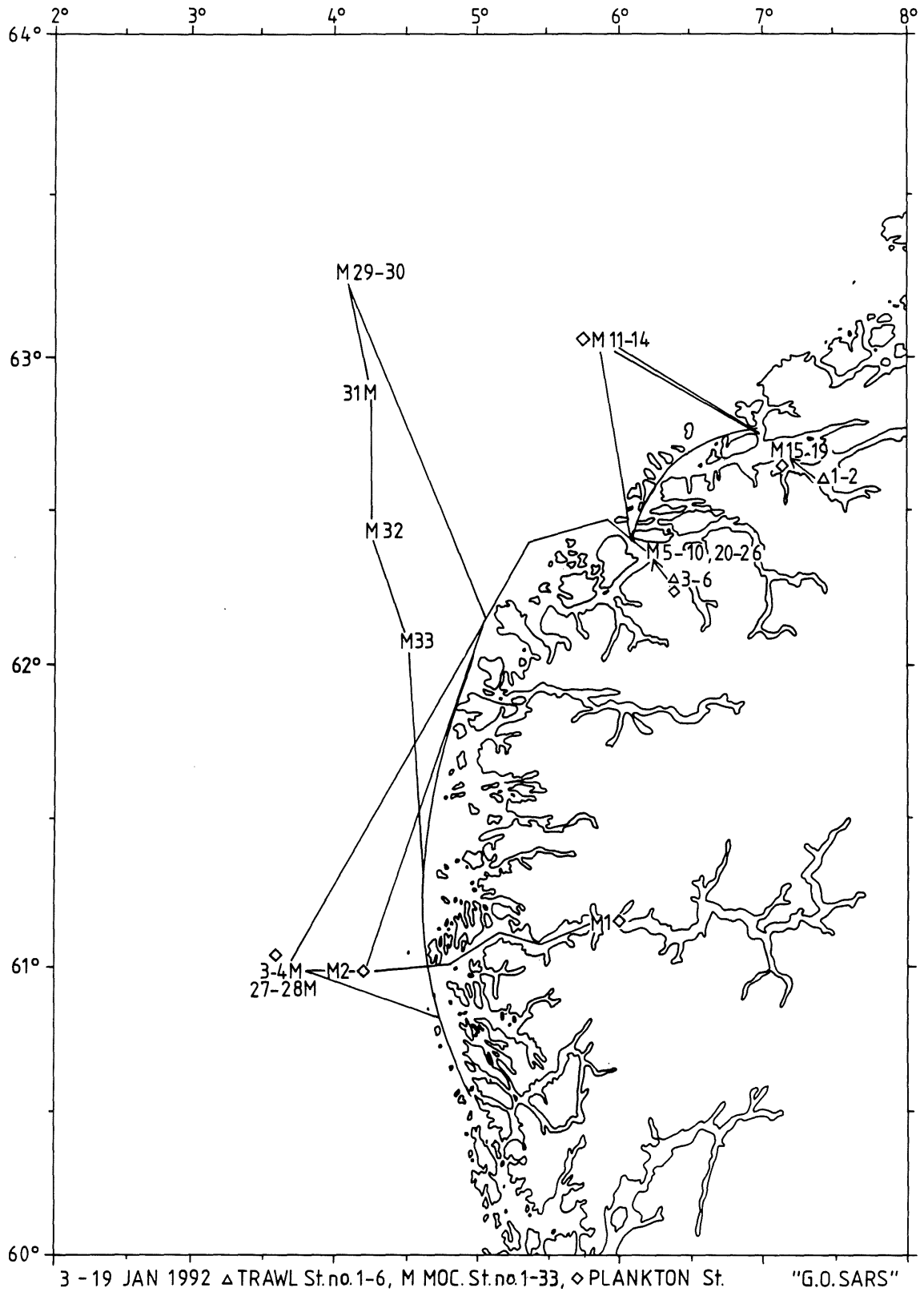
FIXED OCEANOGRAPHIC STATIONS	YEAR: 1992												
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
LISTA N58°01' E06°32'	9, 20, 30	10, 18, 28	9, 21	2, 18, 29	11, 21, 30	10, 24	2, 11, 20, 29	8, 19, 29	10, 18, 28	7, 16, 30	9, 18	8, 17	33
UTSIRA Y N59°19' E04°48'	7, 20, 27	8, 17, 25	3, 16, 23	1, 9, 23	20, 29	7, 20, 29	6, 14, 23	1, 9		2, 12, 21	11, 18, 27	4, 17, 23	31
UTSIRA I N59°19' E04°59'	7, 20, 27	8, 17, 25	3, 16, 23	1, 9, 23	20, 29	7, 20, 29	6, 14, 23	1, 9		2, 12, 21	11, 18, 27	4, 17, 23	31
SOGNESJØEN N61°01,4' E04°50'	9, 31	15	2, 19, 26	4, 11, 21	2, 9, 20, 29	9, 22, 30	7, 13, 23, 31	8, 15, 22	14, 21, 28	5, 14, 22, 31	12, 26	28	33
BUD N62°56' E06°47'	20	10, 26	7, 21	4, 21	3, 18, 29	11, 25	10, 24	6, 19	2, 15, 29	17, 30	11, 23	5	24
SKROVA N68°07,5' E14°39'	3, 18	1, 7, 15, 22	7, 13, 20, 27	3, 10, 17, 24, 30	8, 16, 22, 29	5, 12, 19, 26	2, 10, 17, 24	3, 10, 17, 25	1, 13, 21, 28	7, 20, 27	4, 11, 18, 27	7, 14, 21, 29	46
EGGUM N68°22,8' E13°39'	12, 22	2, 14, 26	12, 24	6, 18	2, 13, 25	8, 20	4, 17, 29	10, 22	3, 14, 26	10, 22	3, 11, 27	9, 29	29
INGØY N71°08' E24°01'	3, 14, 21	2, 11, 22	1, 9, 17, 26	2, 10, 20, 30	11, 20, 29	8, 14, 23	2, 11, 23	1, 9, 17, 25	4, 12, 21, 30	9, 16, 25	2, 11, 20	1, 14, 29	40

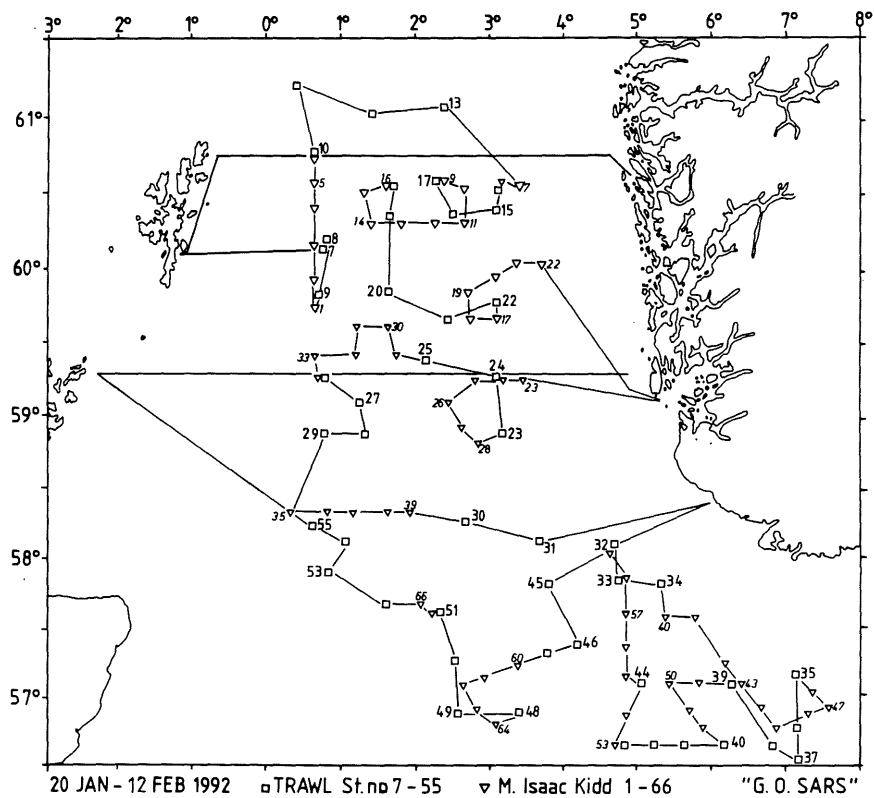
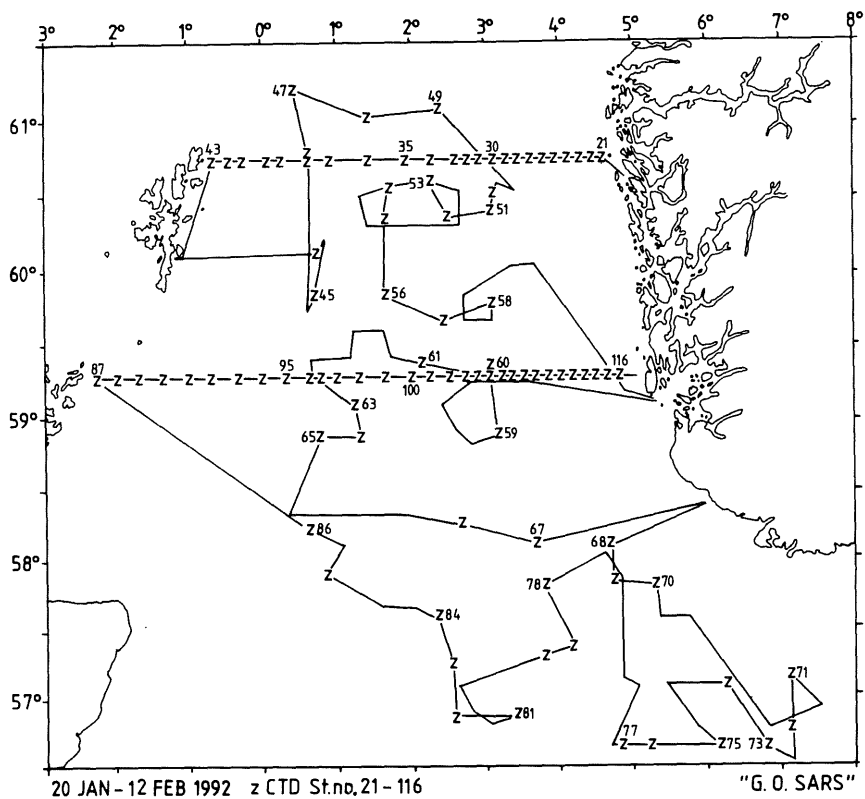
FIXED OCEANOGRAPHIC SECTION	YEAR 1992		CRUISE NO./SHIP NO.										
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
TORUNGEN-HIRTSHALS (date/ship no.)	9.1. /16	10.2.	1.,9. 29,3. /16		12.5 /16		22.7 /16		1.9 /16	5.10 /16	9.11 /16		10
UTSIRA - WEST	2/15				7/12	8/12					14/15		4
FEIE - SHETLAND	2/15	1/1		4/12	7/12						14/15		5
HANSTHOLMEN - ABERDEEN					7/12	8/12					14/15		3
SVINÖY - NORTH/WEST			4/15			10/12							2
GIMSÖY - NORTH/WEST			5/15					10/15					2
BEAR ISL. - WEST										12/12			1
VARDÖ - NORTH	1/12		5/15			8/15		11/11					4
SEMÖY. -NORTH		2/12						11/11					2
FUGLÖYA-BEAR ISL			5/15	5/12		8/15		11/12		12/12			5
SHIPS NAME	NO.	SHIPS NAME		NO.									
"G.O. Sars"	15	"G.M. Dannevig"		16									
"Johan Hjort"	12	"Håkon Mosby"		1									
"Michael Sars"	11												

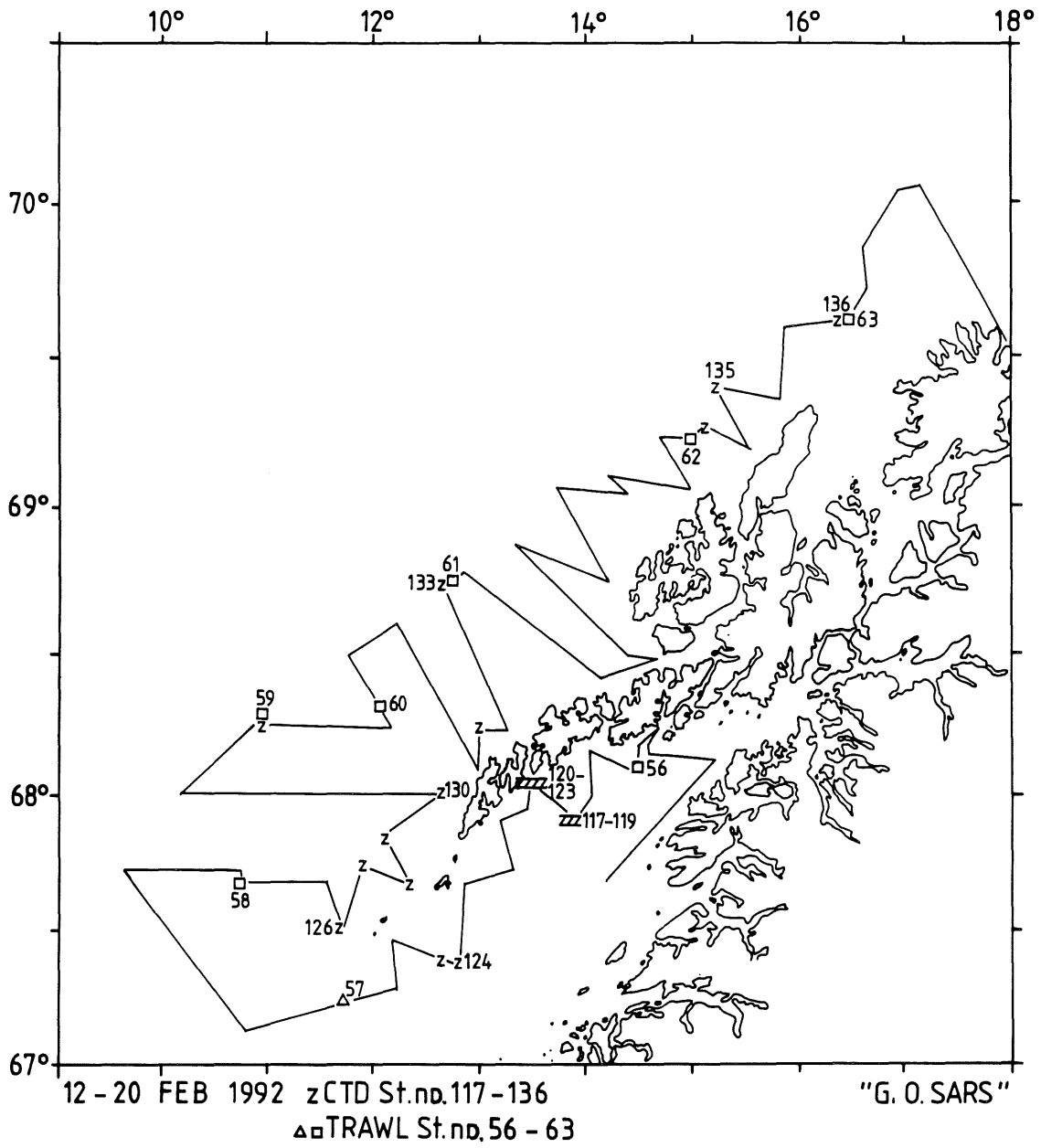


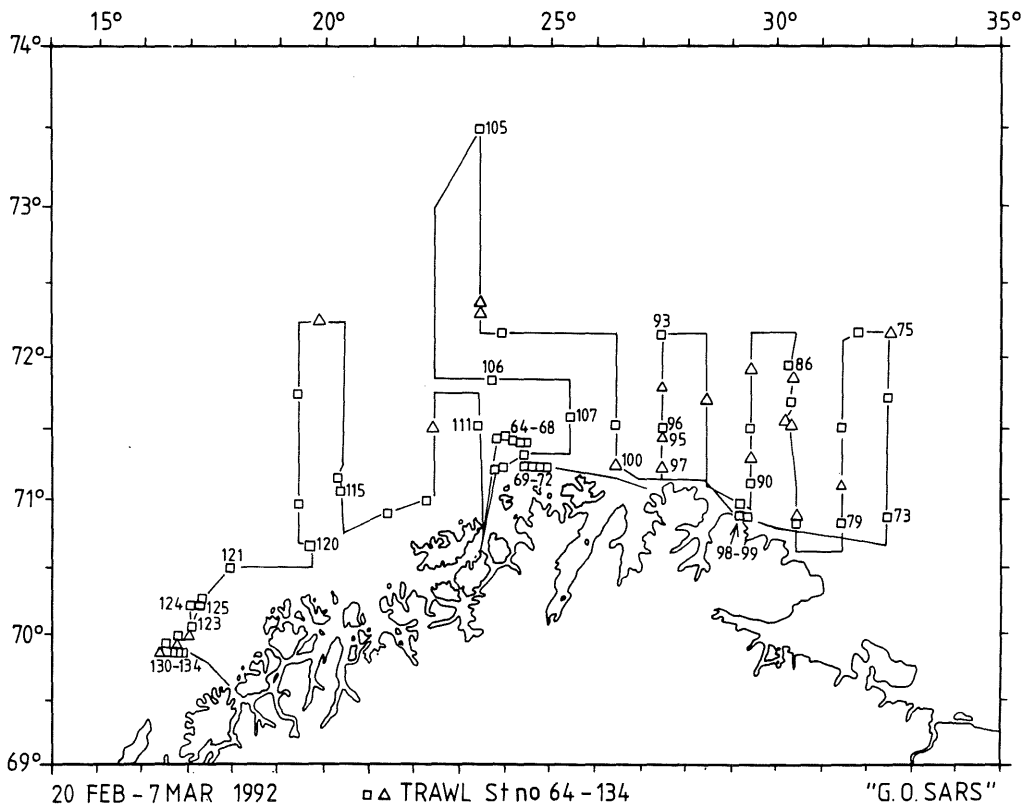
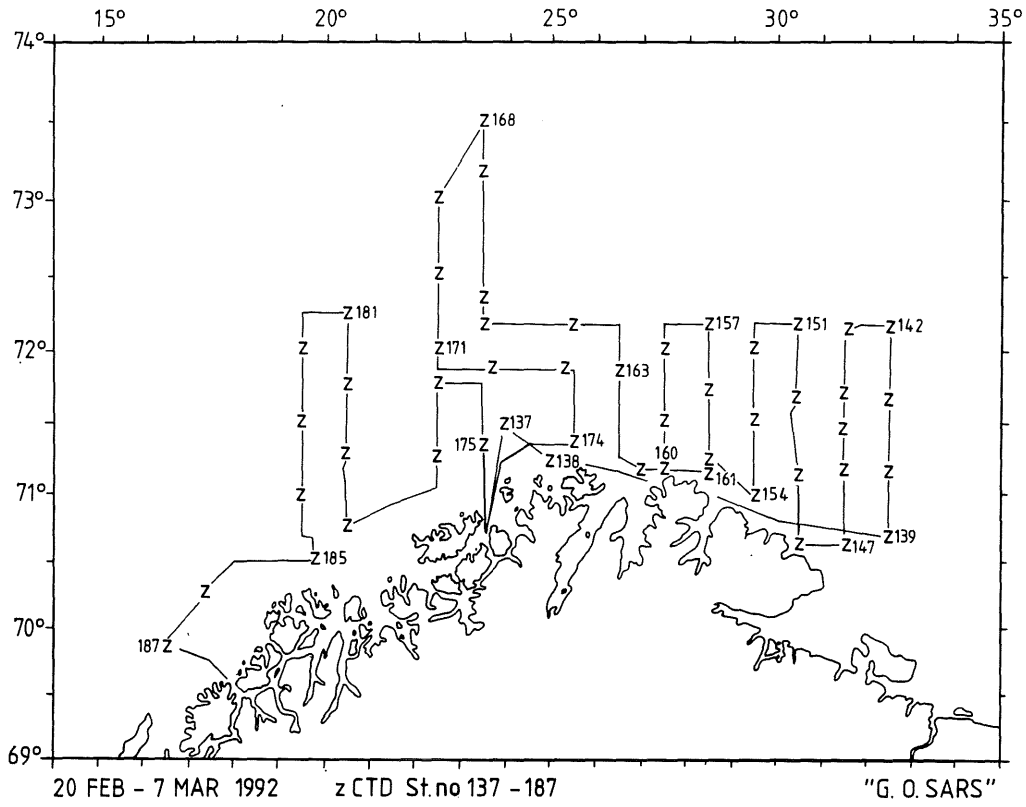
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— FIXED OCEANOGRAPHIC SECTION

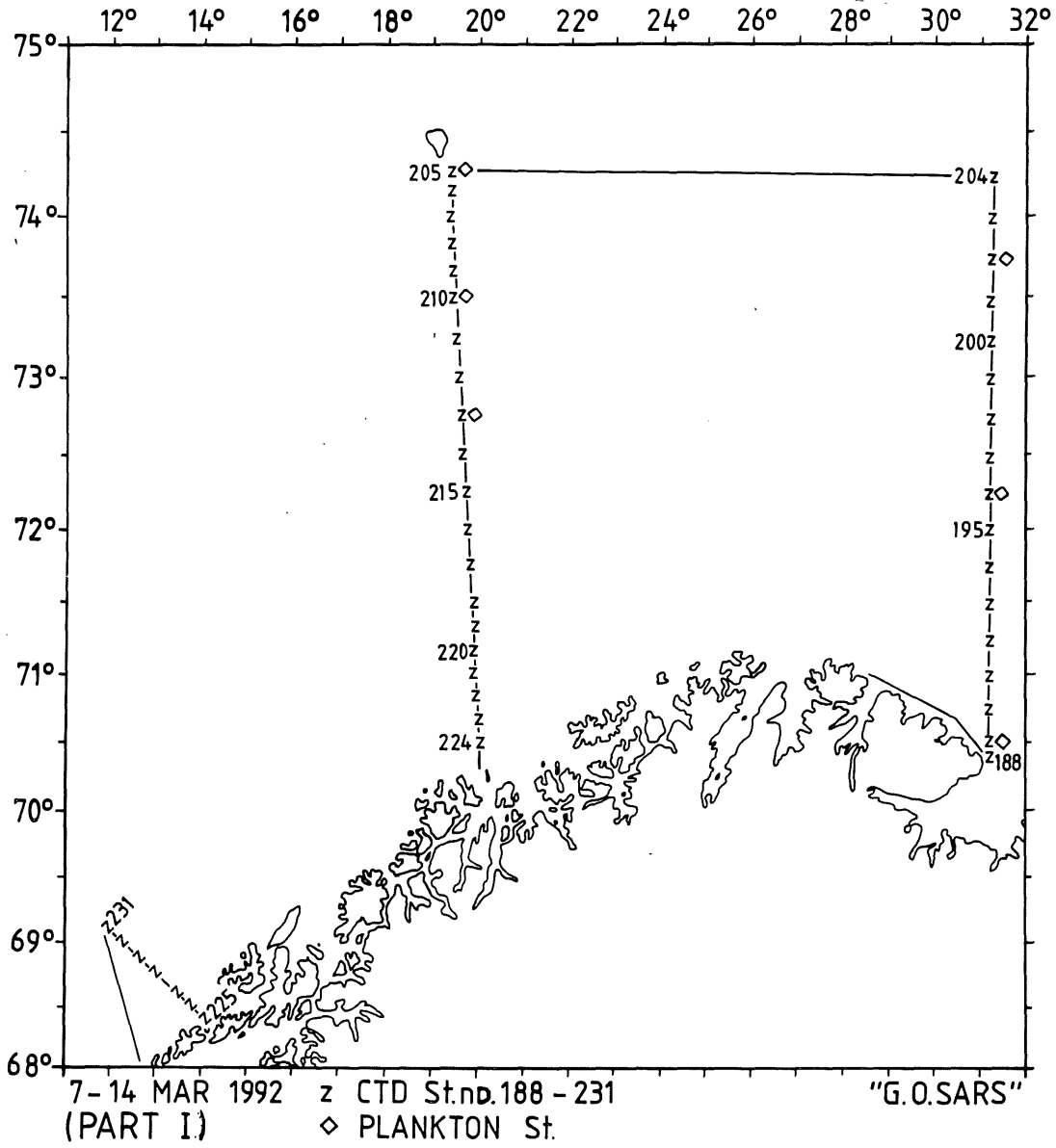


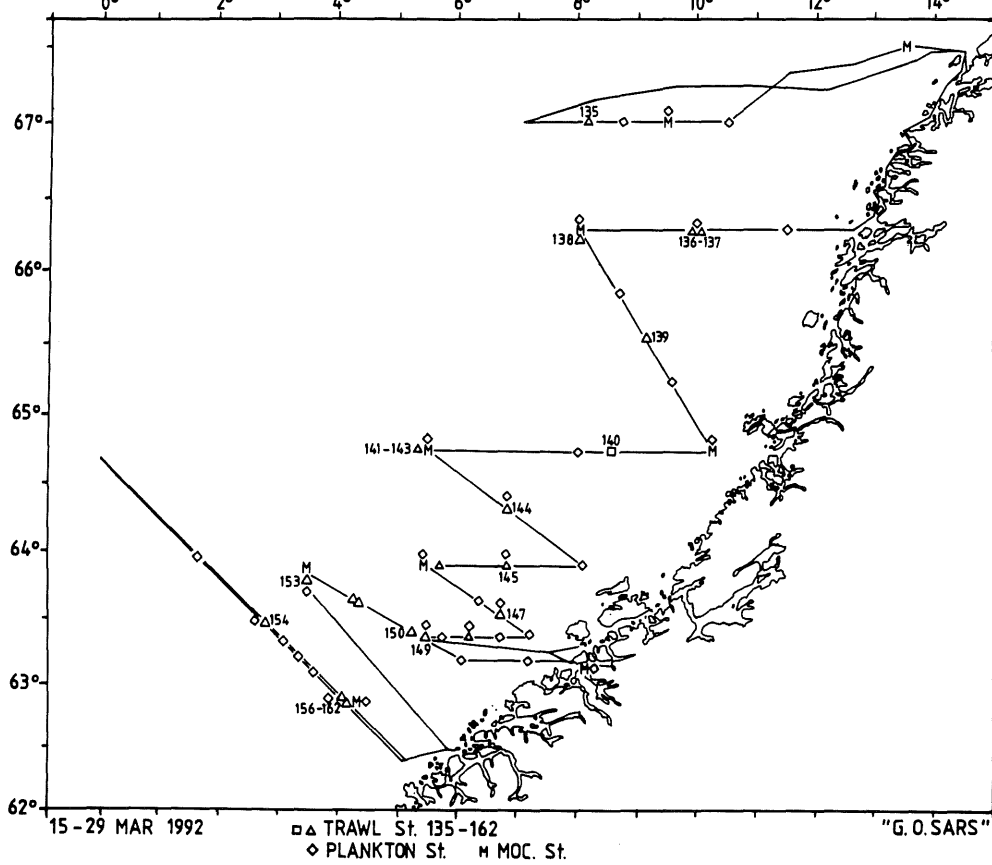
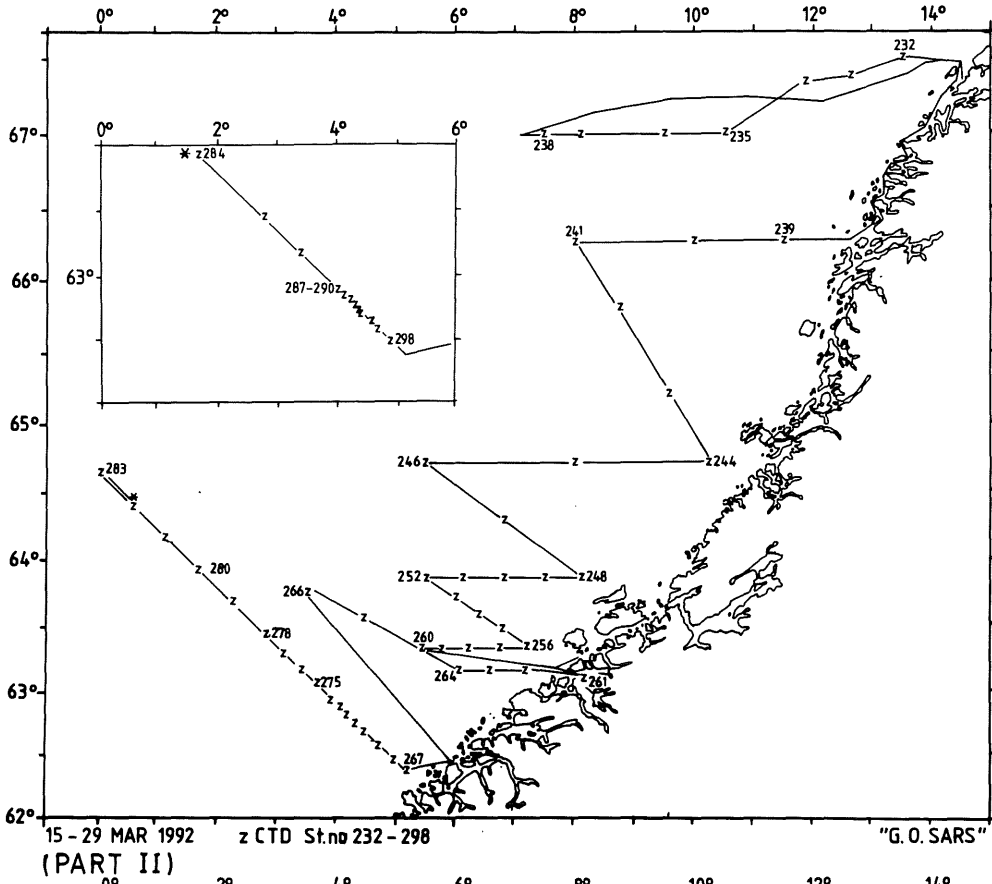


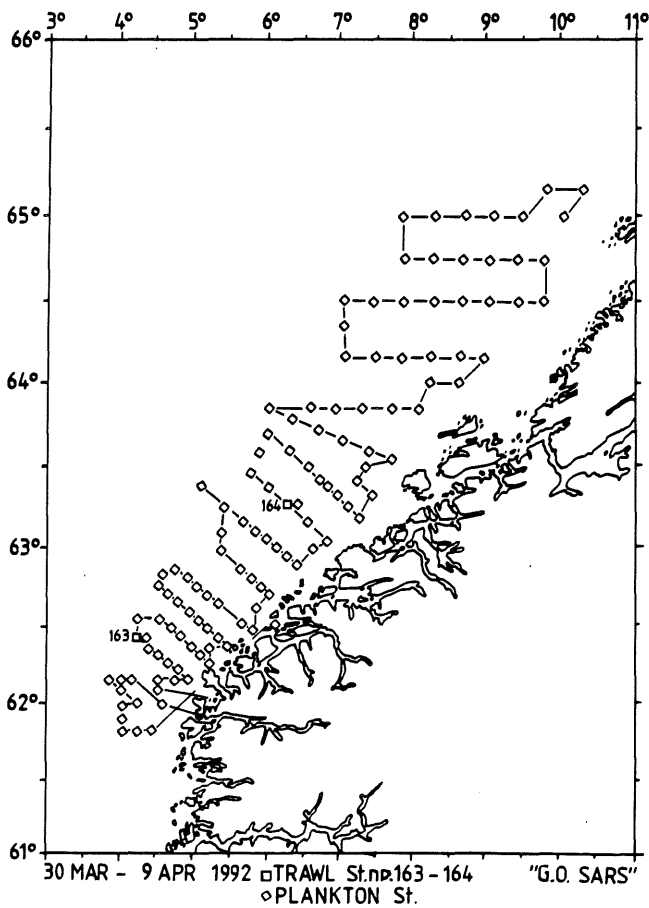
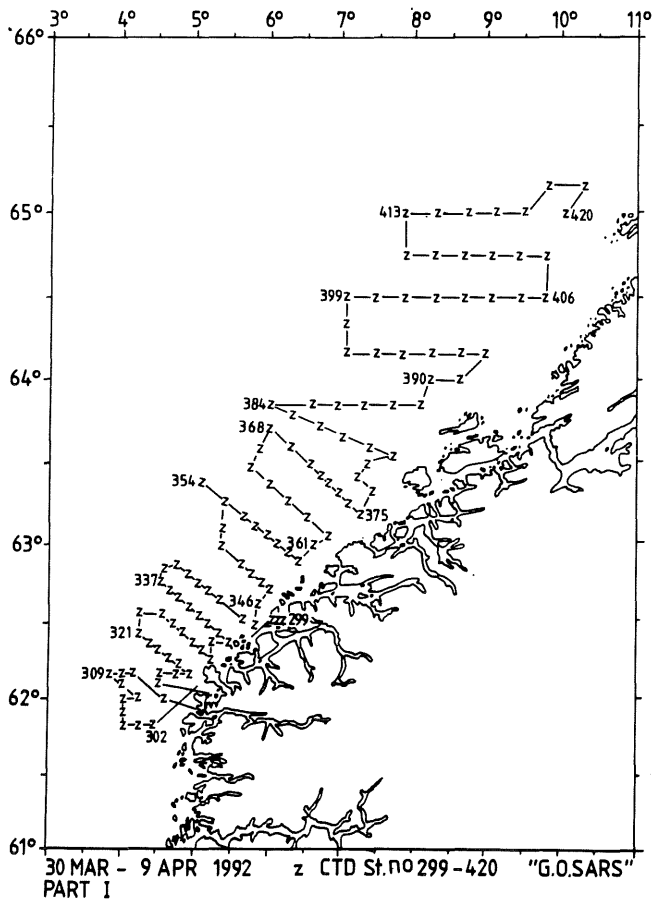


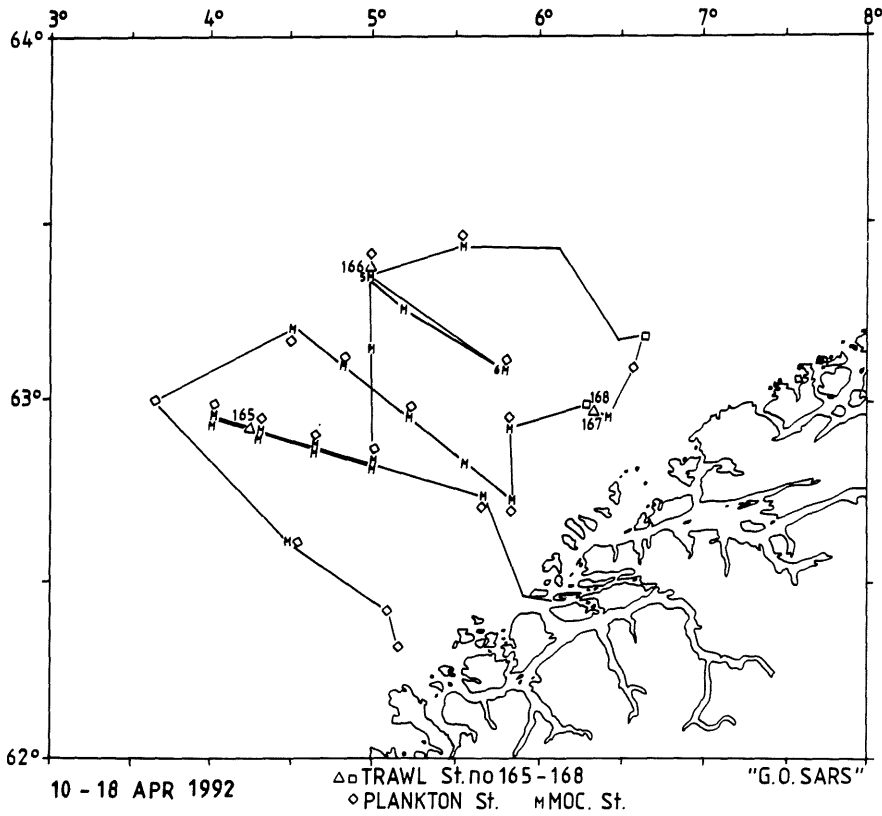
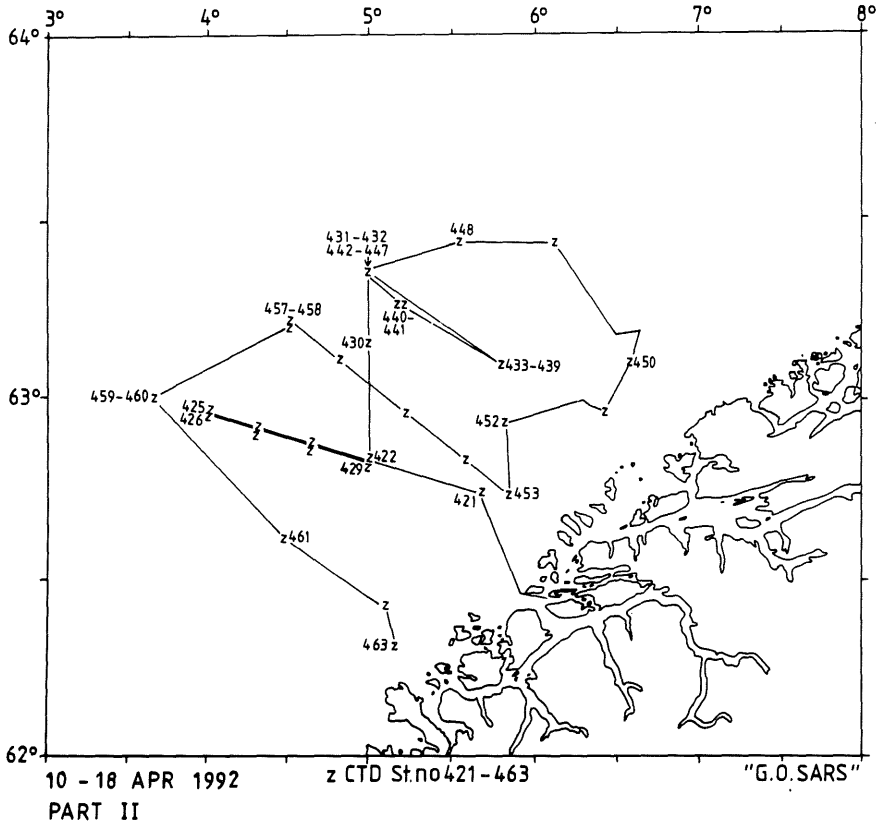


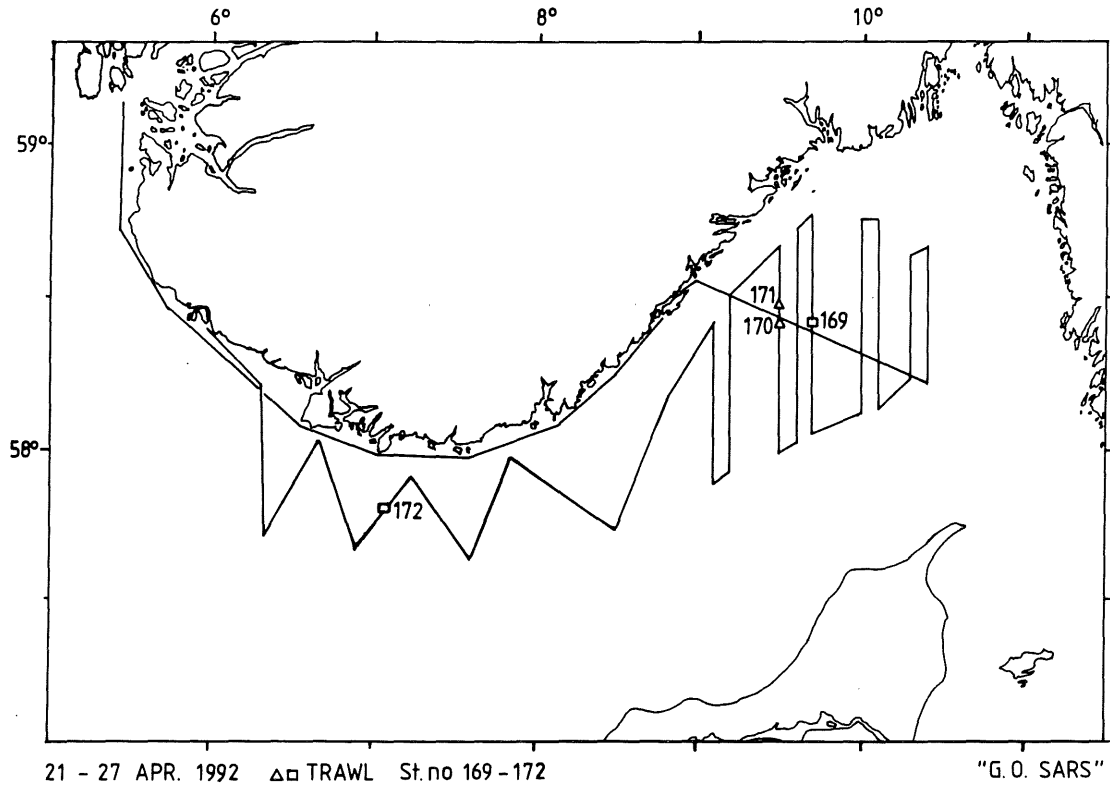


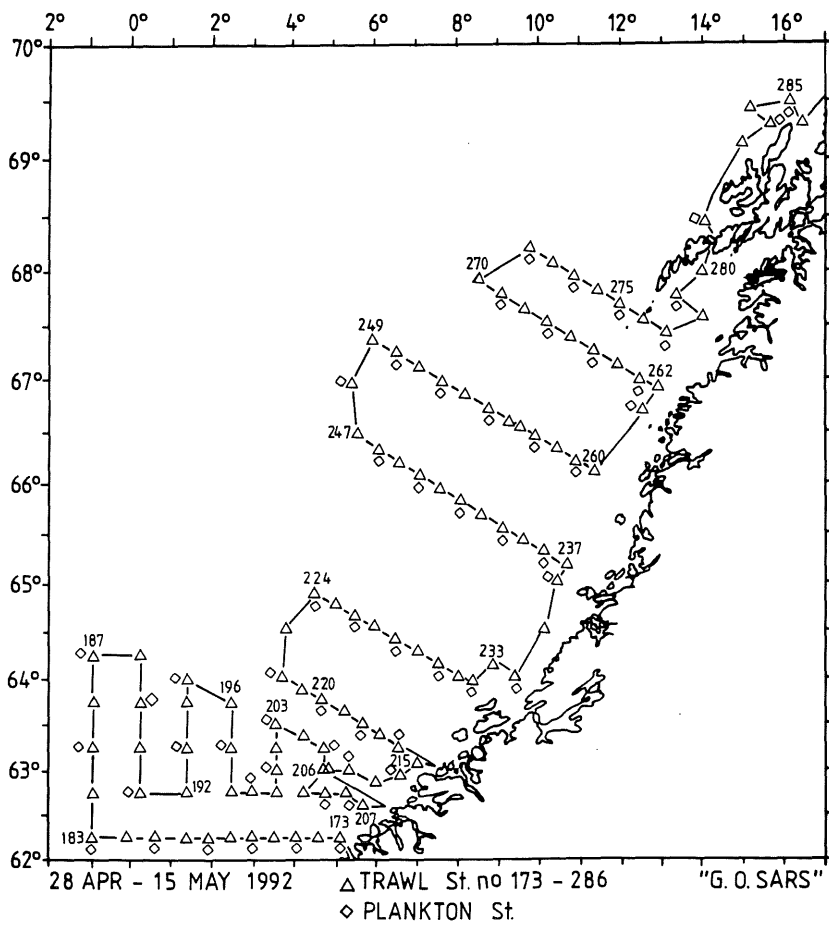
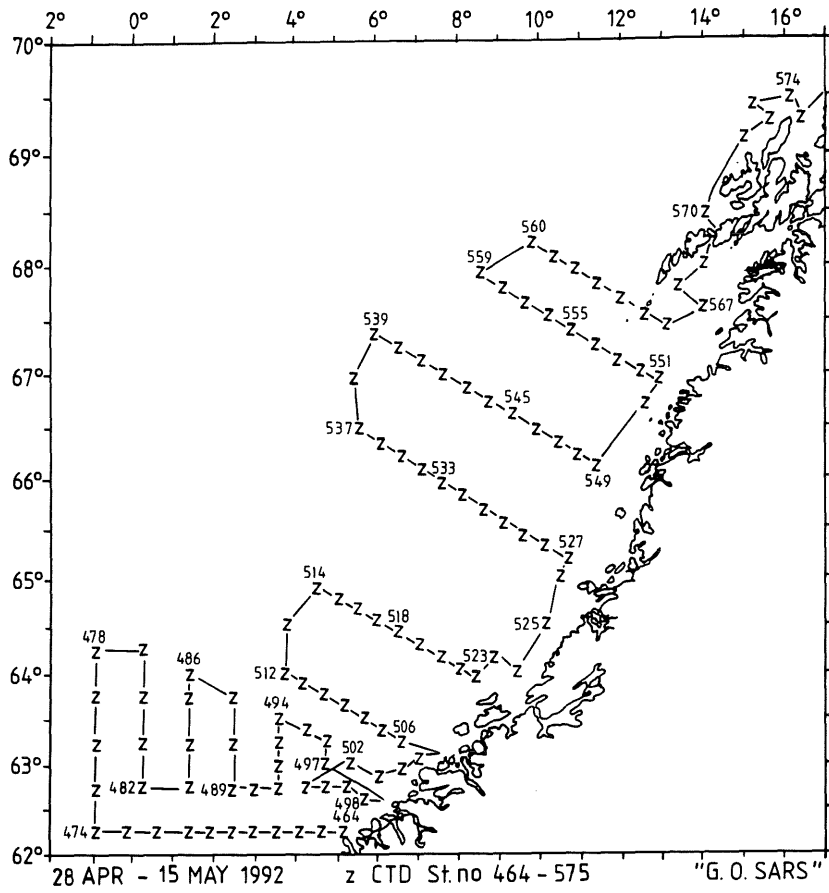


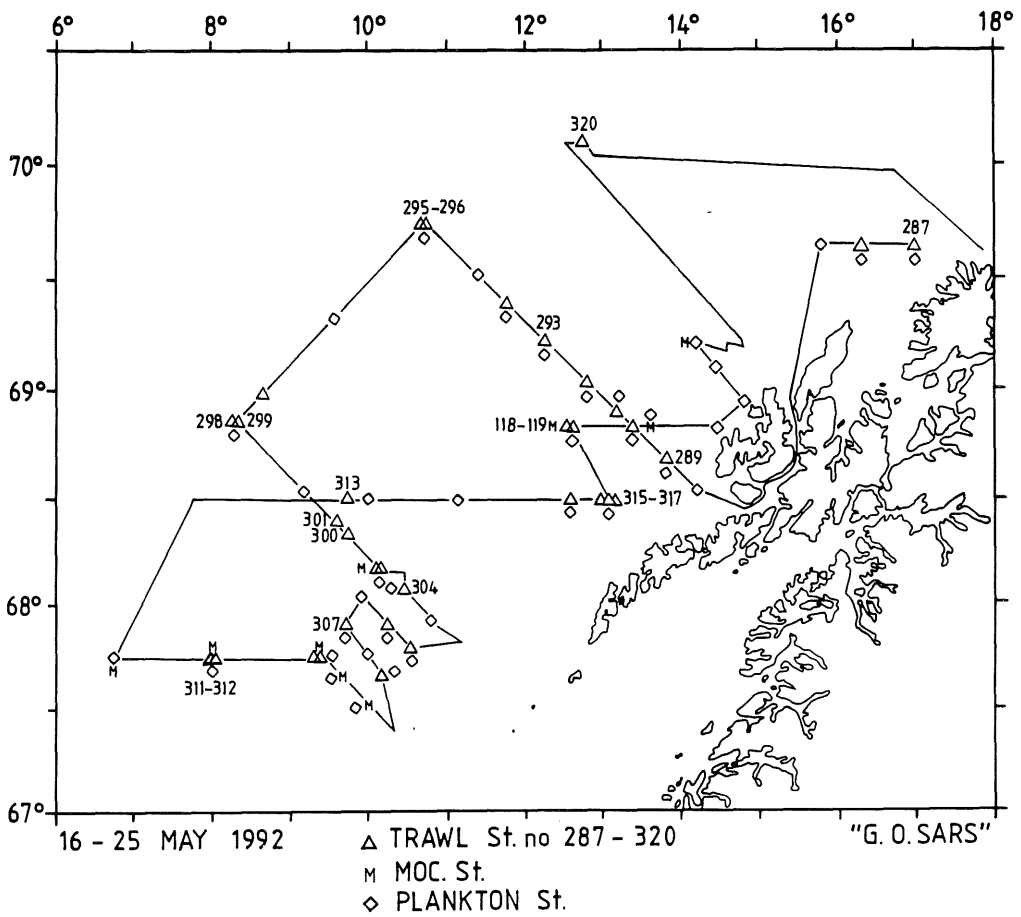
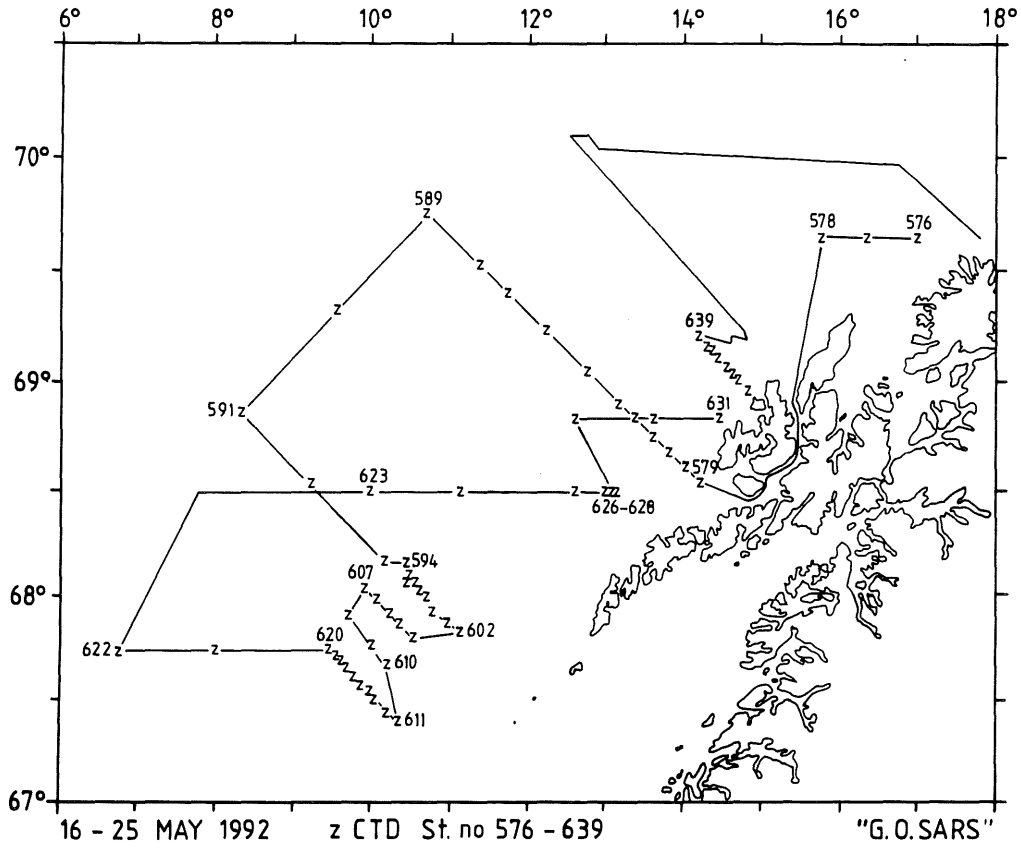


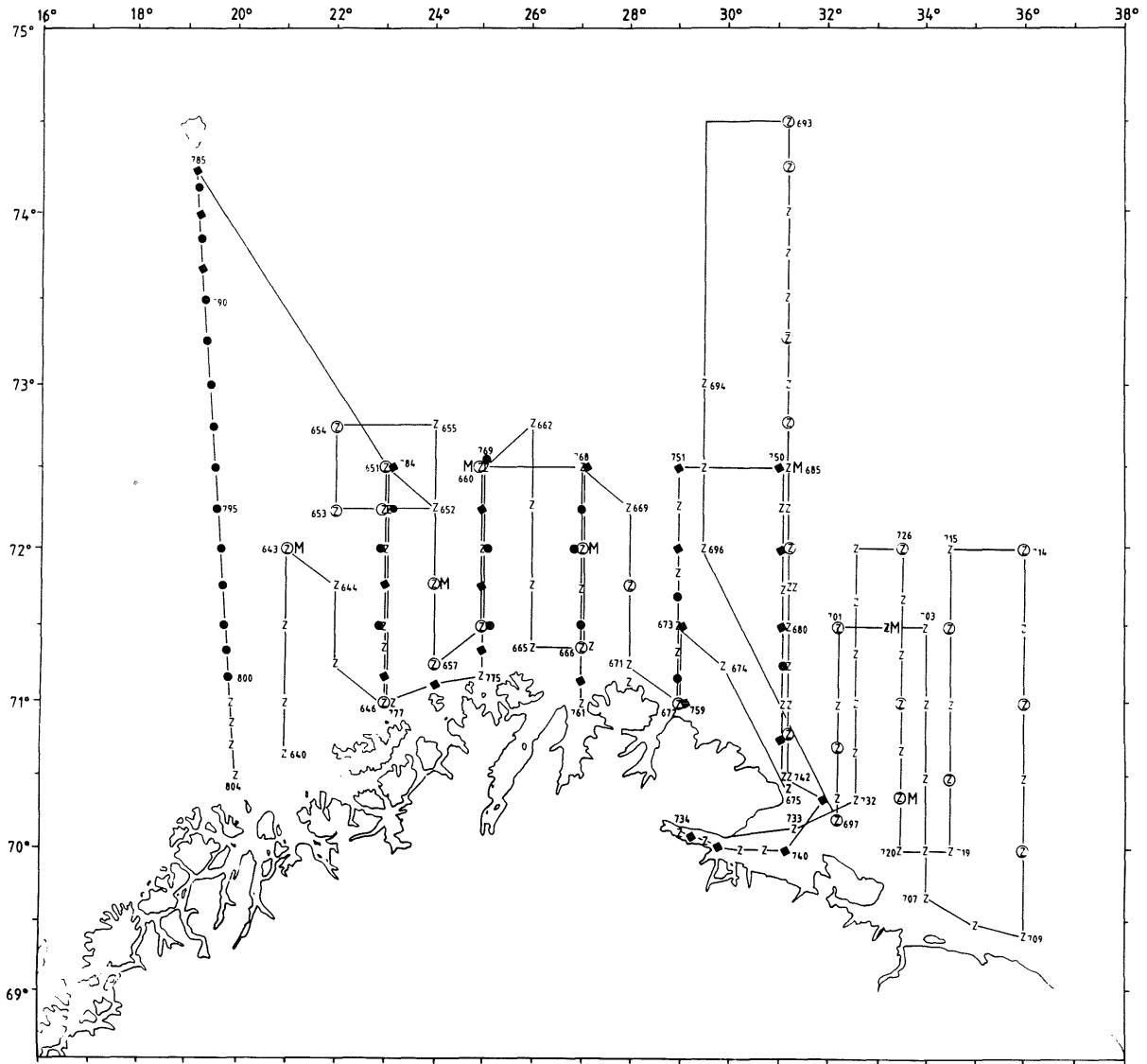








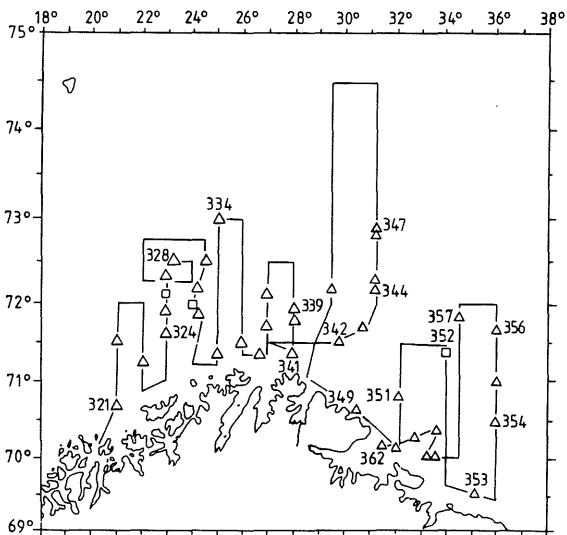




26 MAY - 21 JUN 1992

"G. O. SARS"

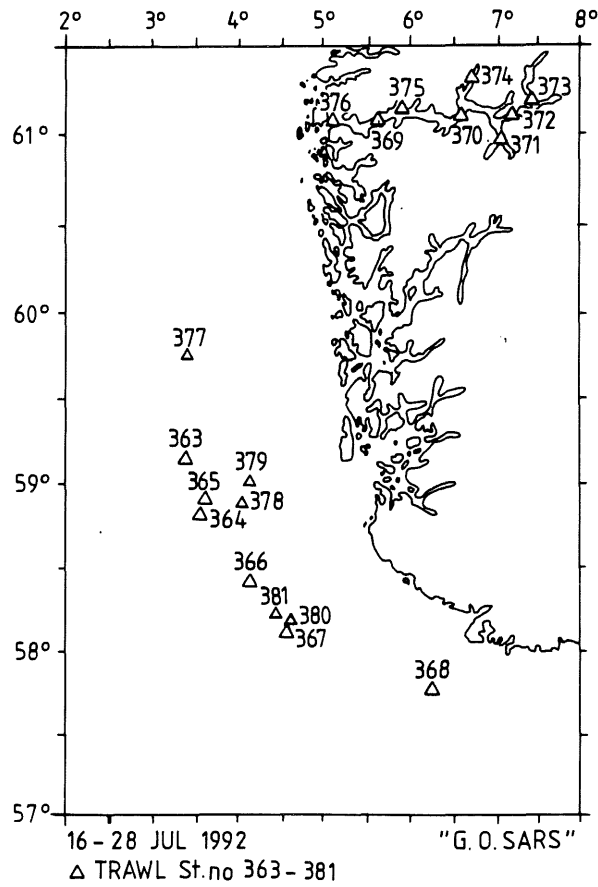
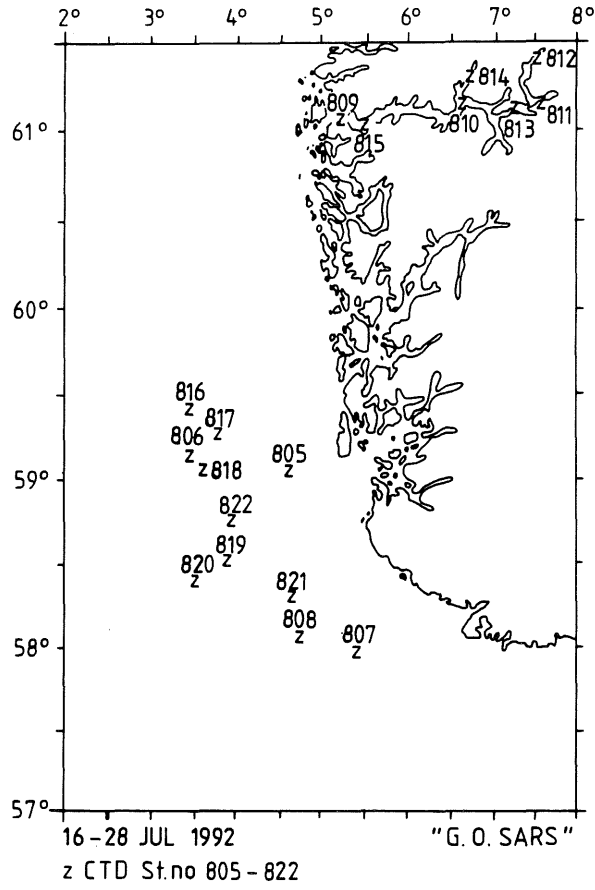
- z CTD St.no.640 - 804
- ⊙ " + WP-2 Net
- M Macness + Chlor. + POC + PON + POP + Psi + Nutrients
- ◆ CTD + Nutrients + Chlor. + WP-2 Net
- " + " + "

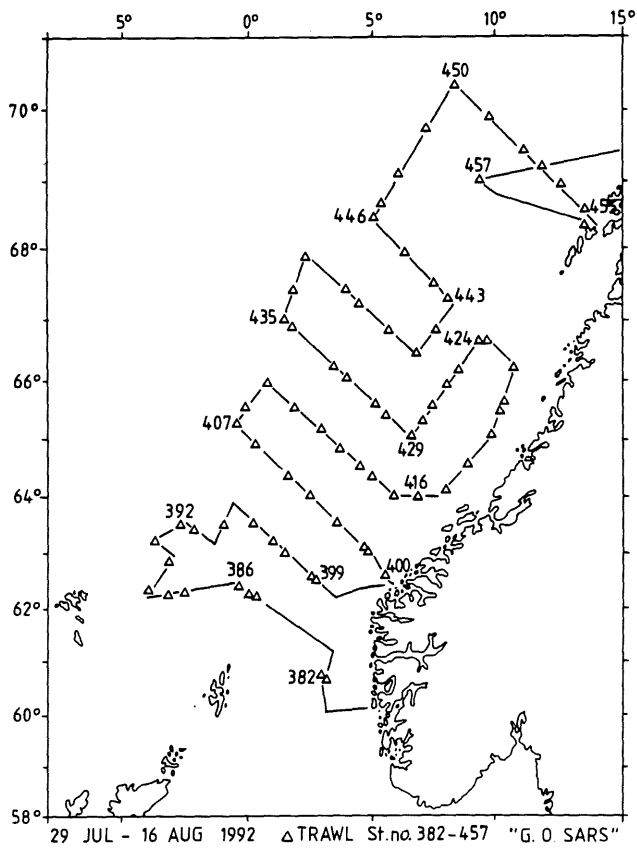
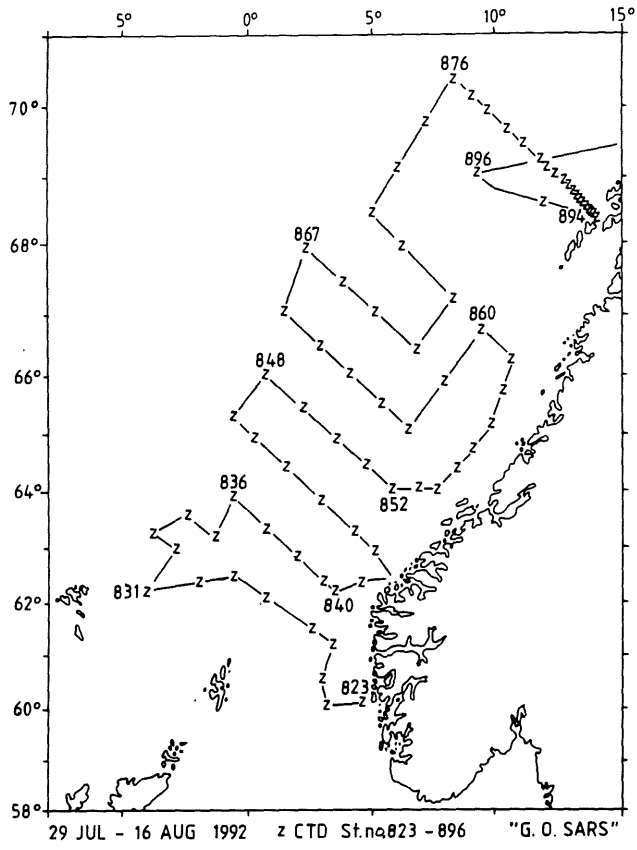


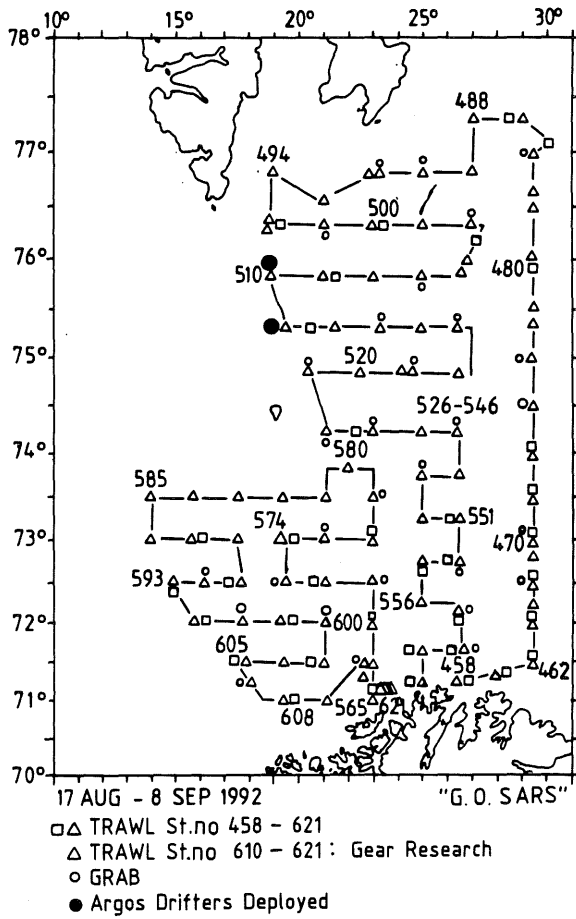
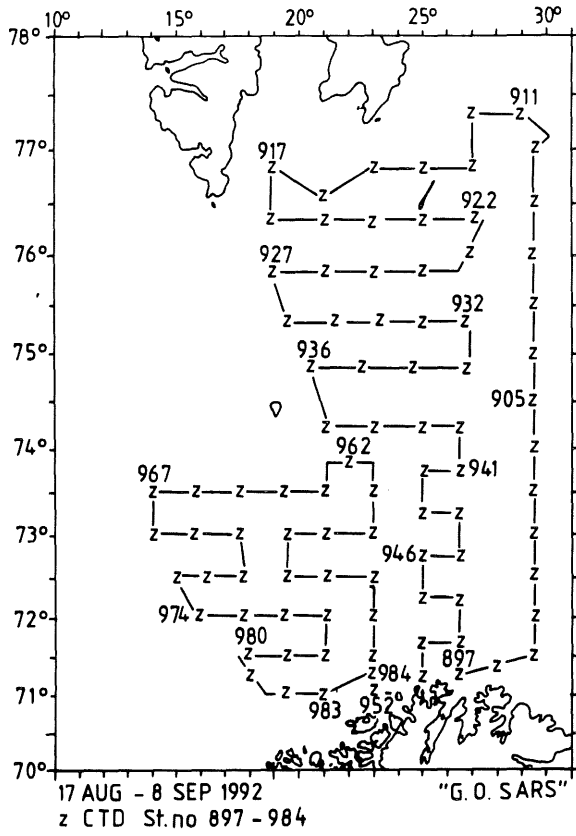
26 MAY - 21 JUN 1992

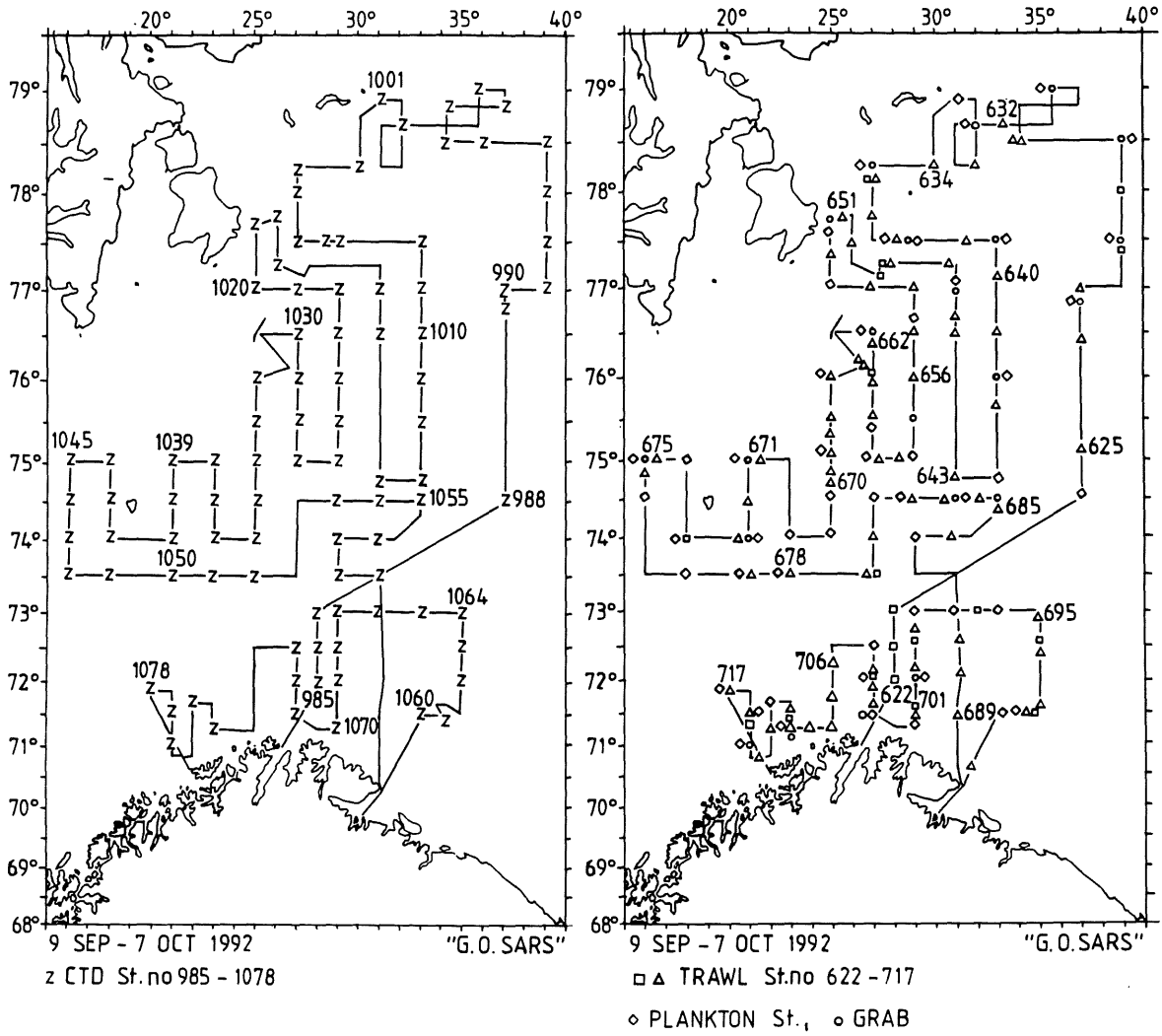
□ Δ TRAWL St.no.321-362

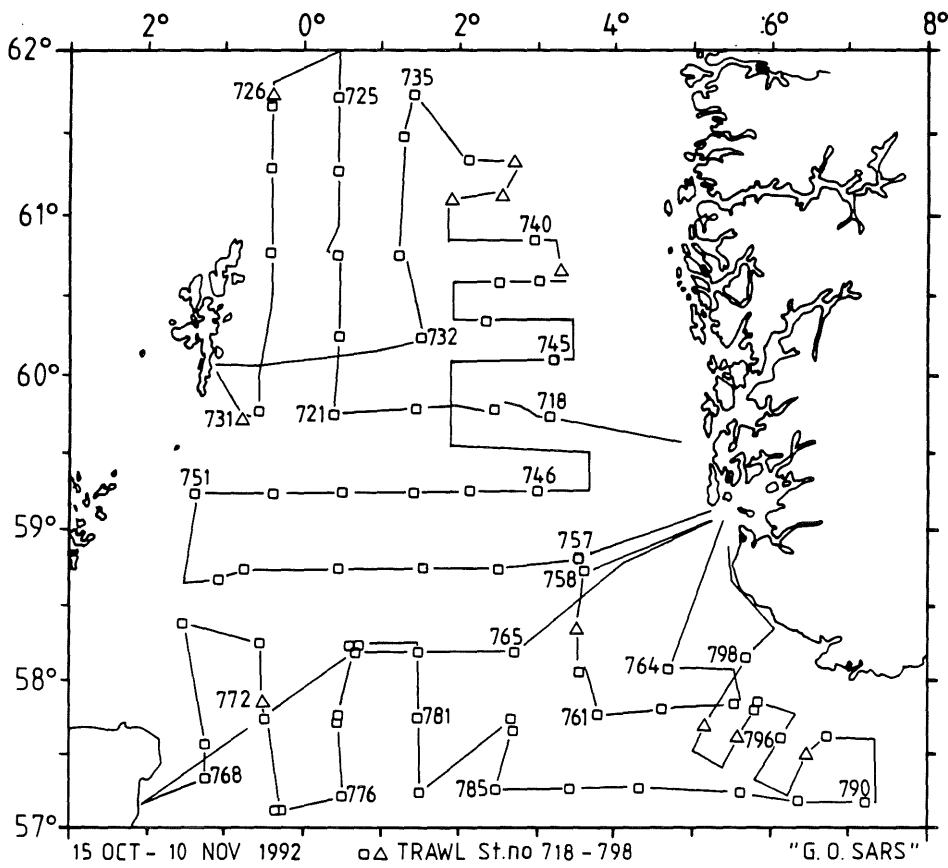
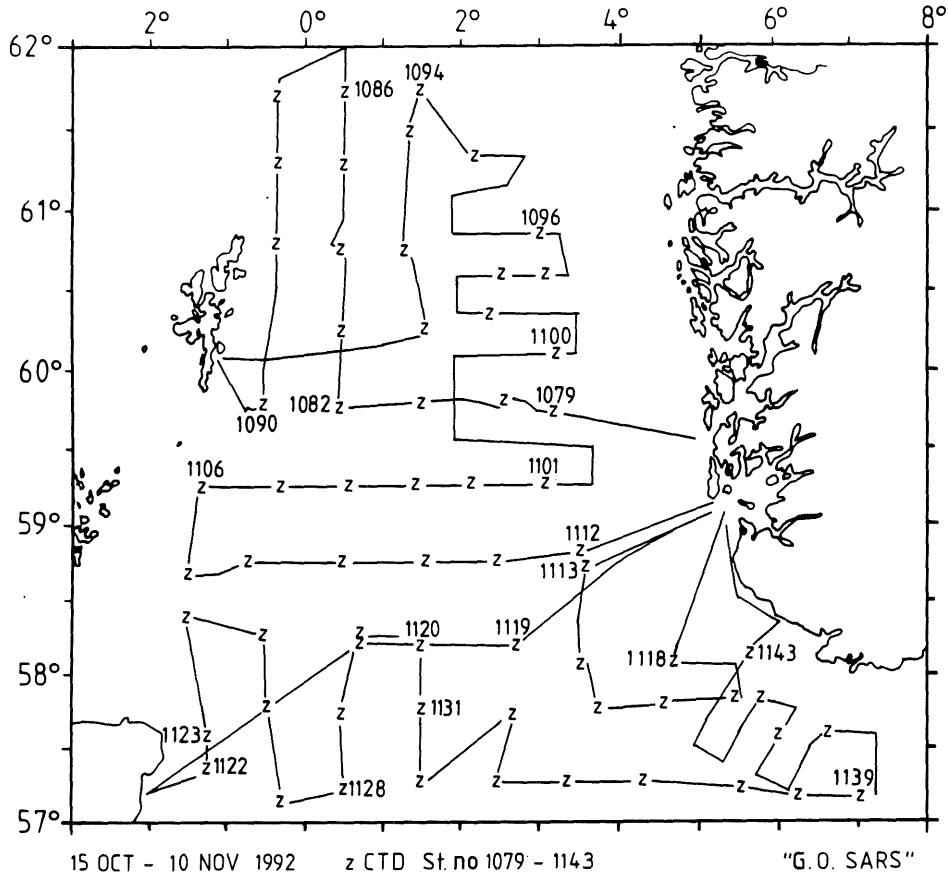
"G. O. SARS"

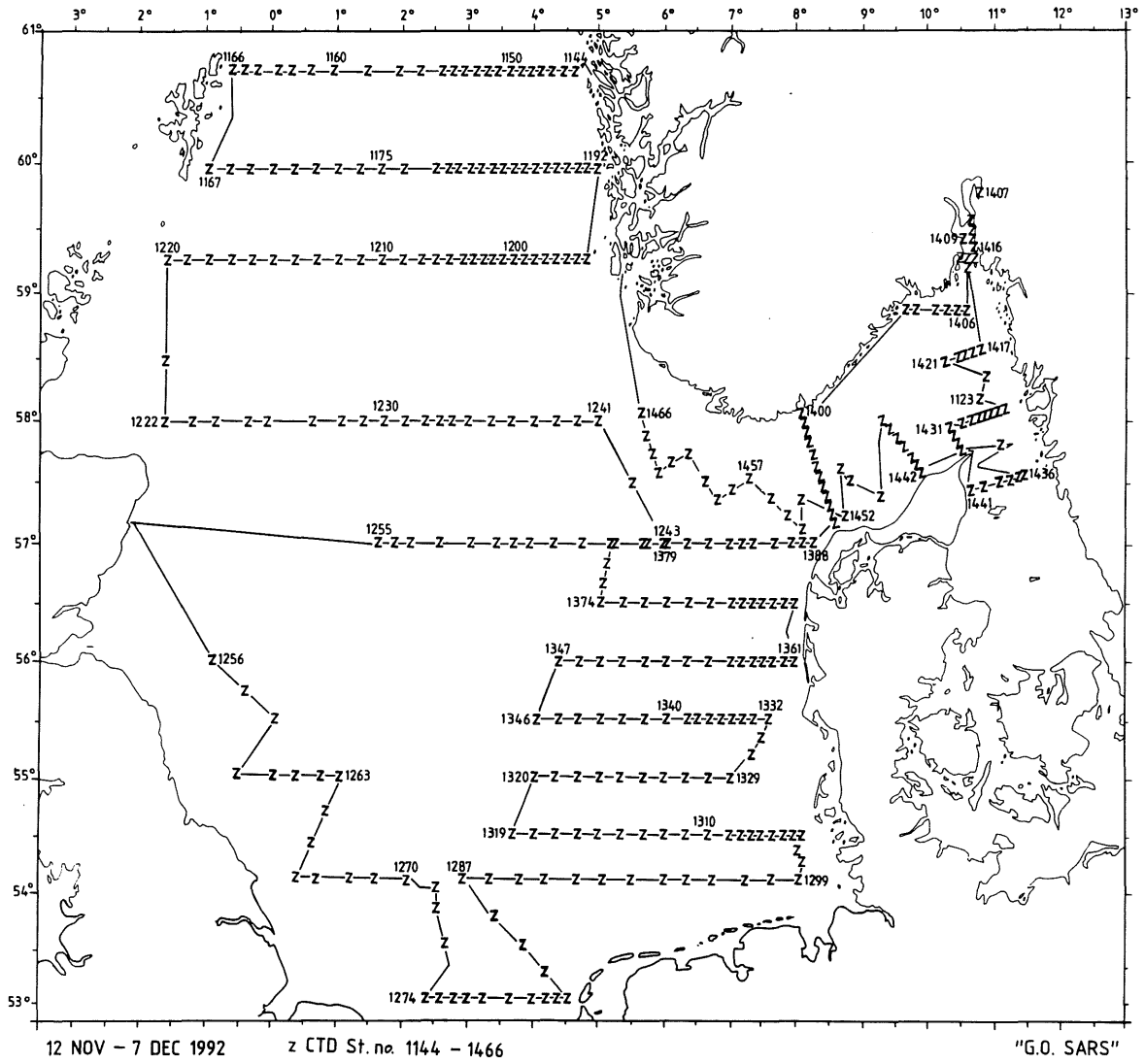


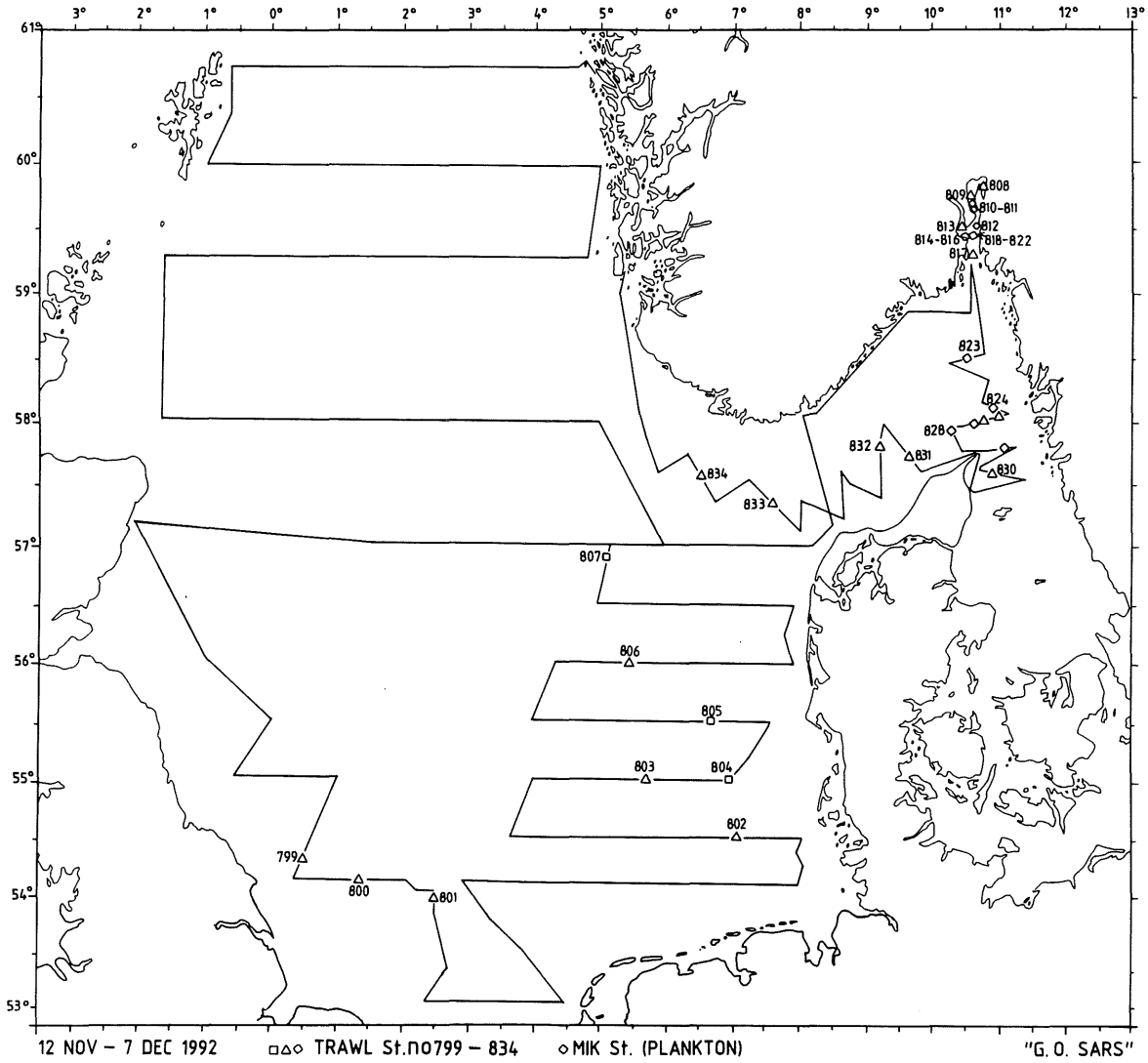


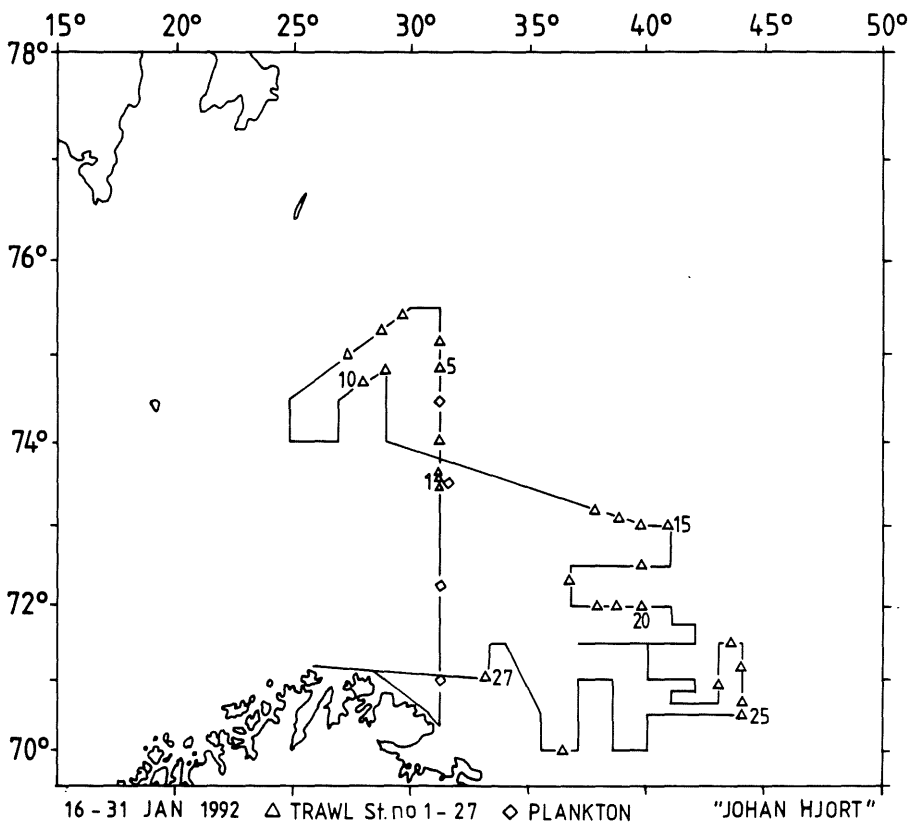
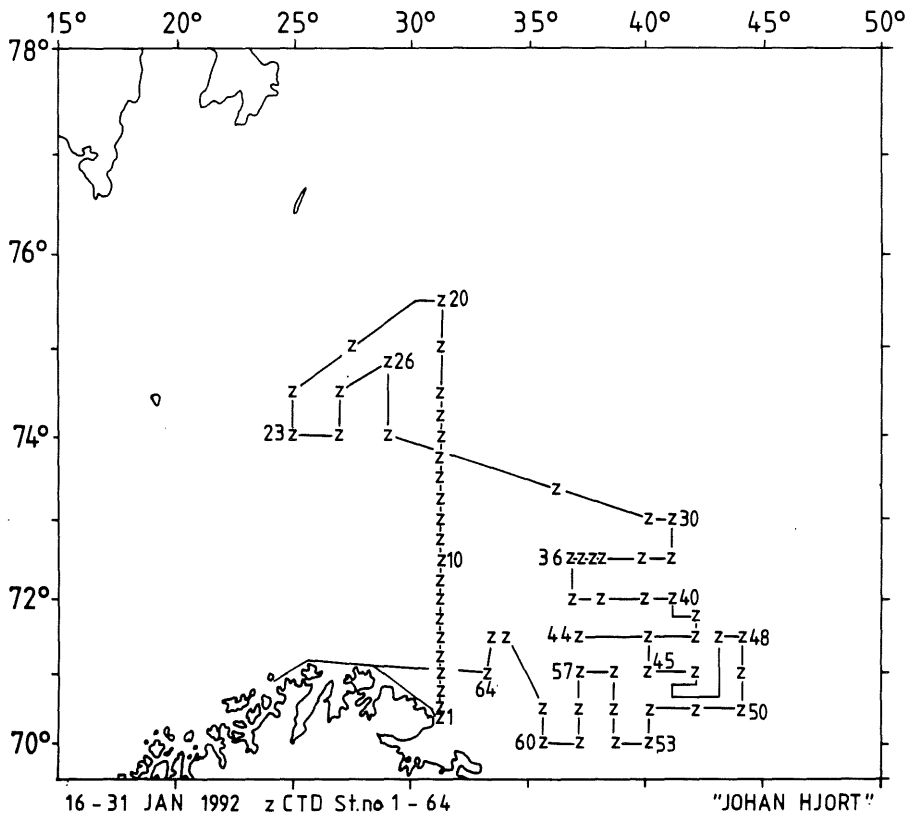


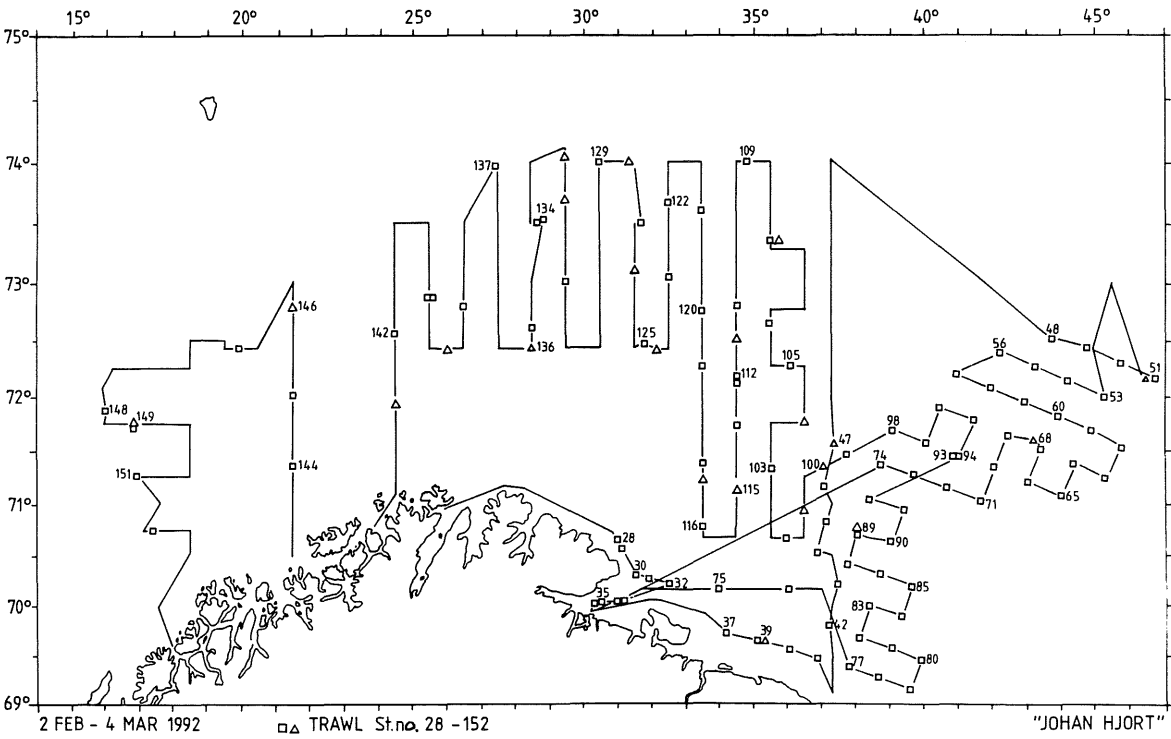
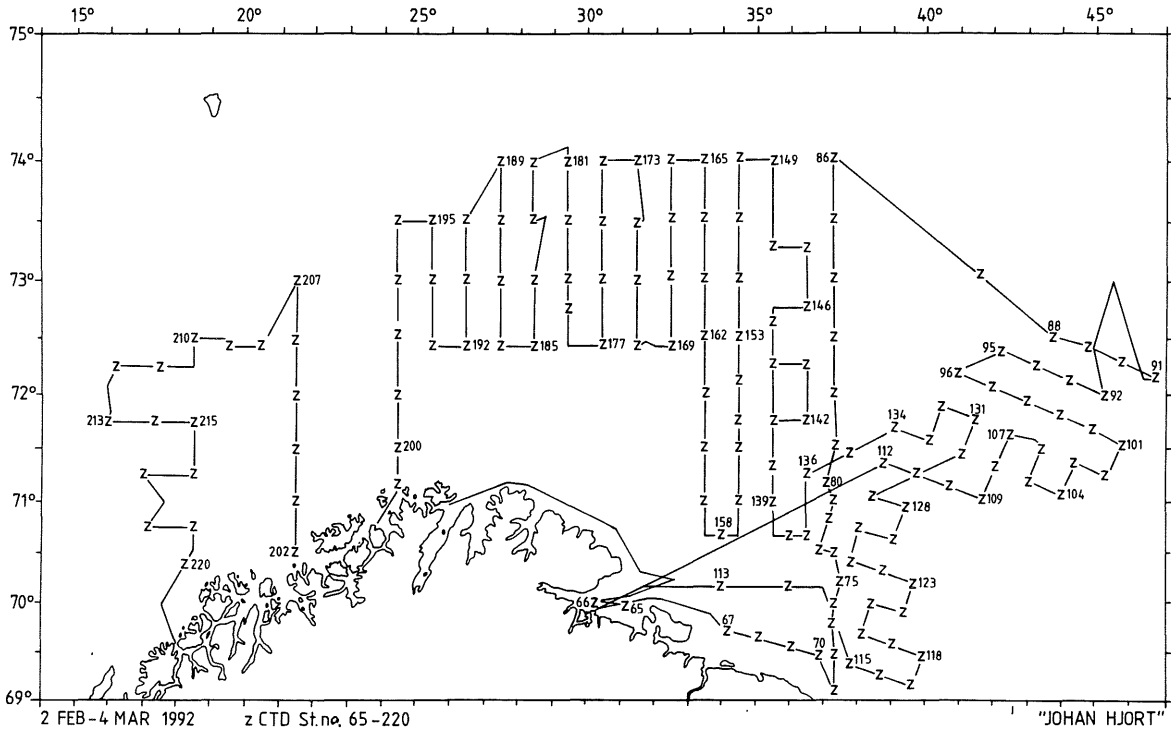


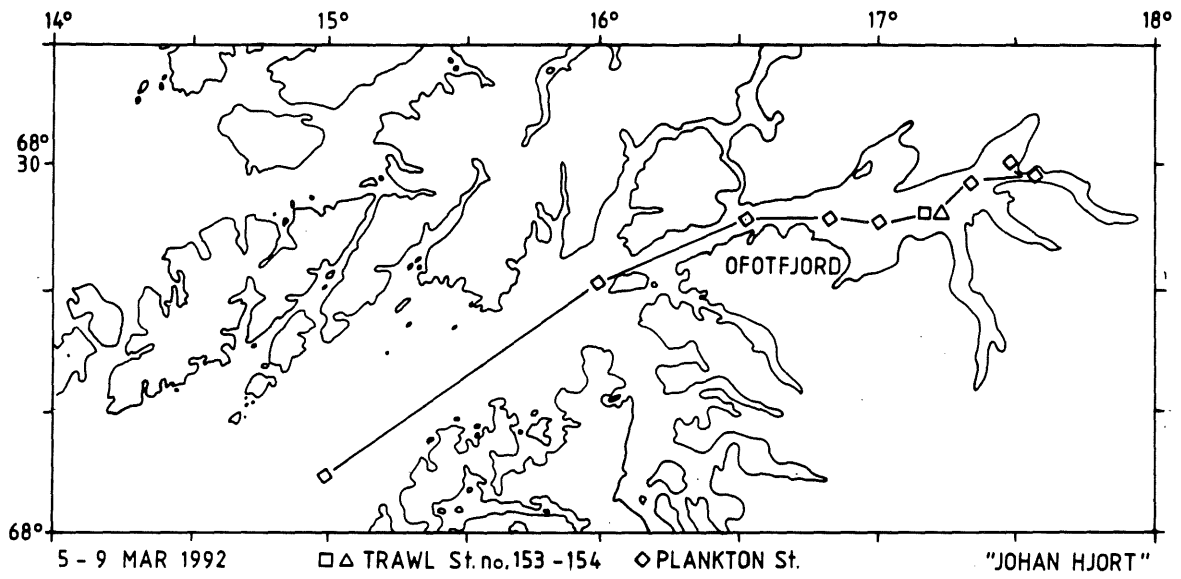
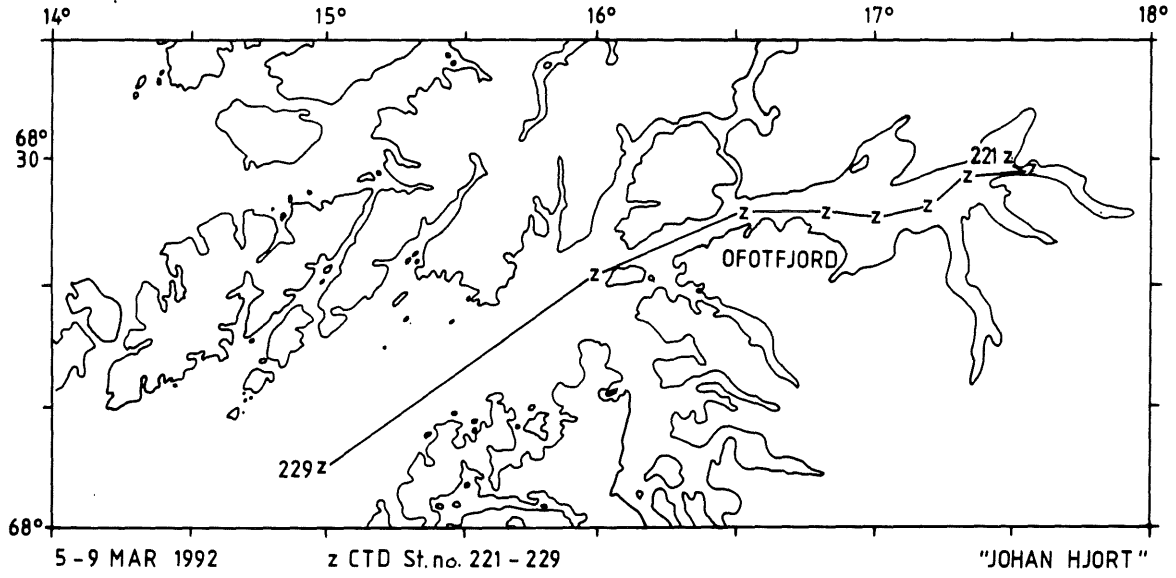


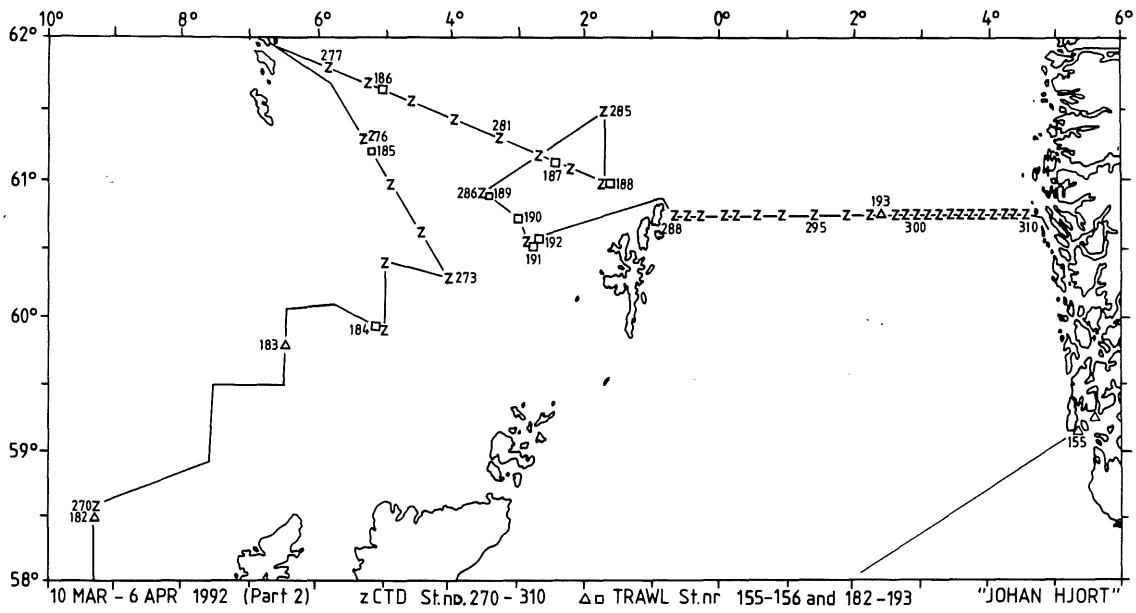
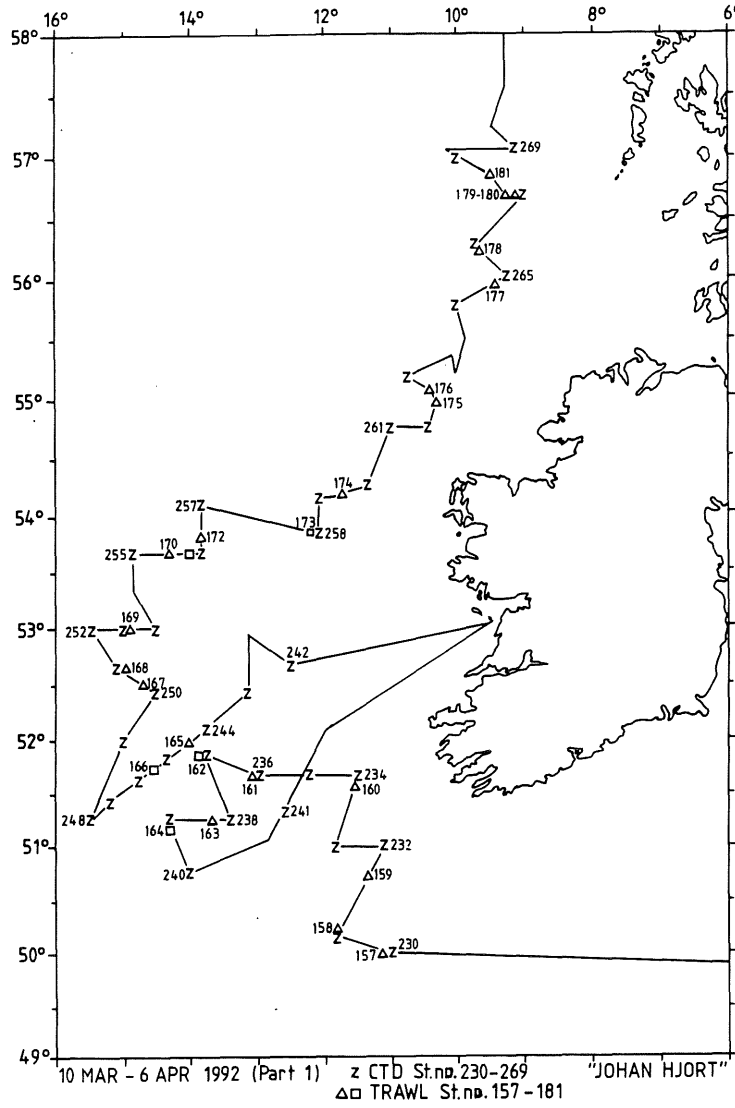


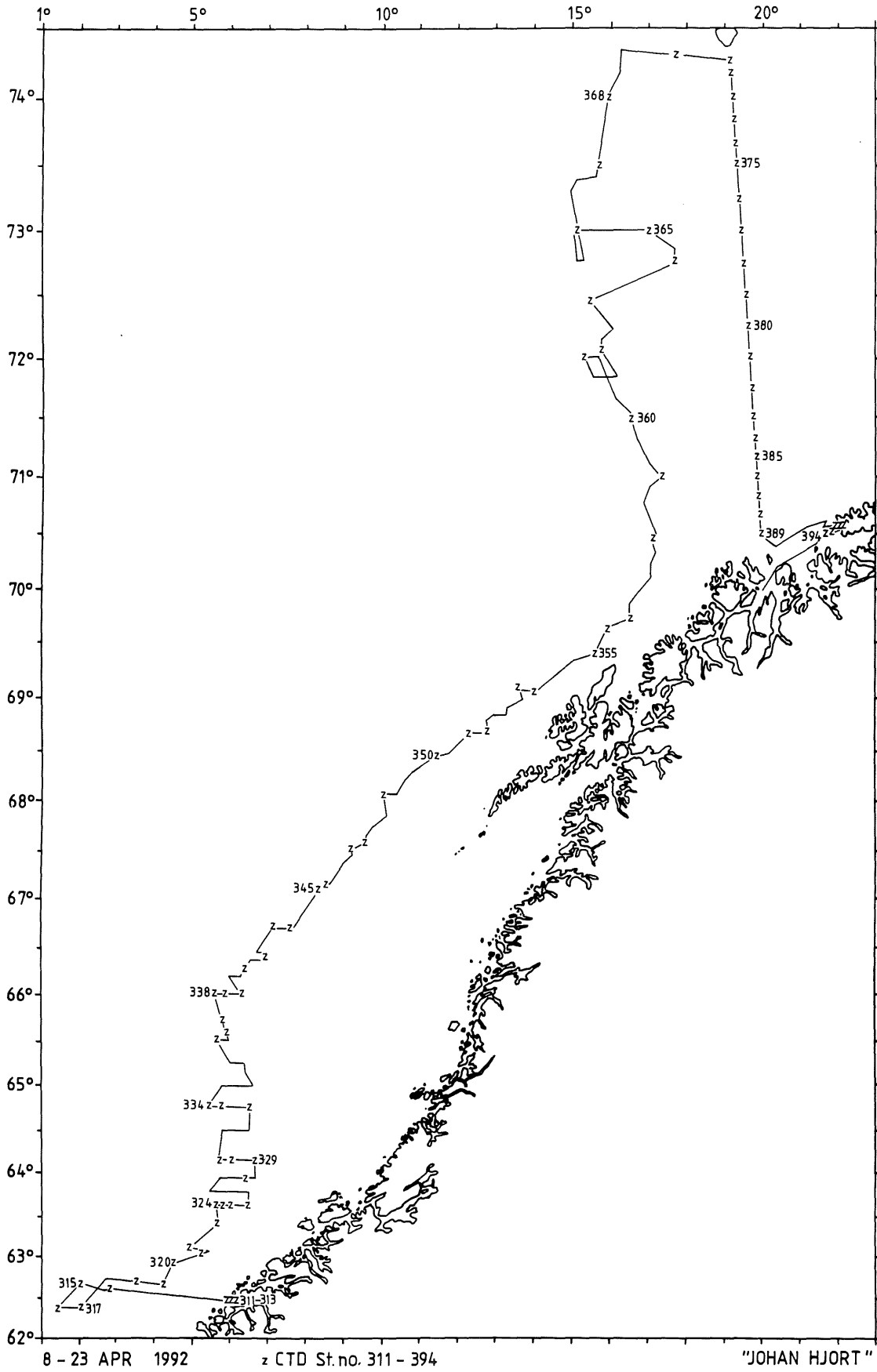


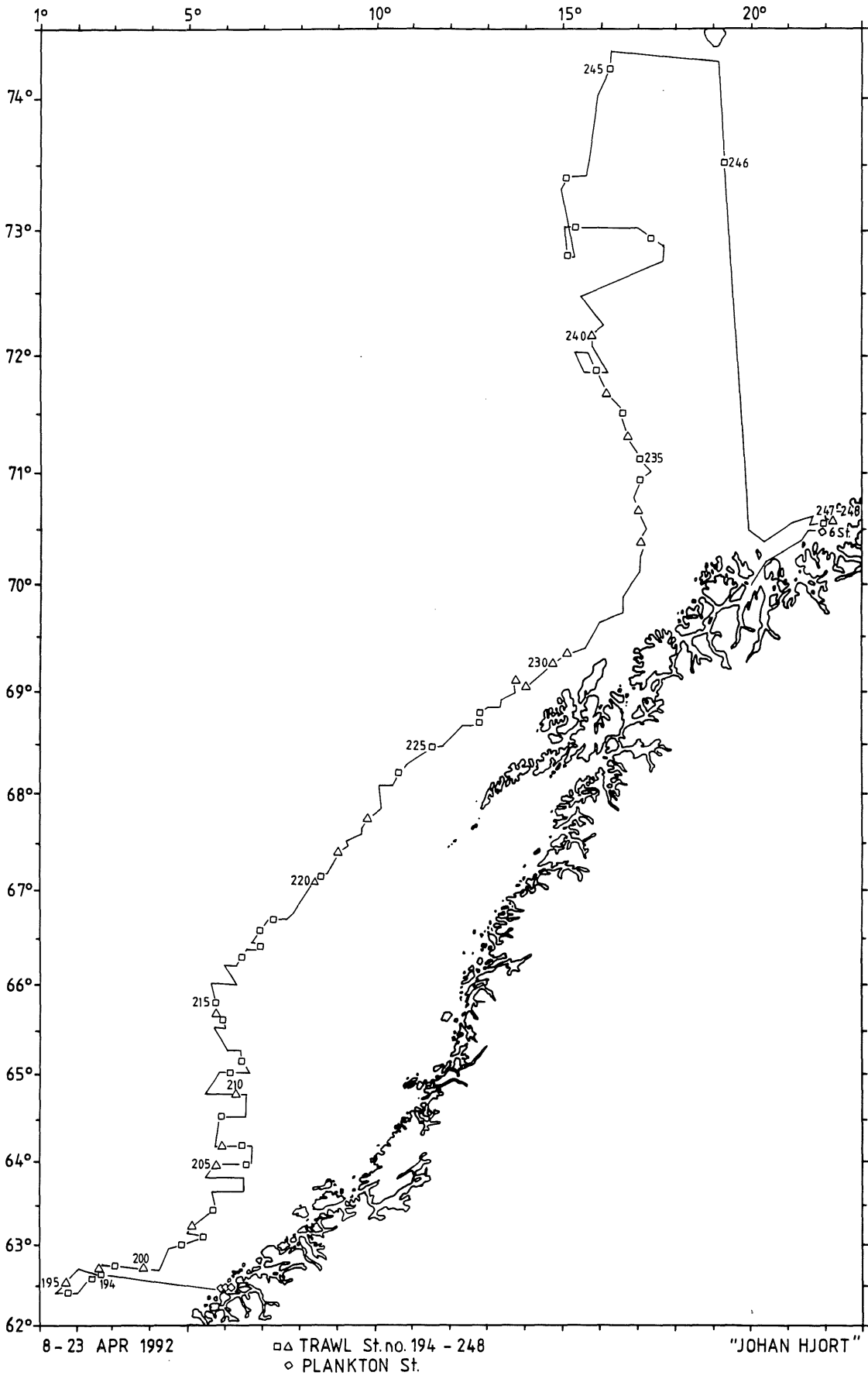


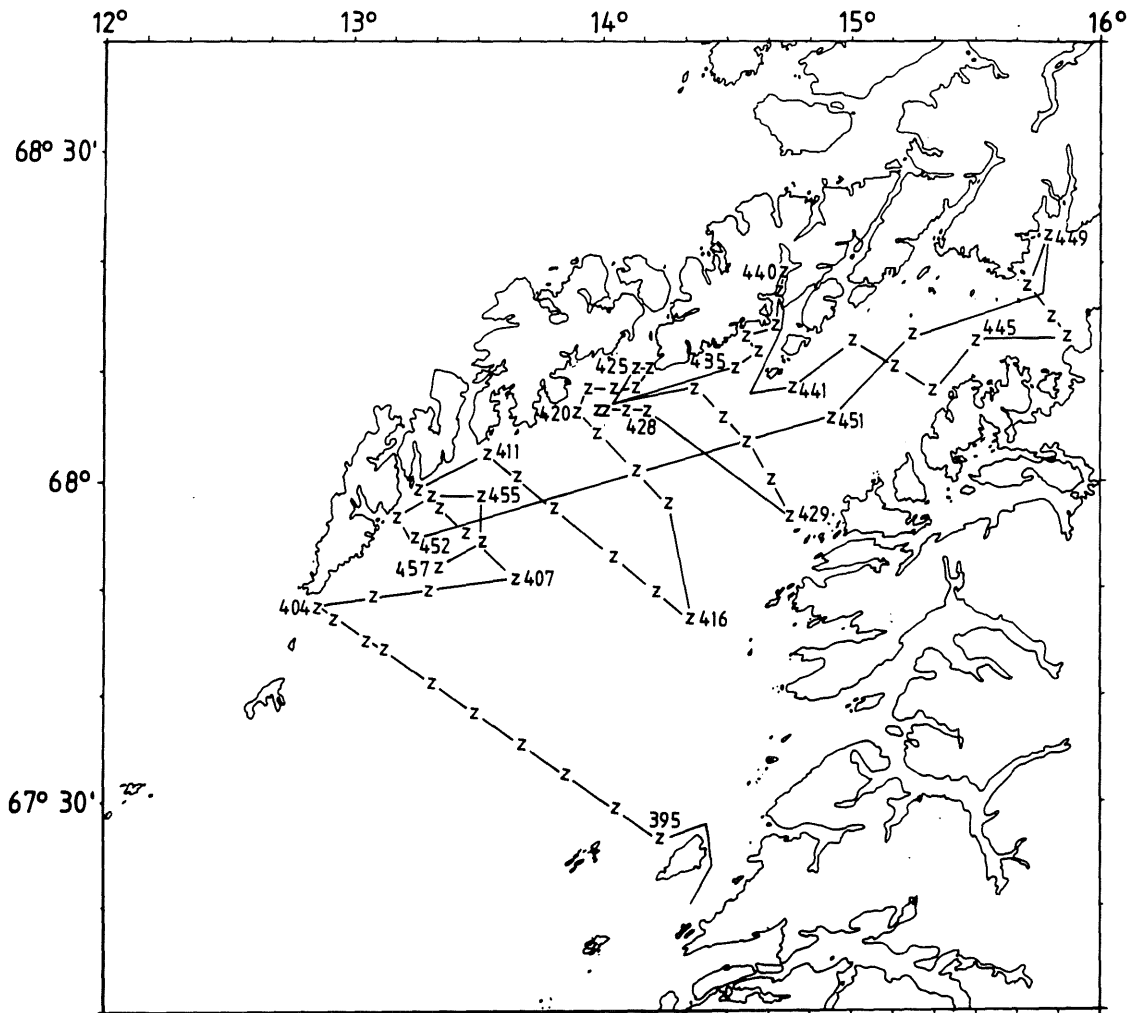




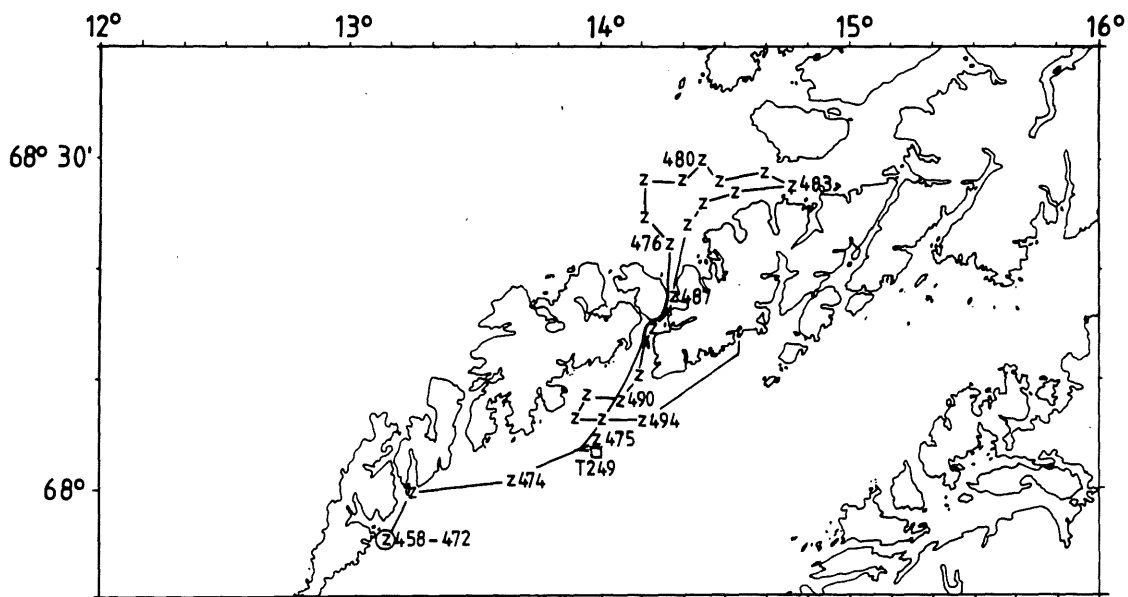




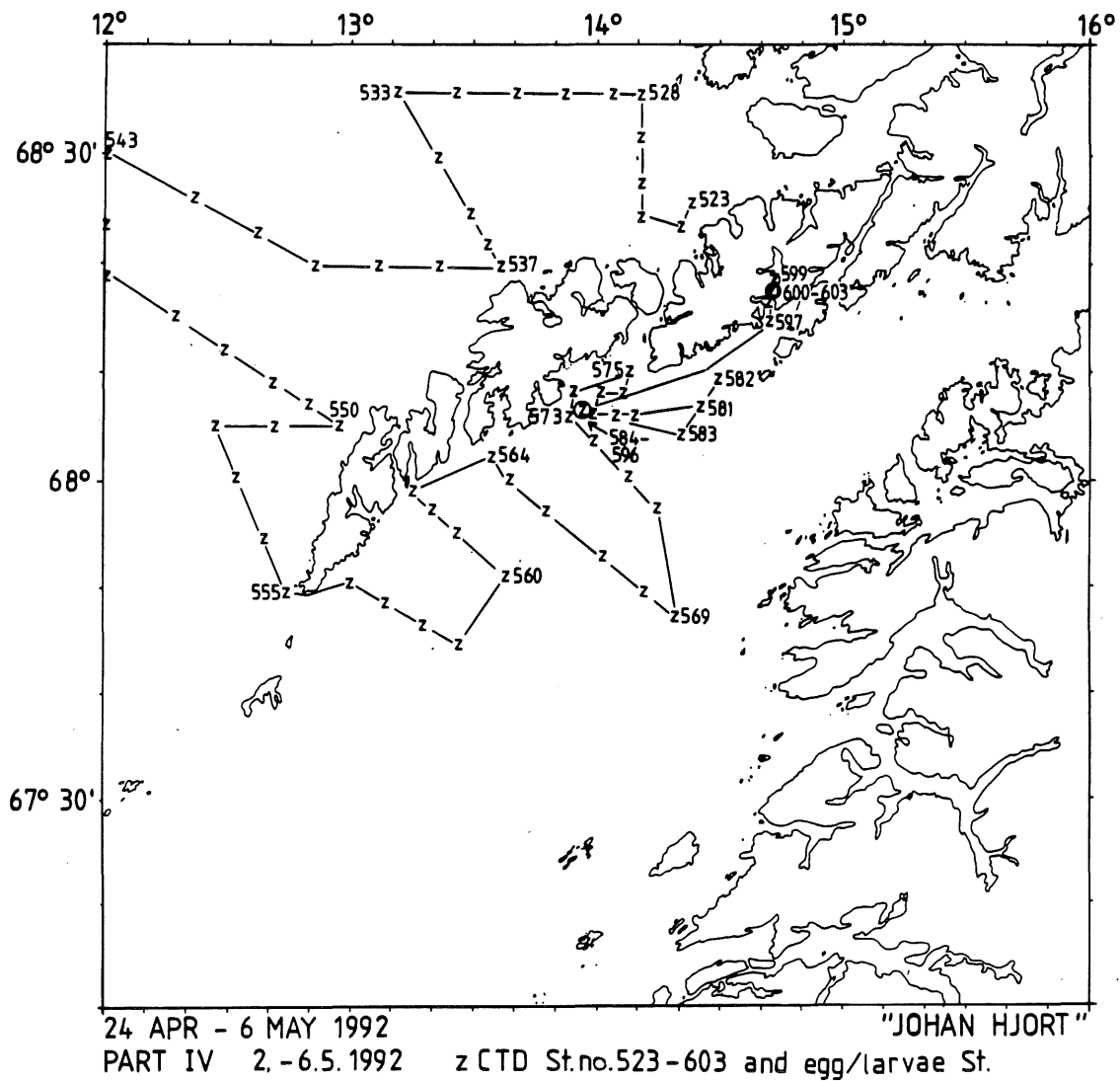
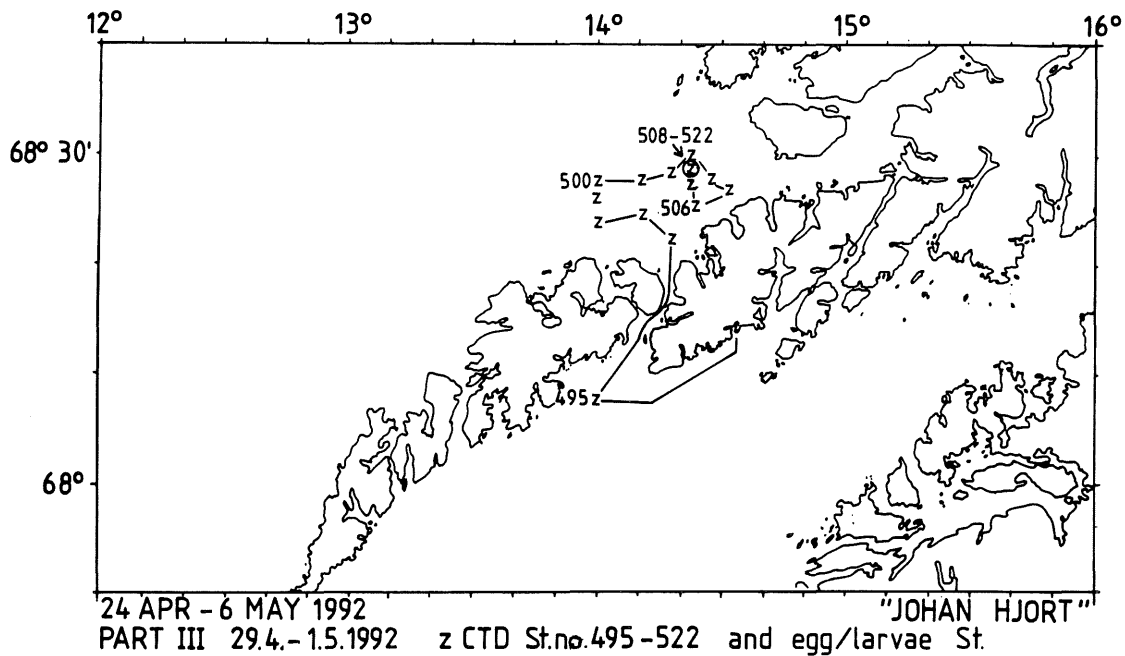


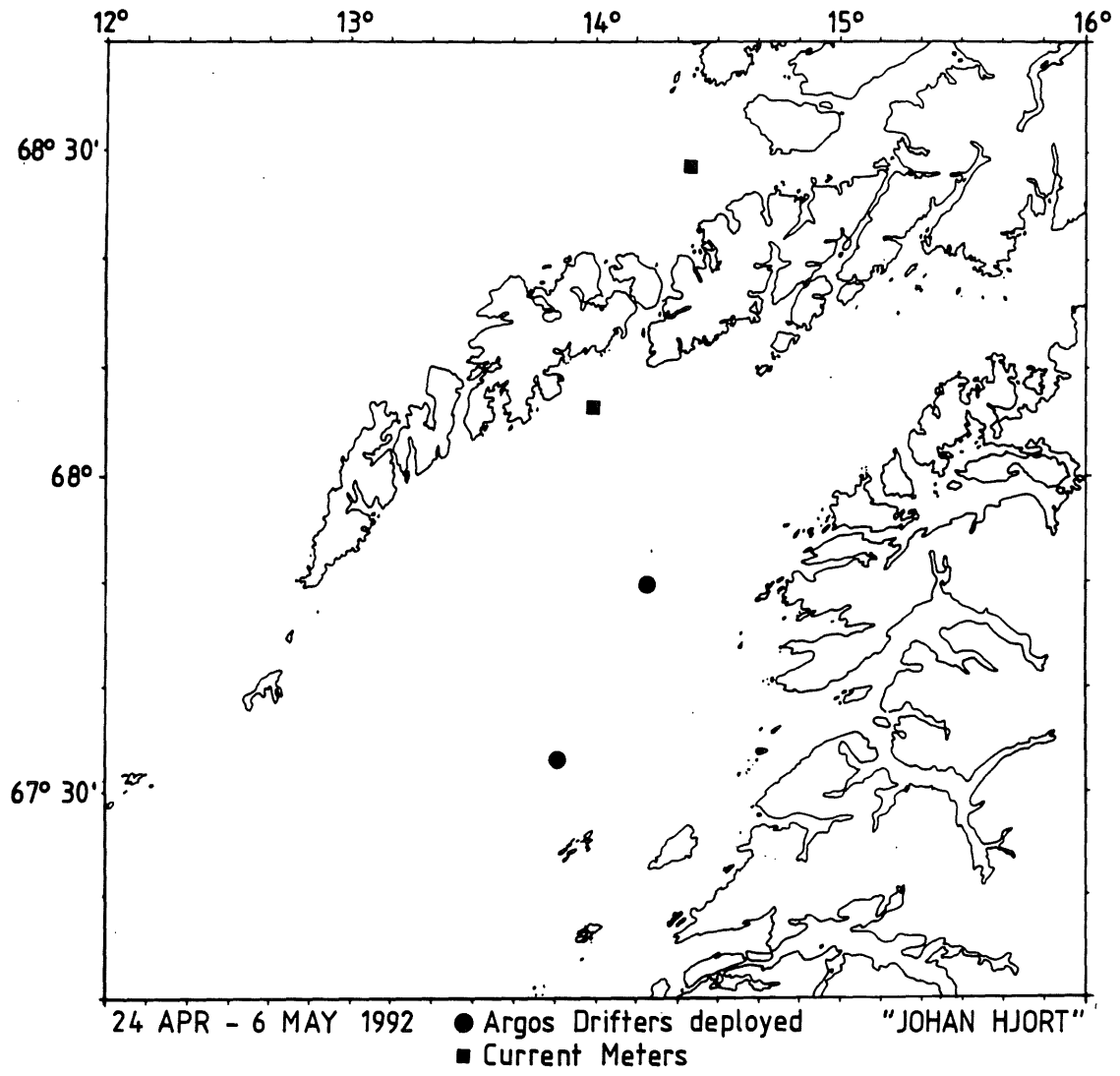


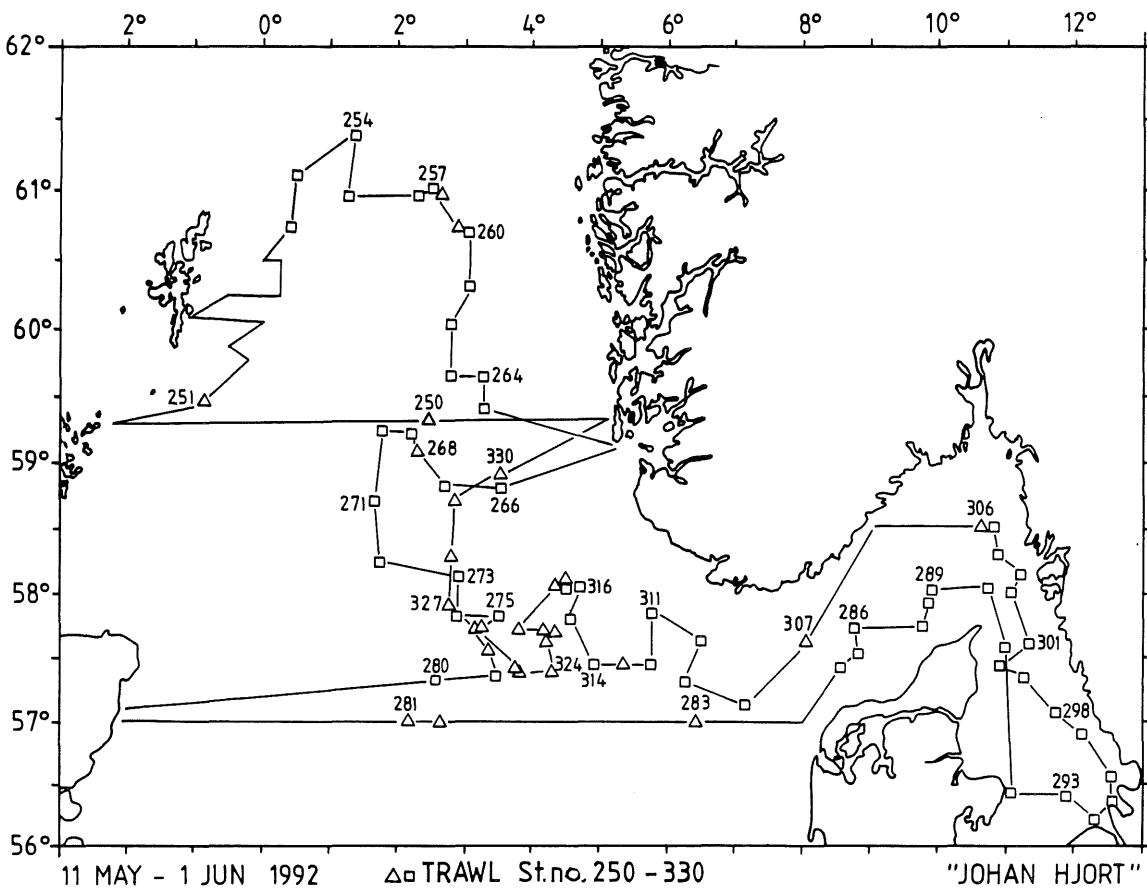
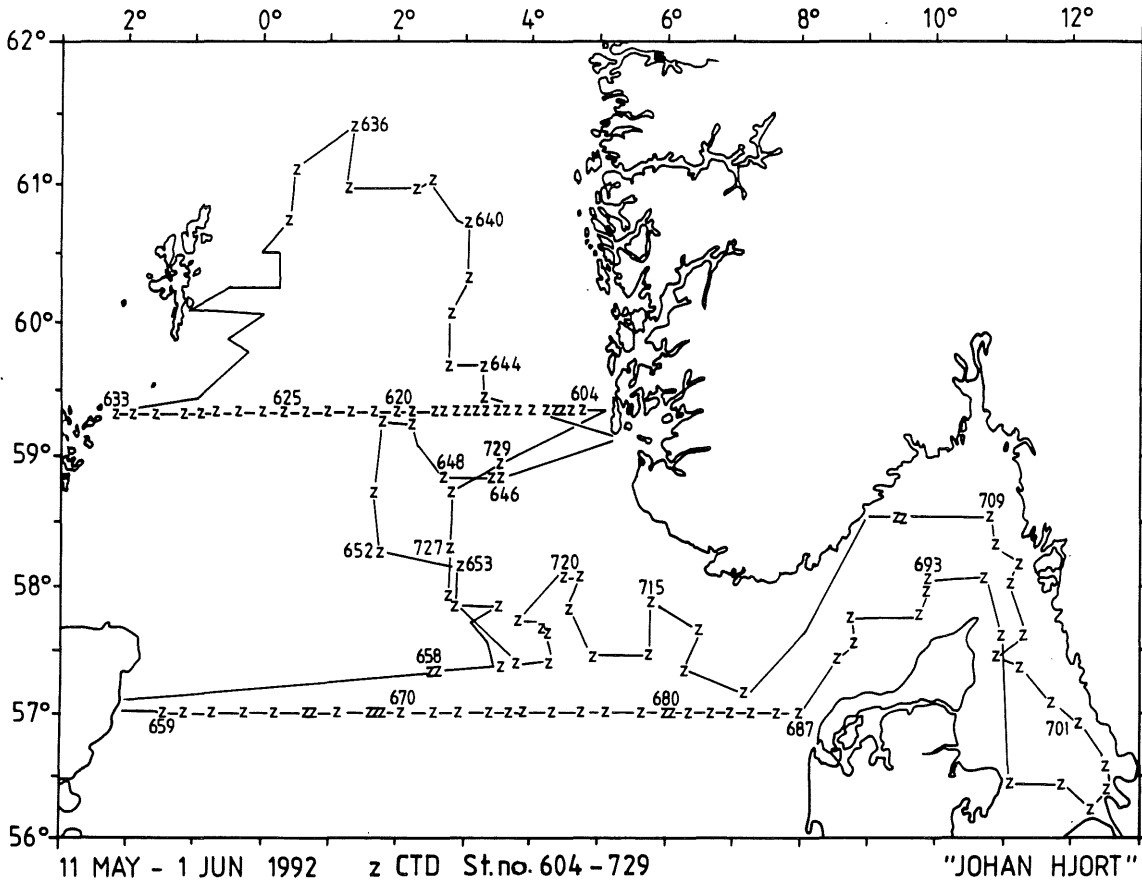
24 APR - 6 MAY 1992 "JOHAN HJORT"
 PART I 24.-26.4.1992 z CTD St.no. 395 - 457 and egg/larvae St.

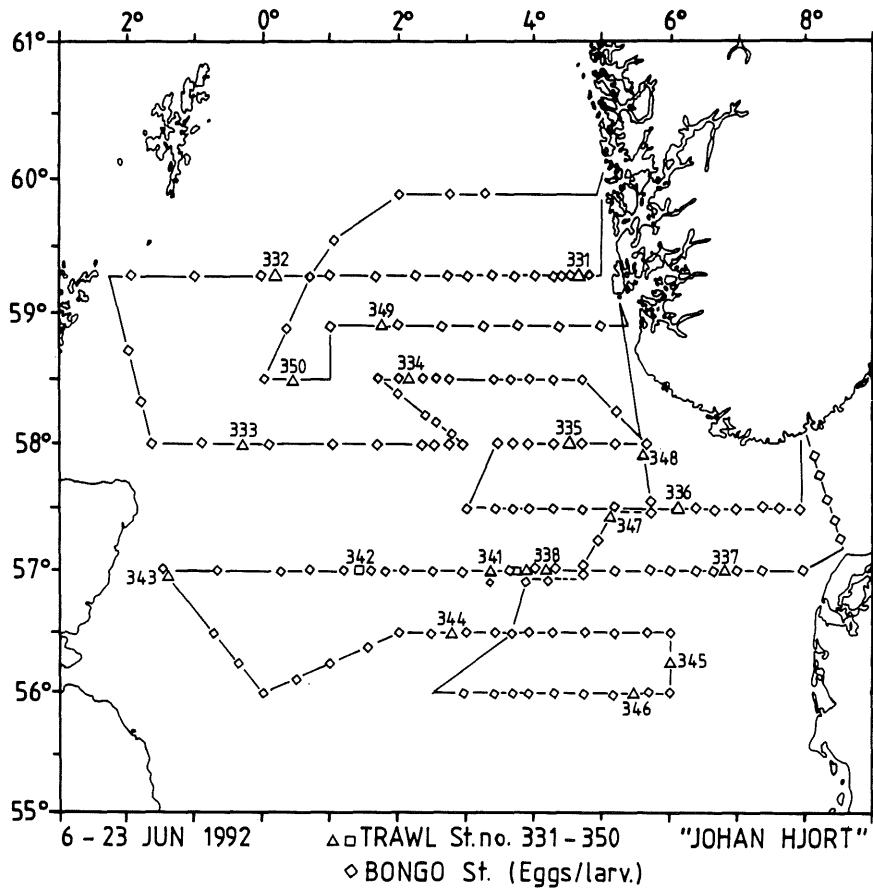
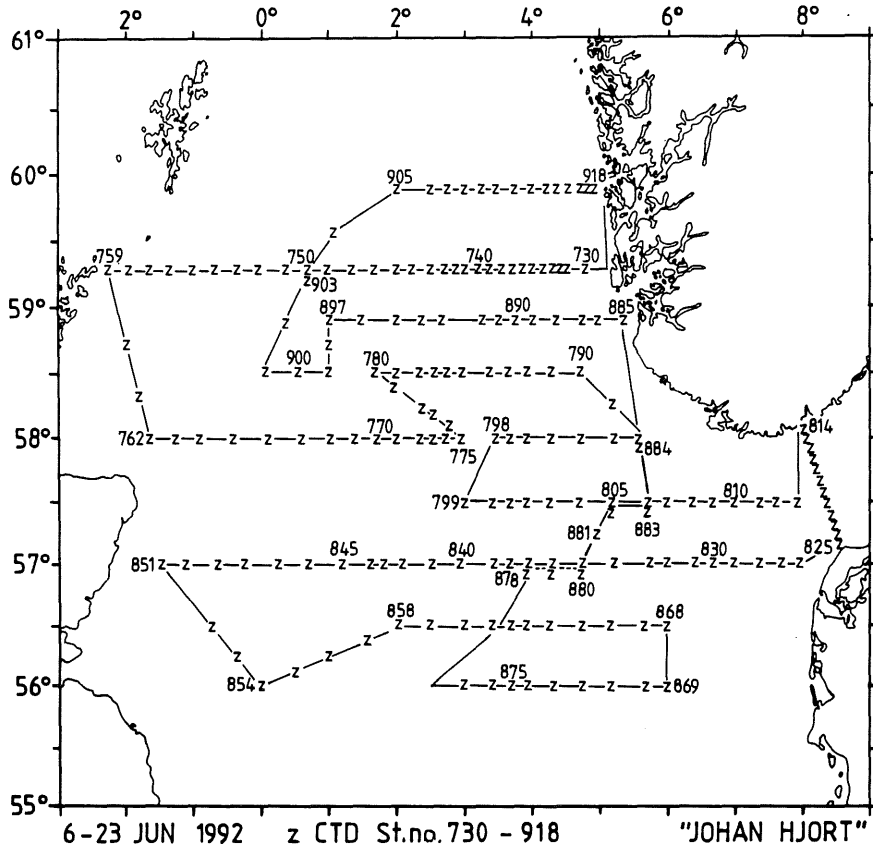


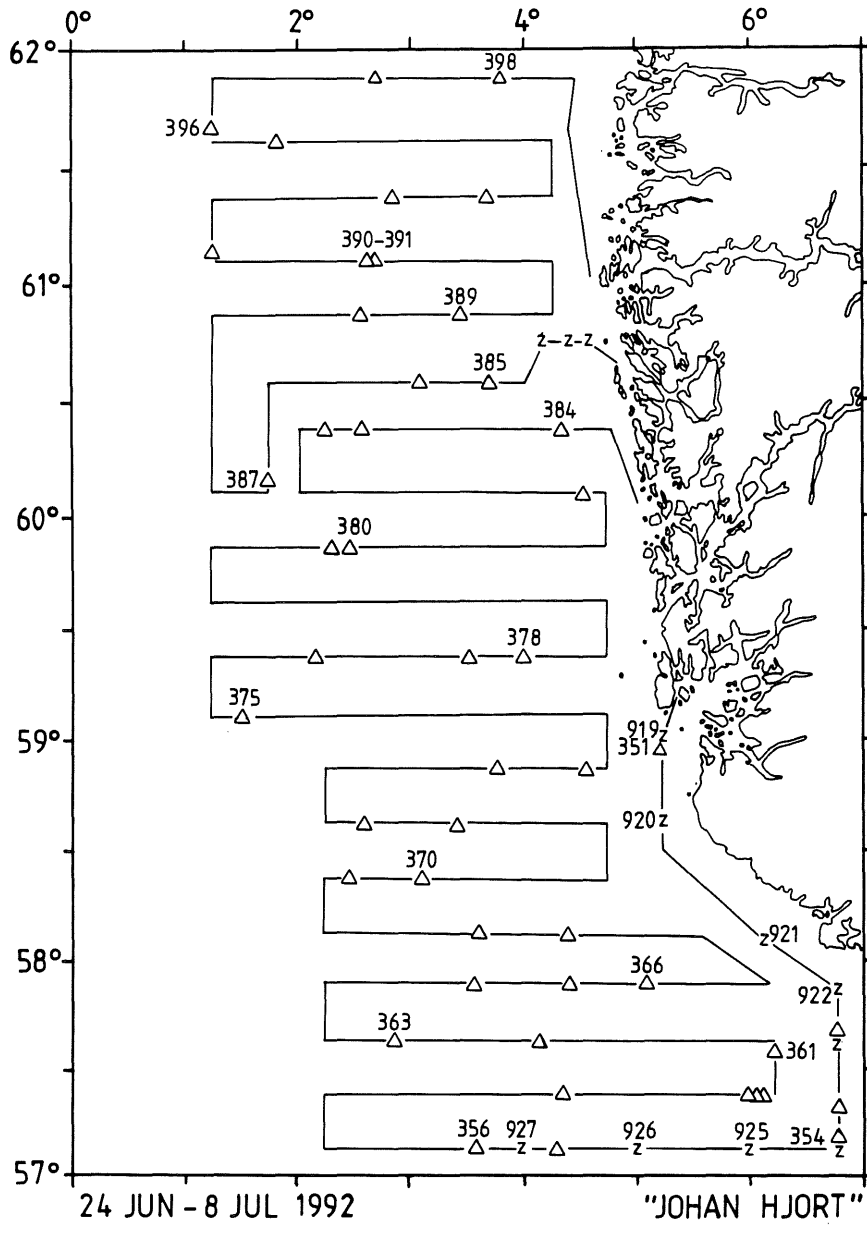
24 APR - 6 MAY 1992 "JOHAN HJORT"
 PART II 26.-29.4.1992 z CTD St.no 458 - 494 and egg/larvae St.
 □ TRAWL St.no. 249



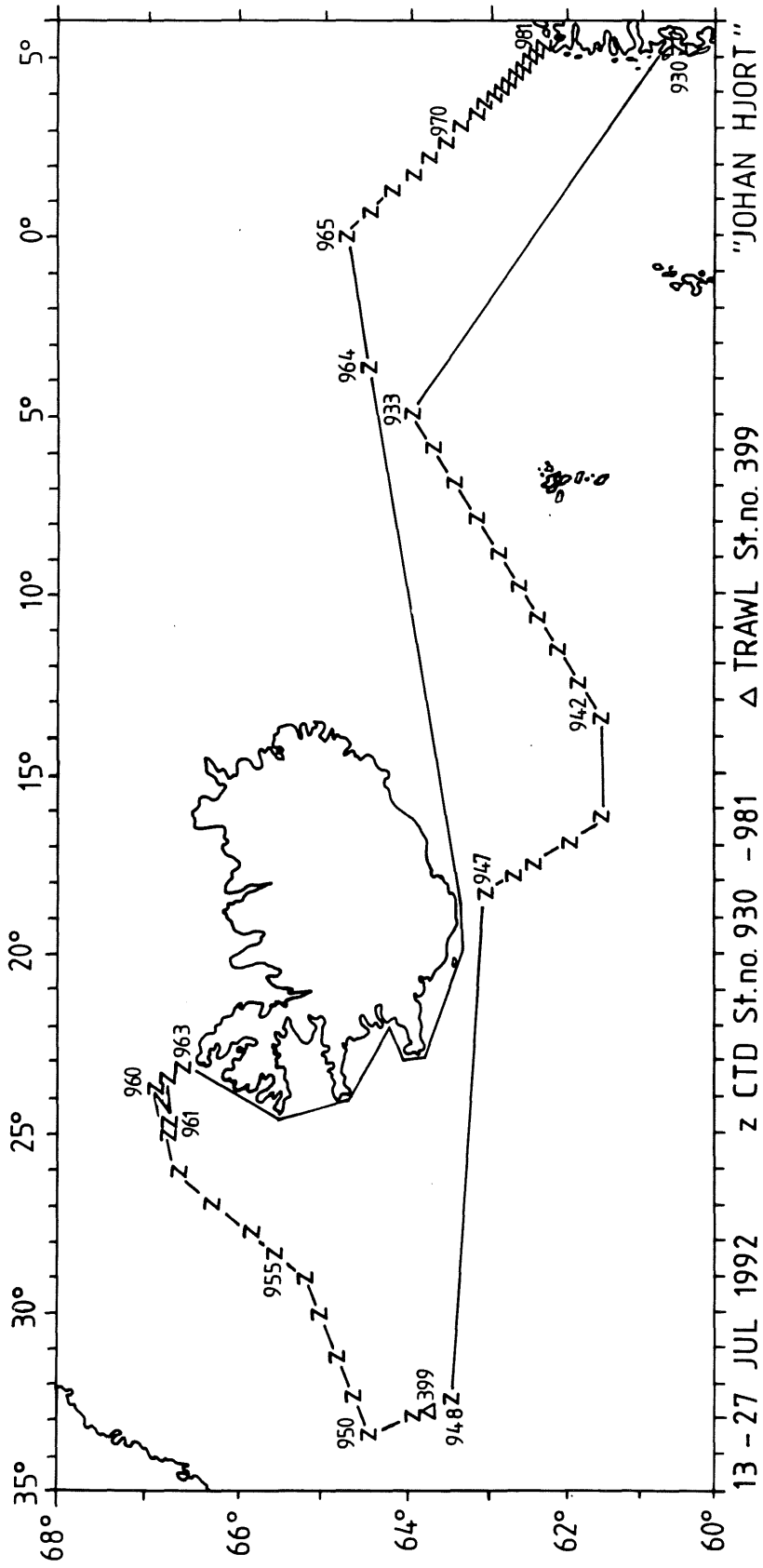


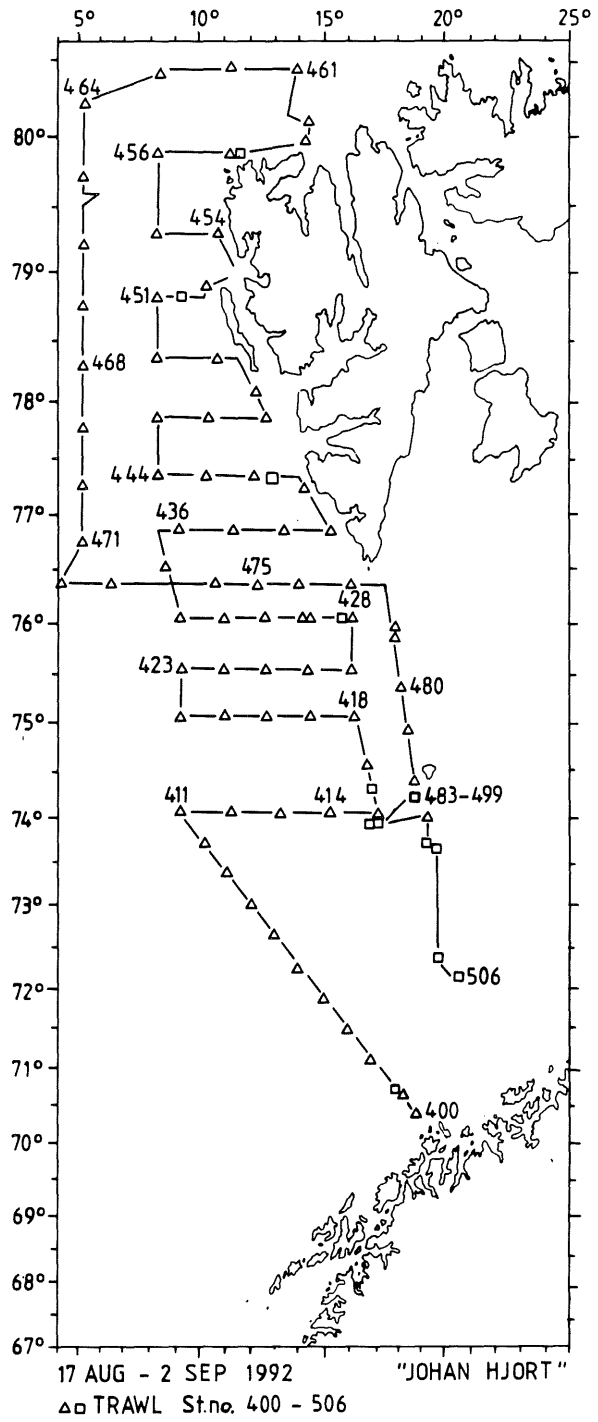
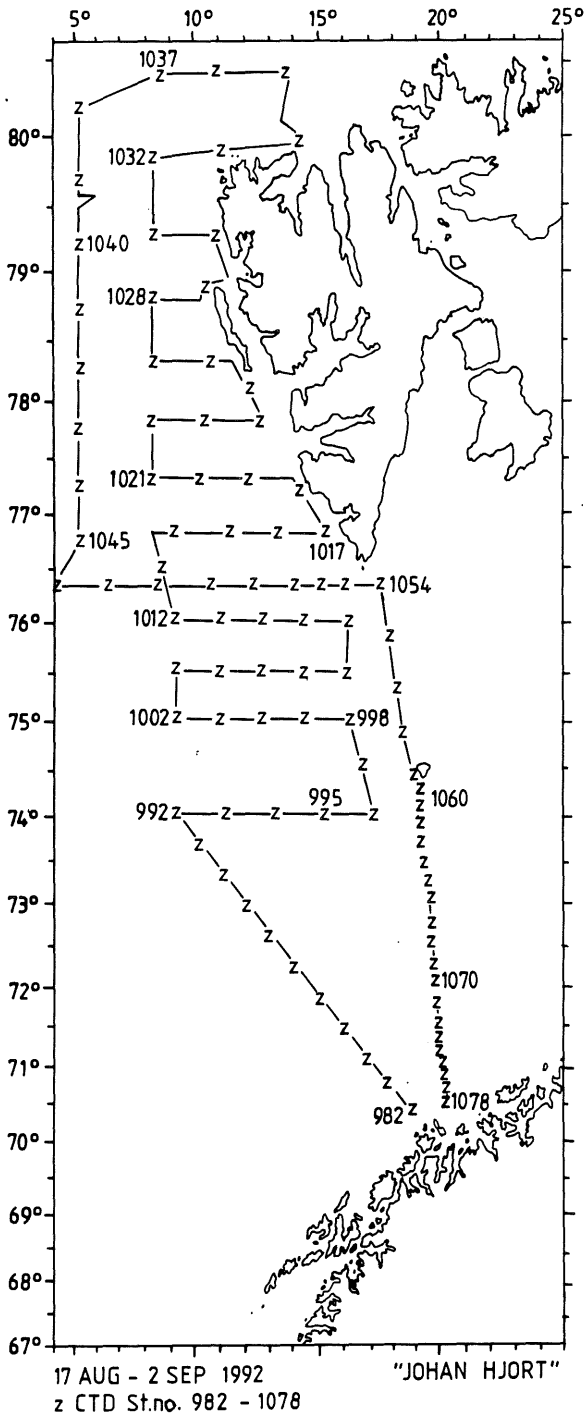


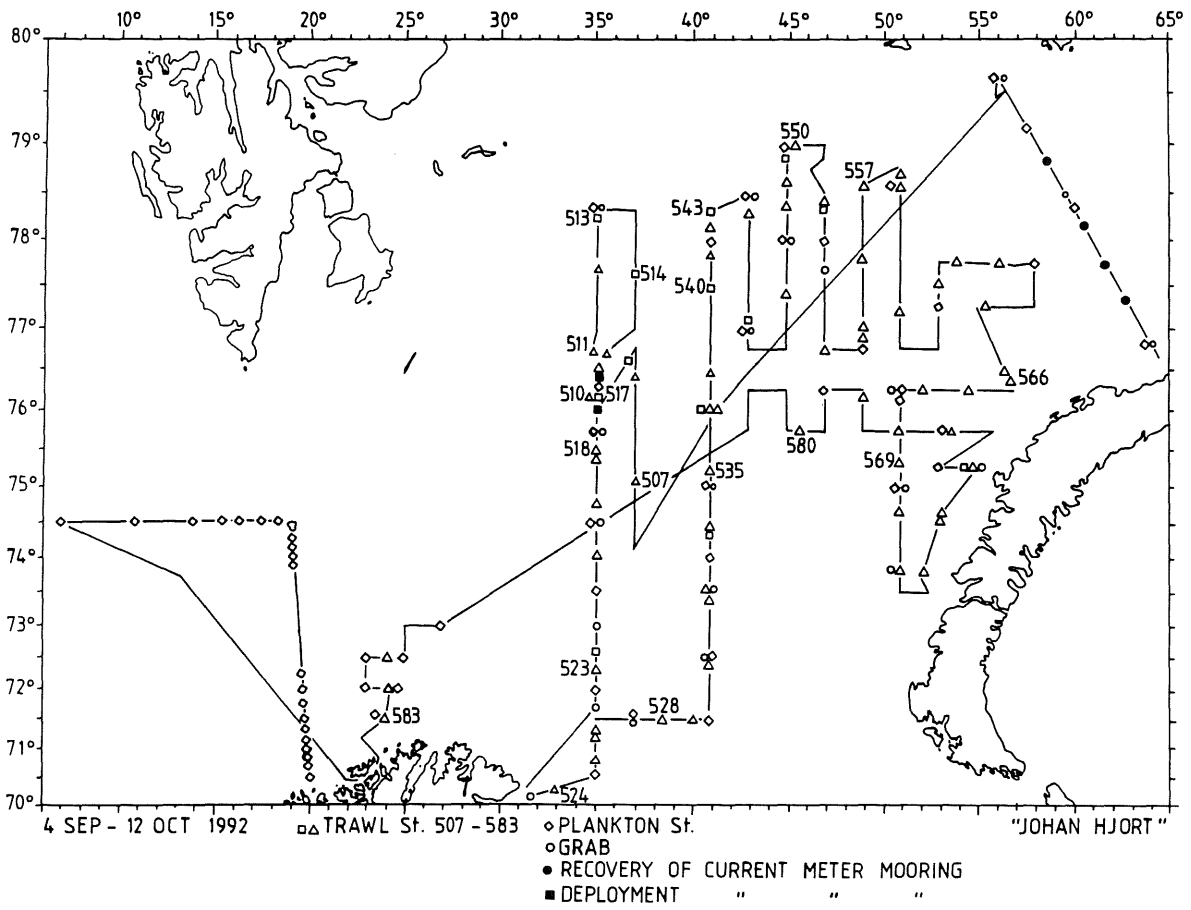
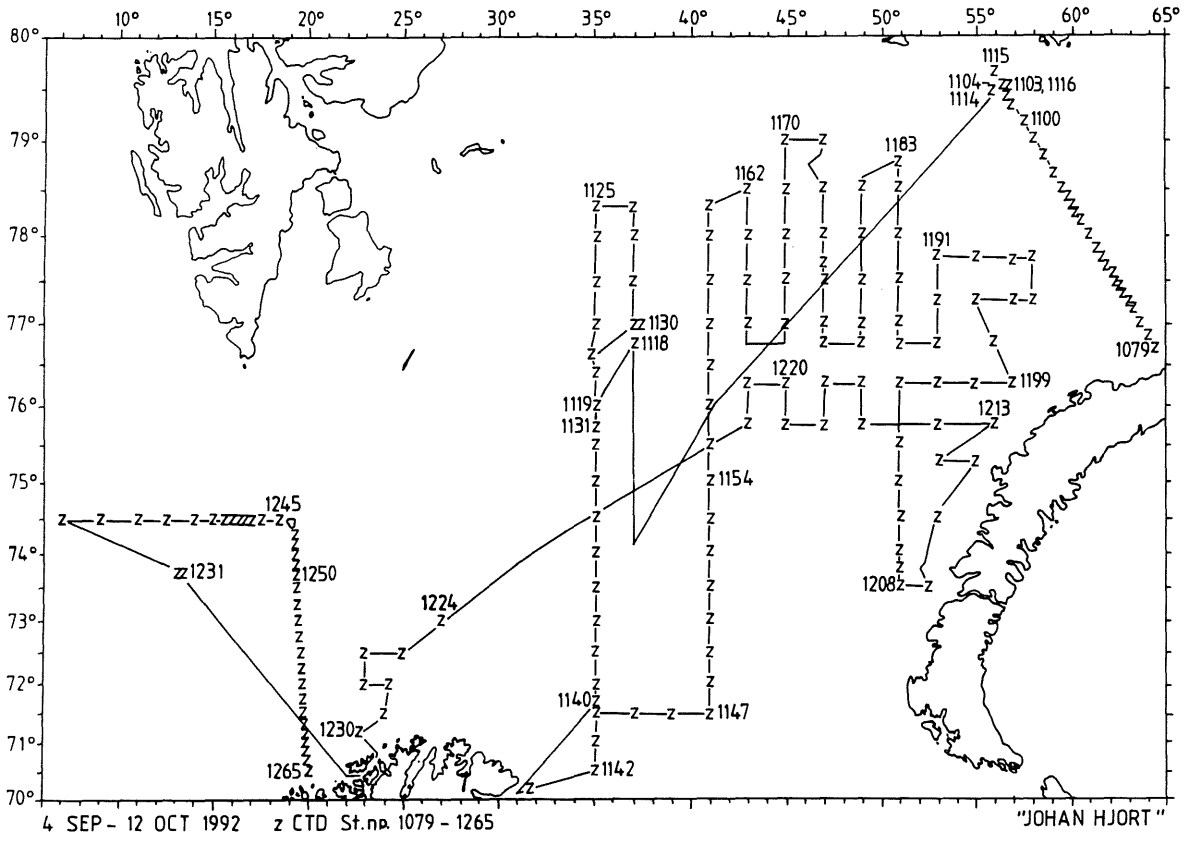


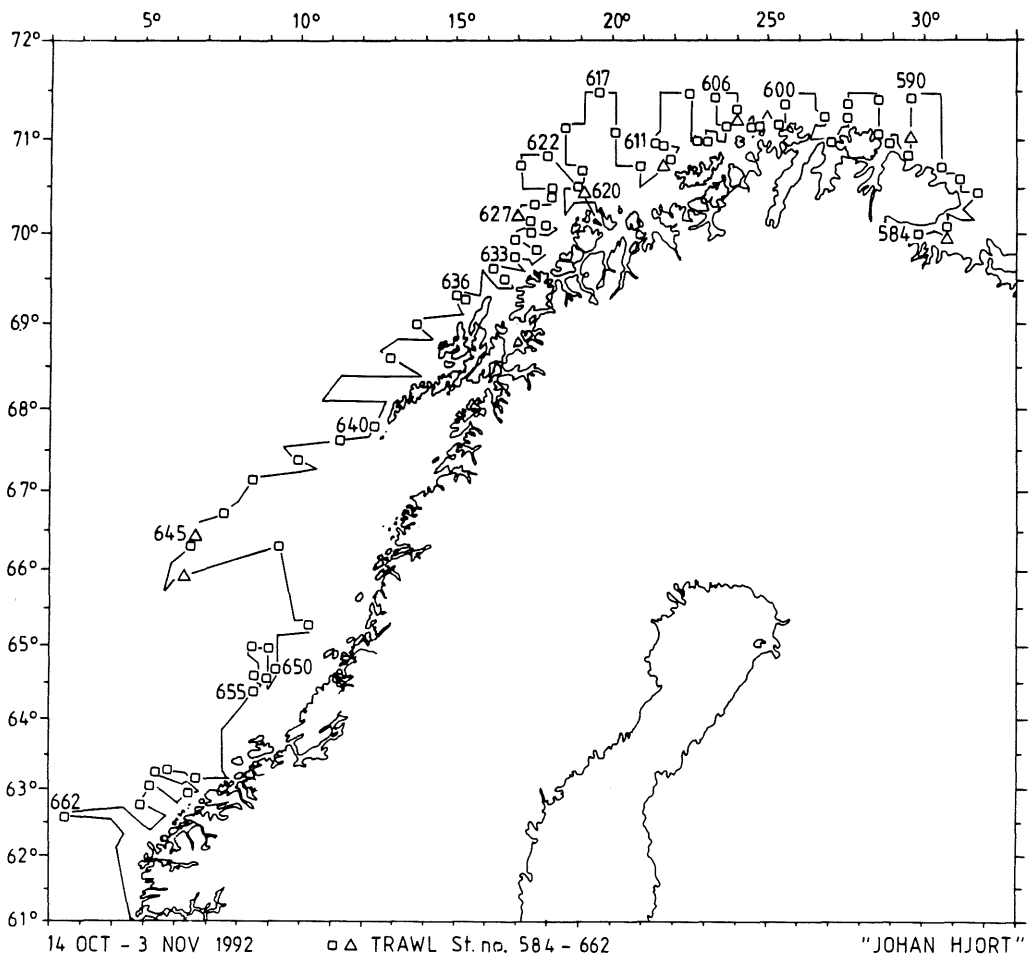
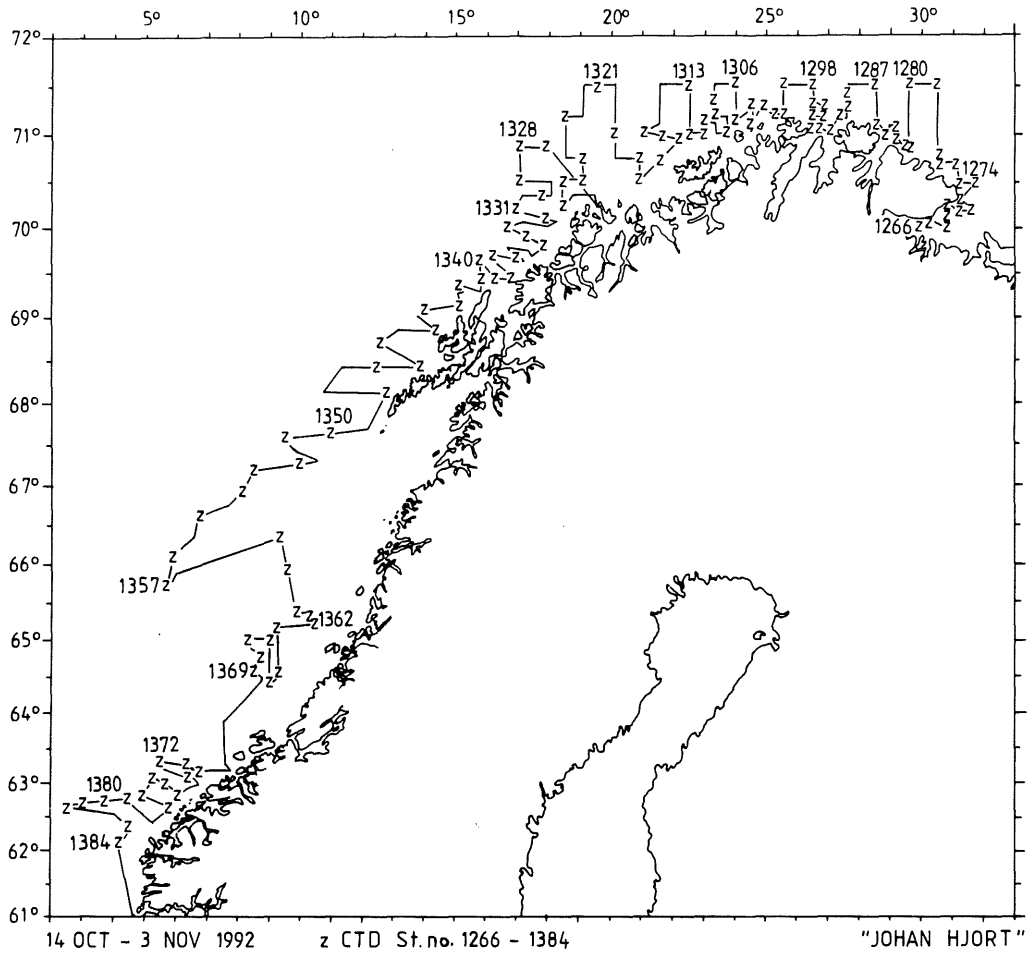


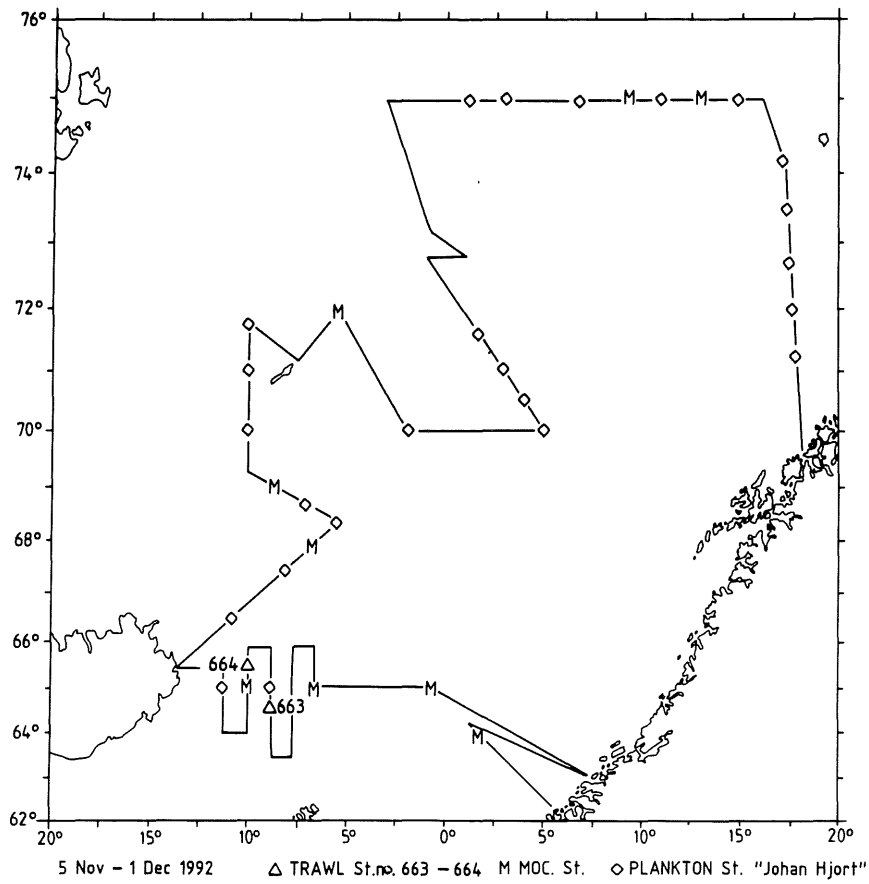
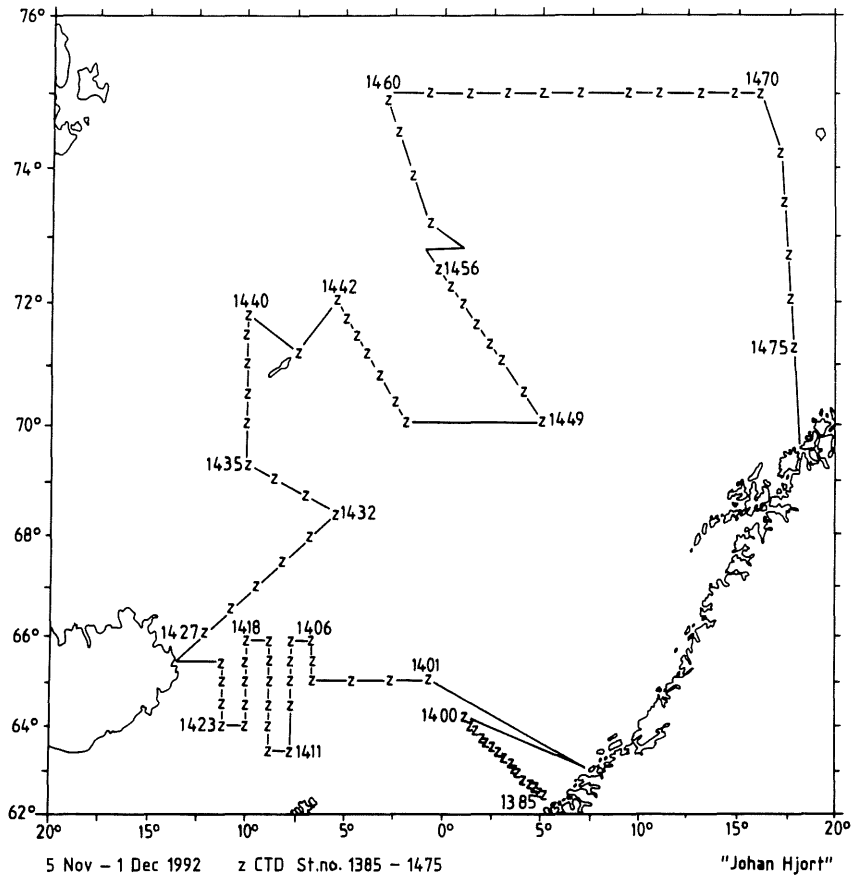
z CTD St.no. 919 - 930
△ TRAWL St.no. 351 - 398

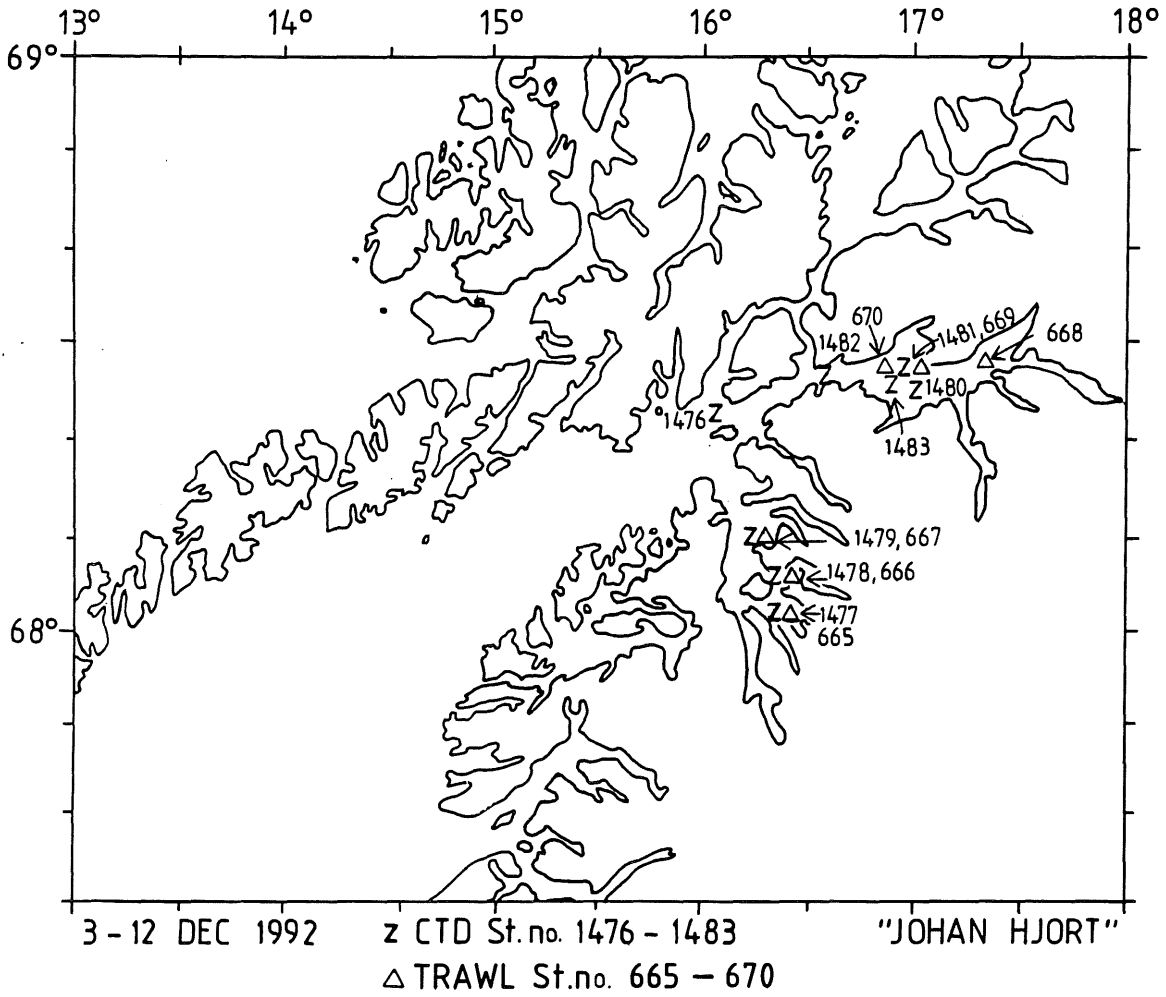


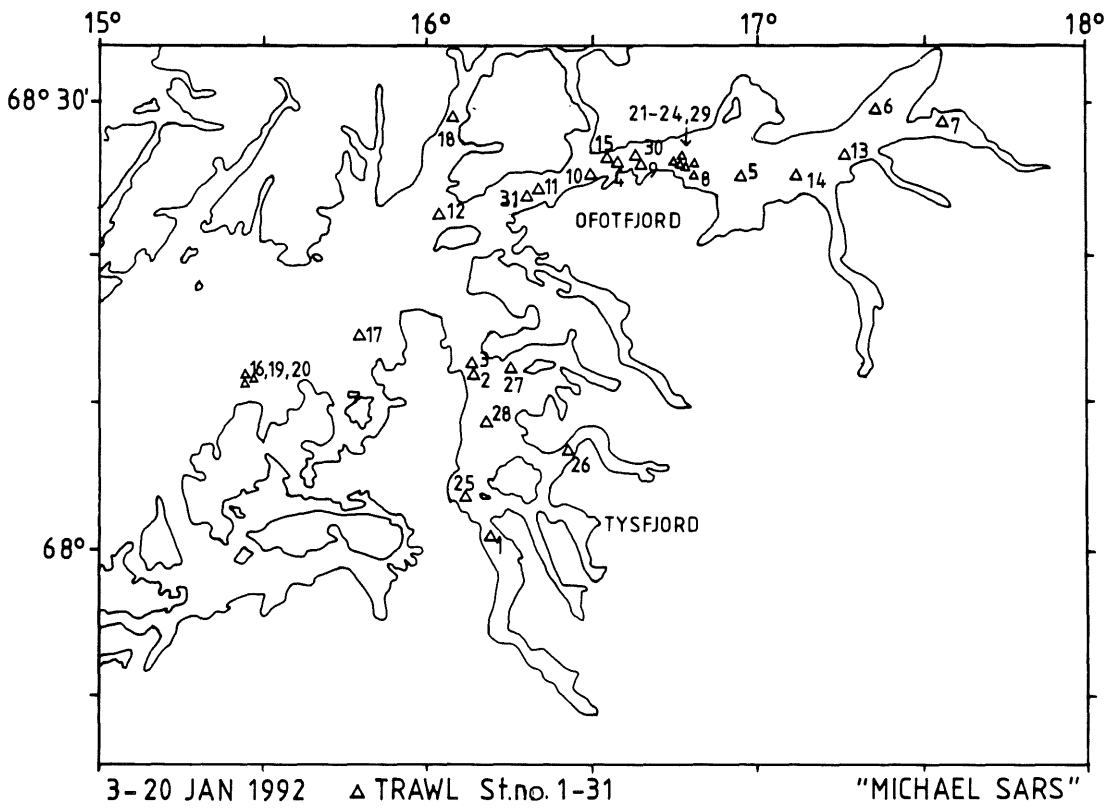
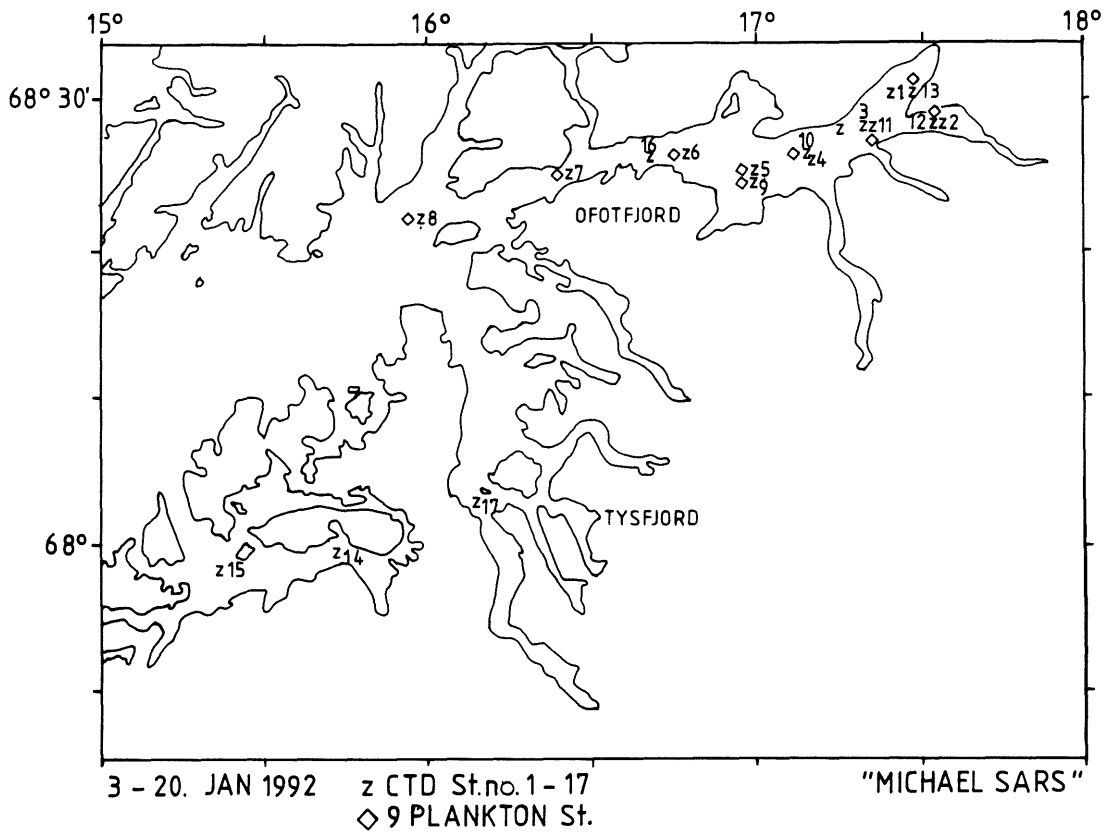


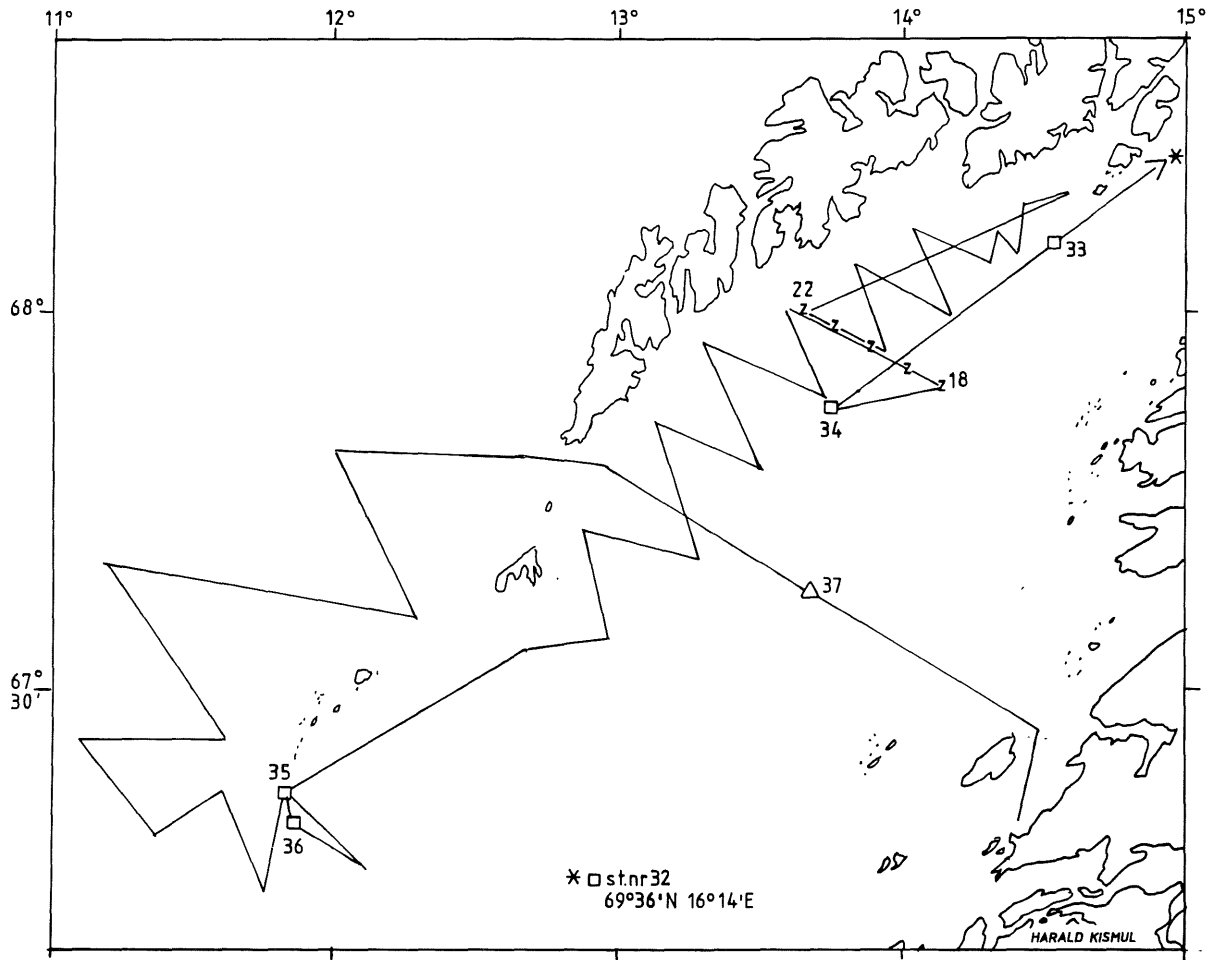




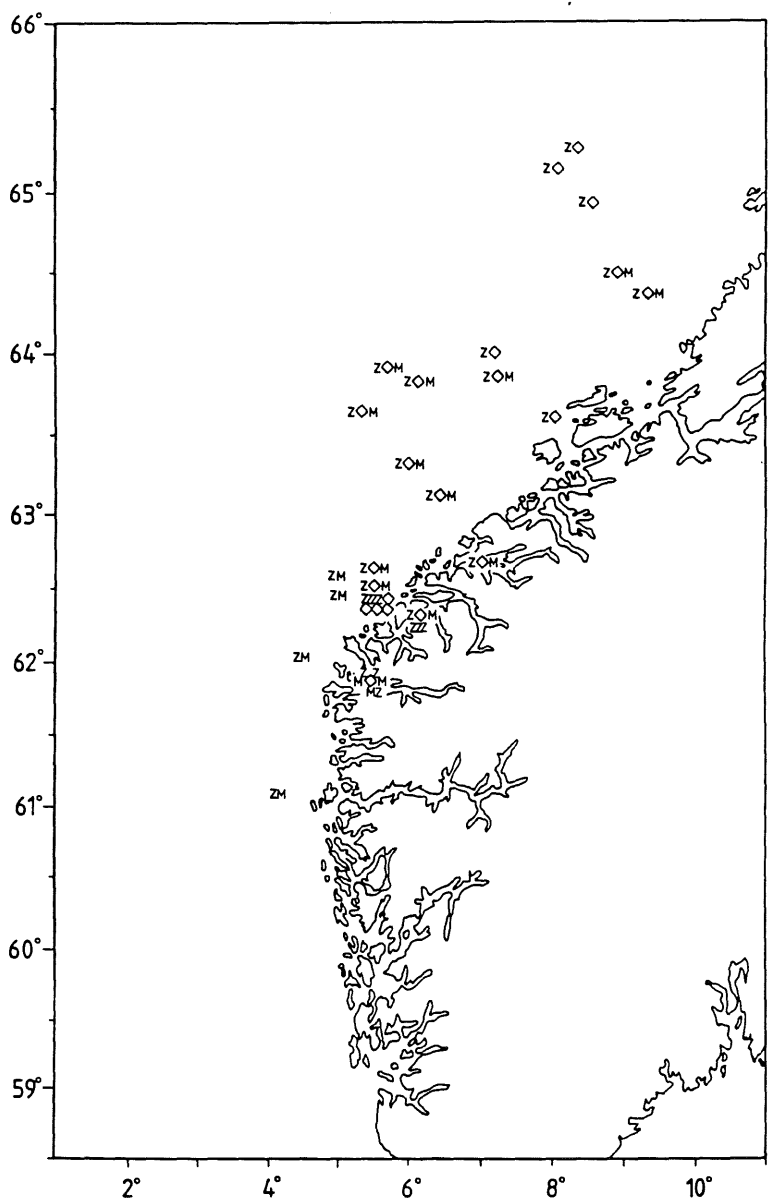








20 JAN - 5 FEB 1992 □ CTD ST. NO. 18-22 △ □ TRAWL ST. NO. 32-37 "MICHAEL SARS"

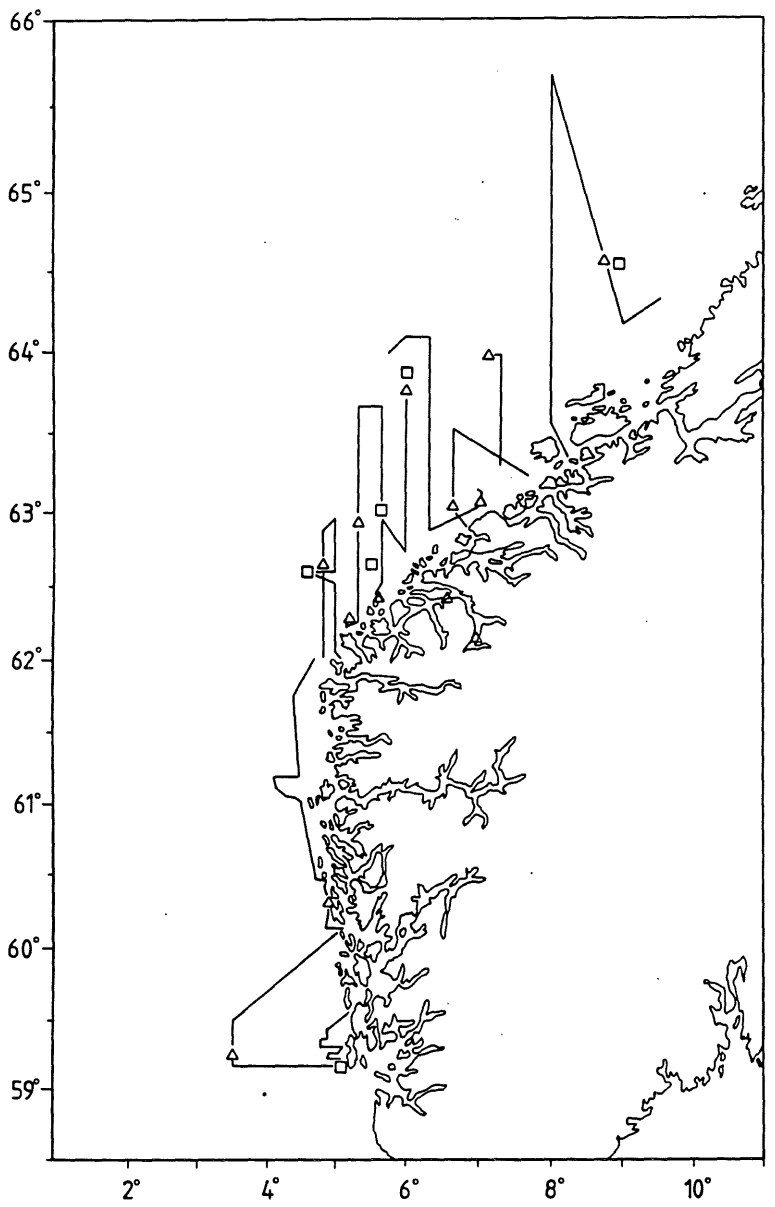


10 FEB - 9 MAR 1992

"M. SARS"

z CTD St.no. 23 - 51

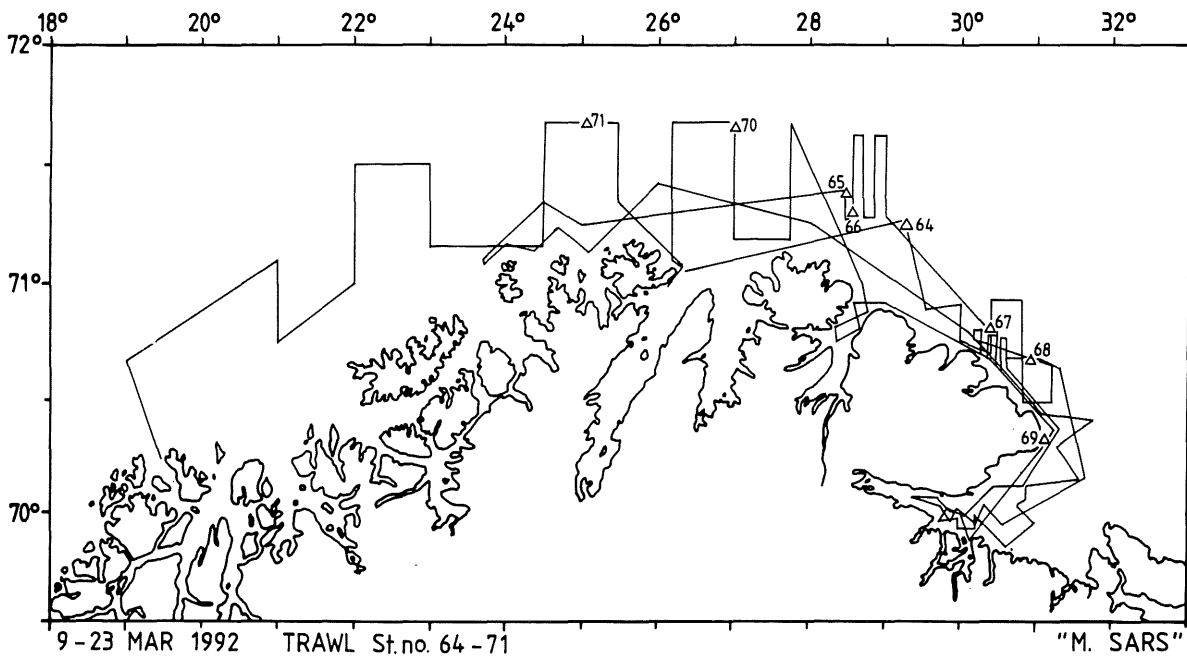
M MOC St ◊ PLANKTON St

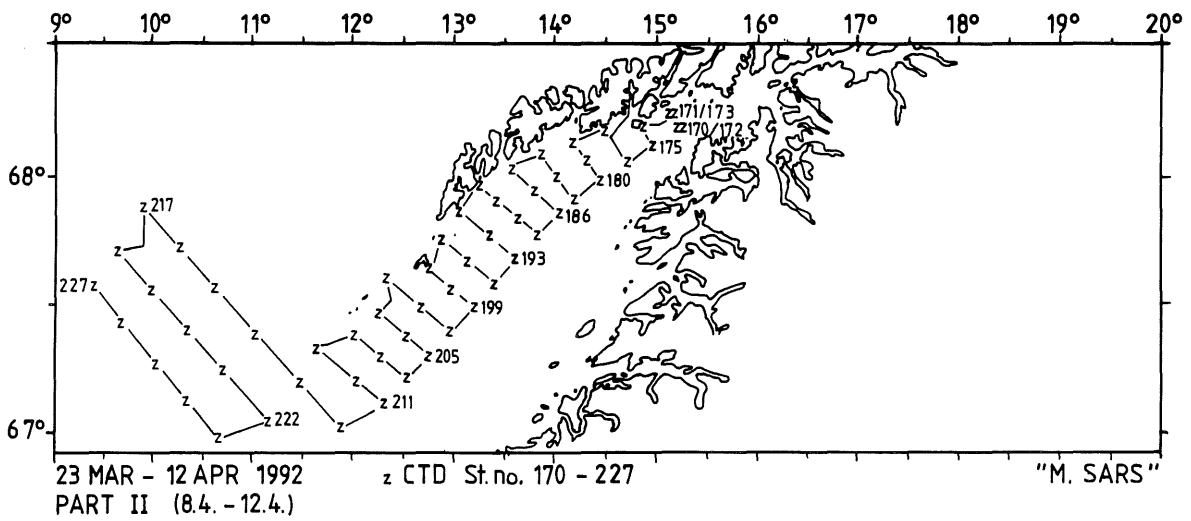
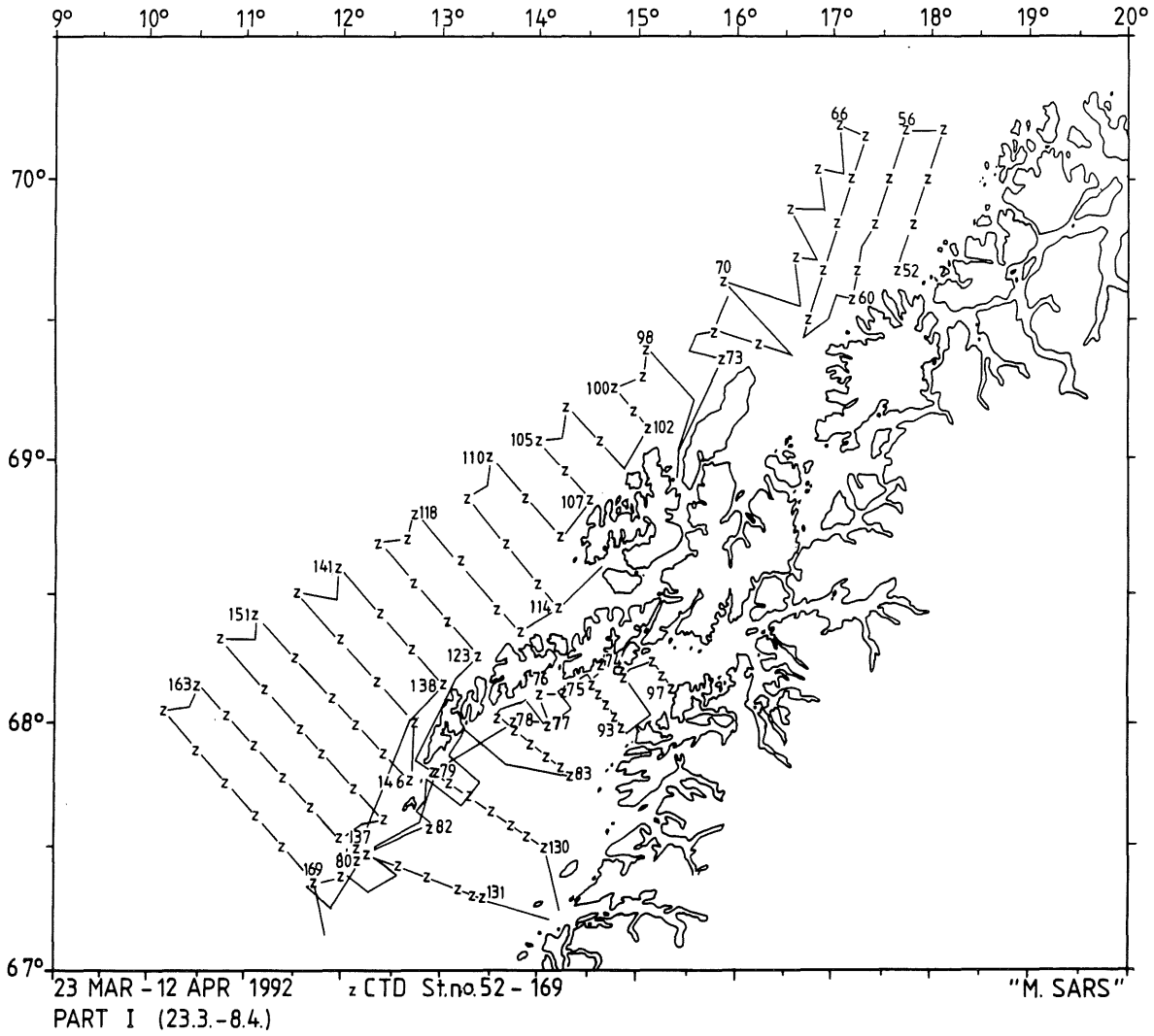


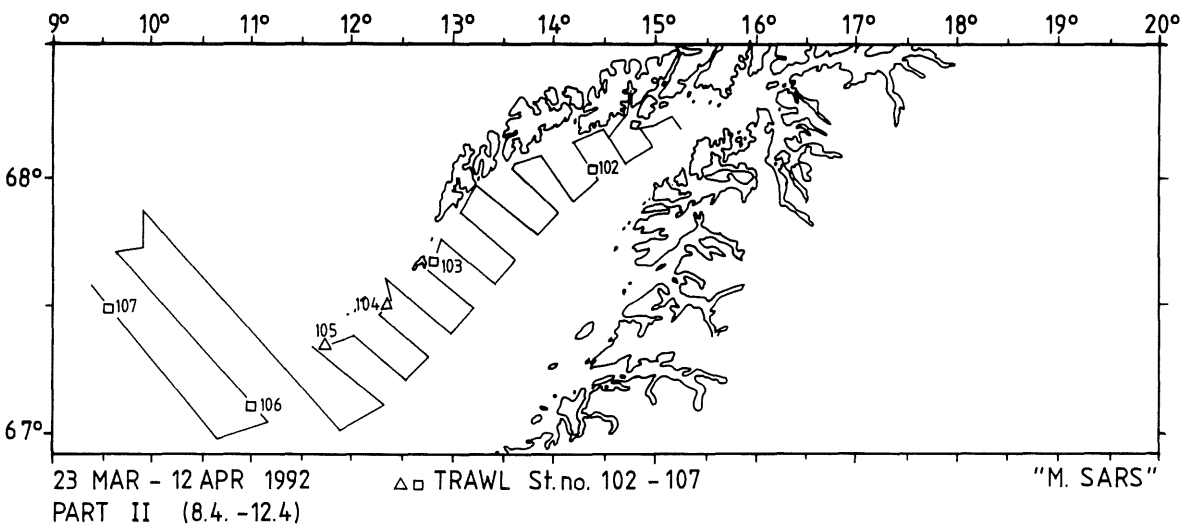
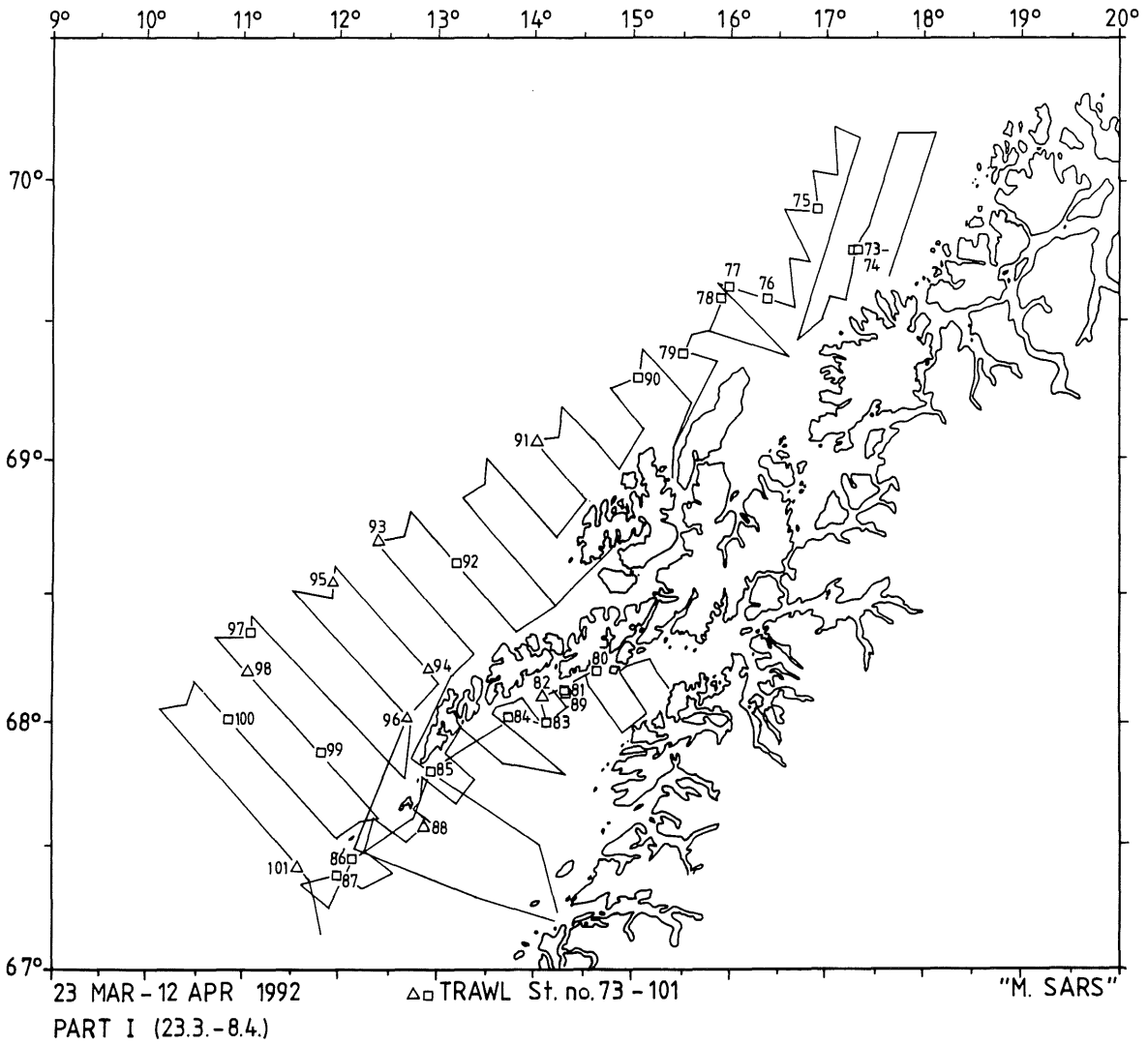
10 FEB - 9 MAR 1992

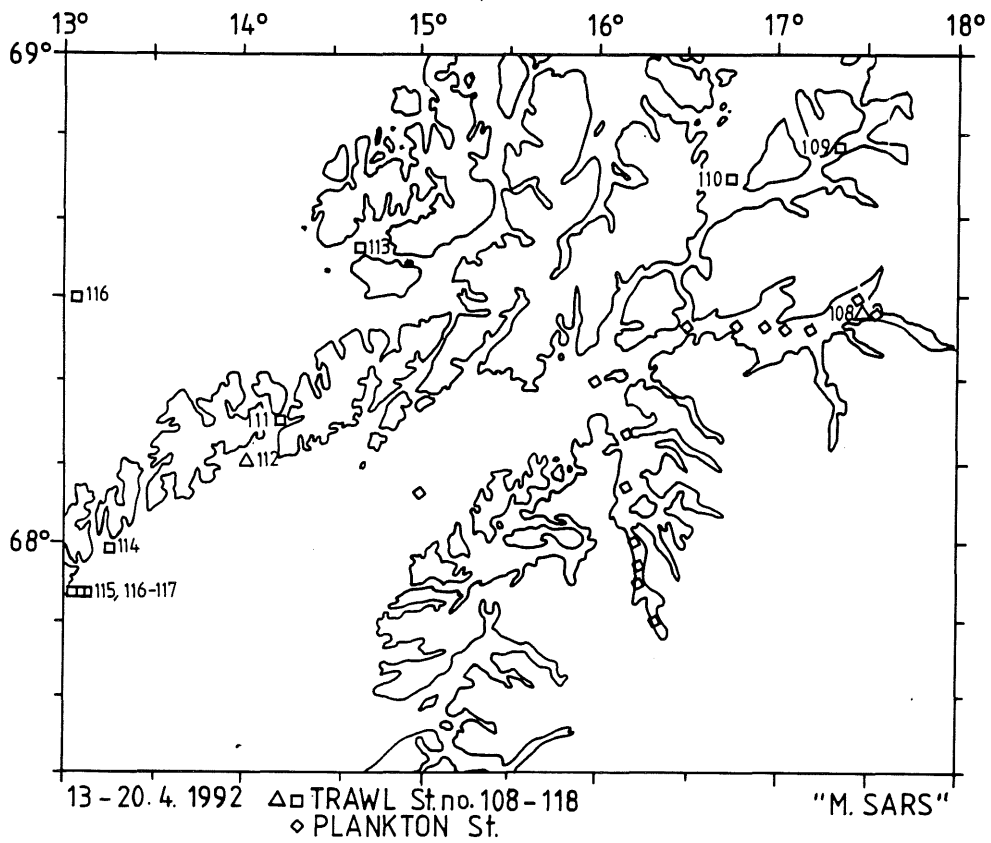
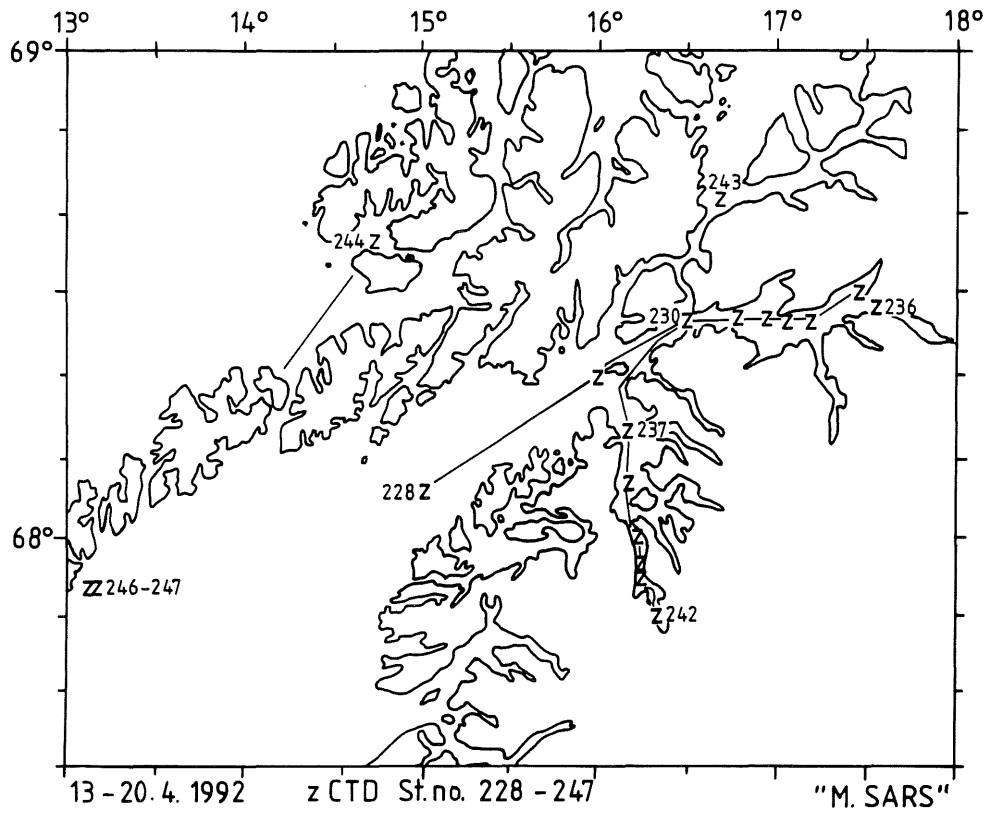
"M. SARS"

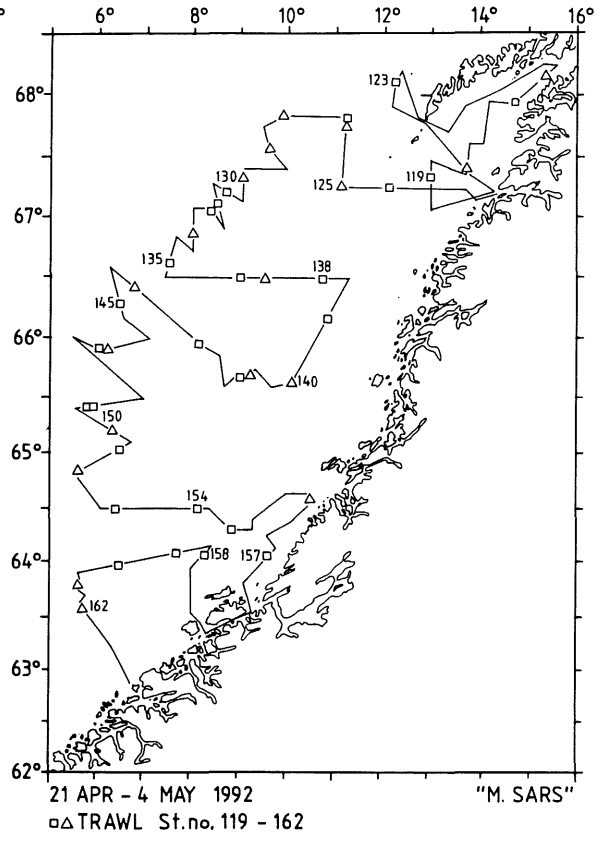
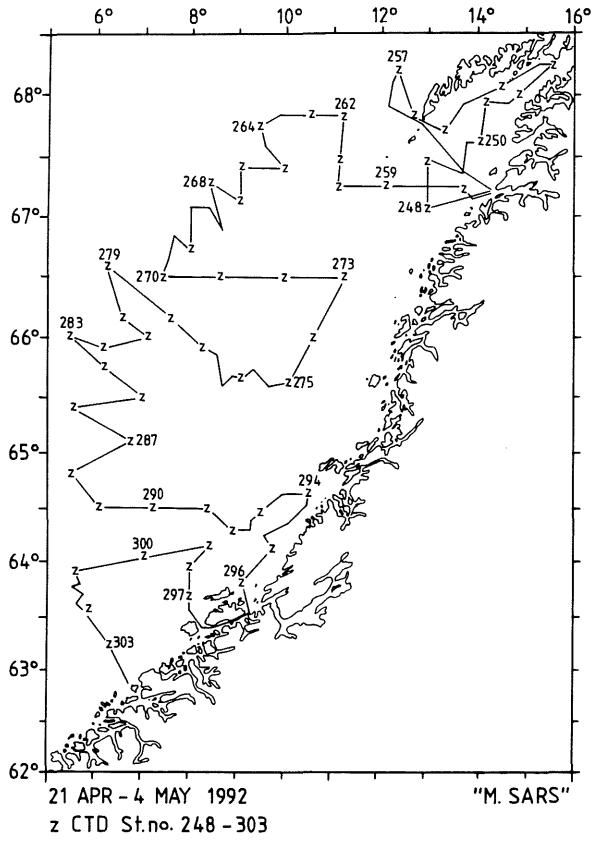
□△ TRAWL St.no. 45-63

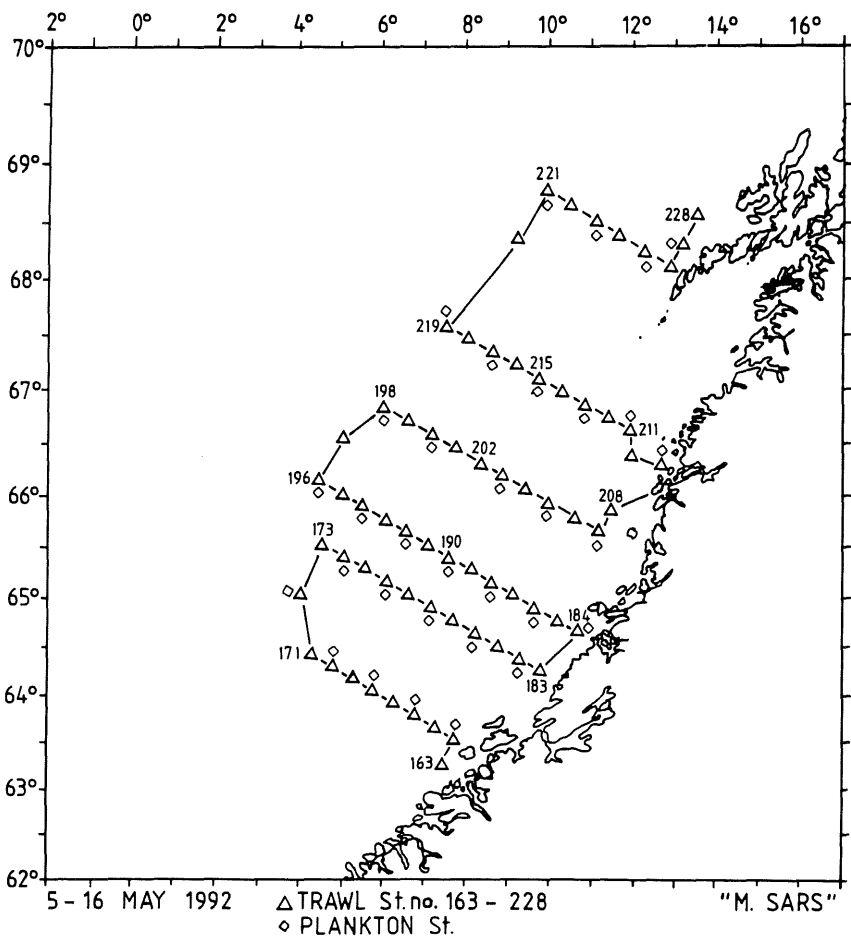
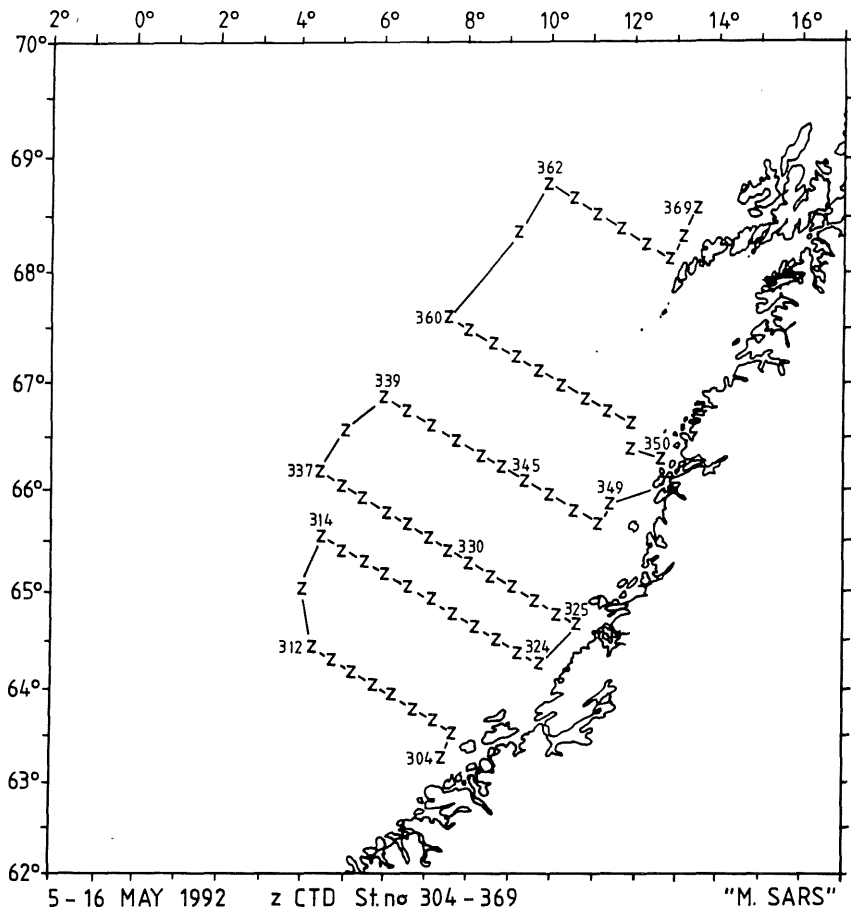


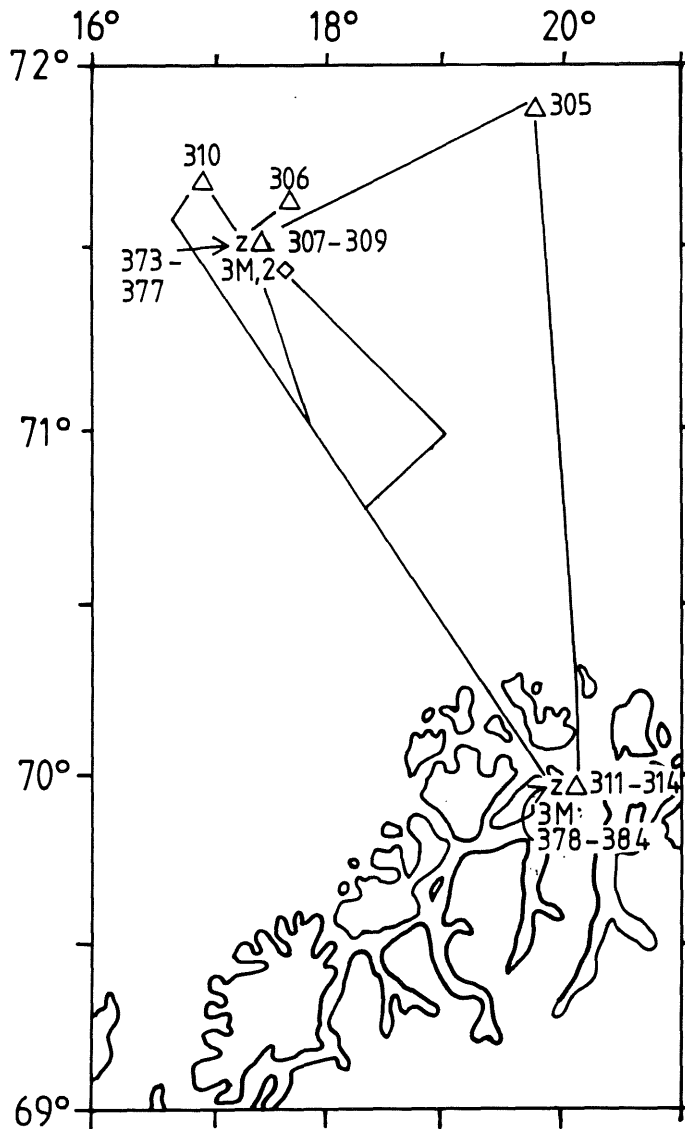






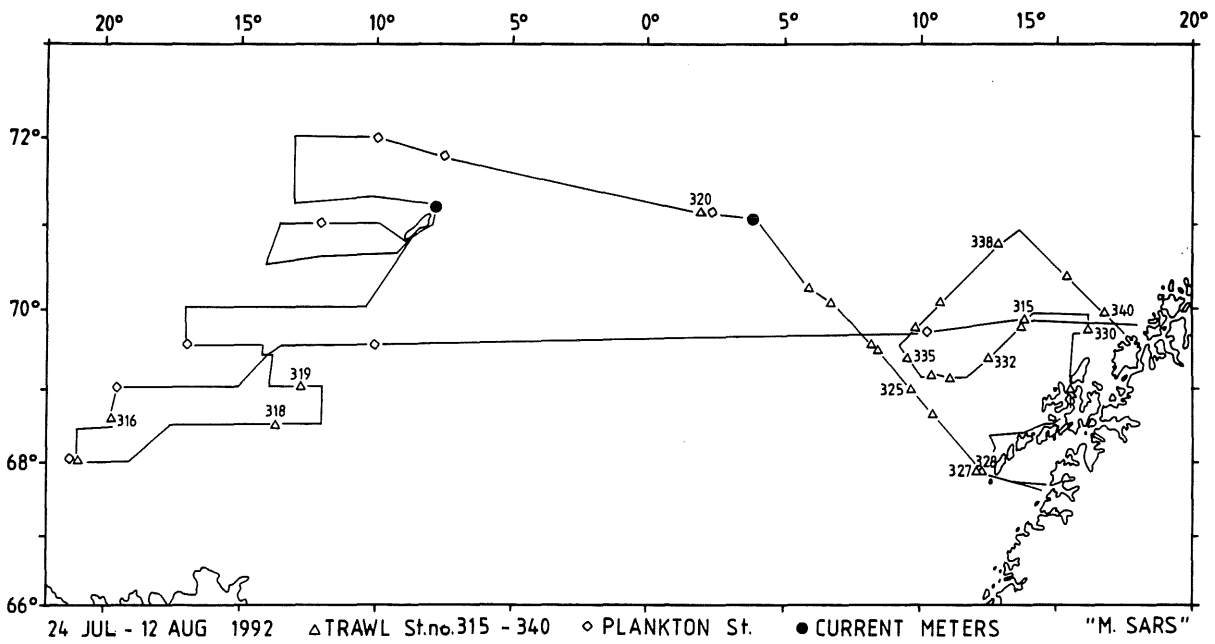
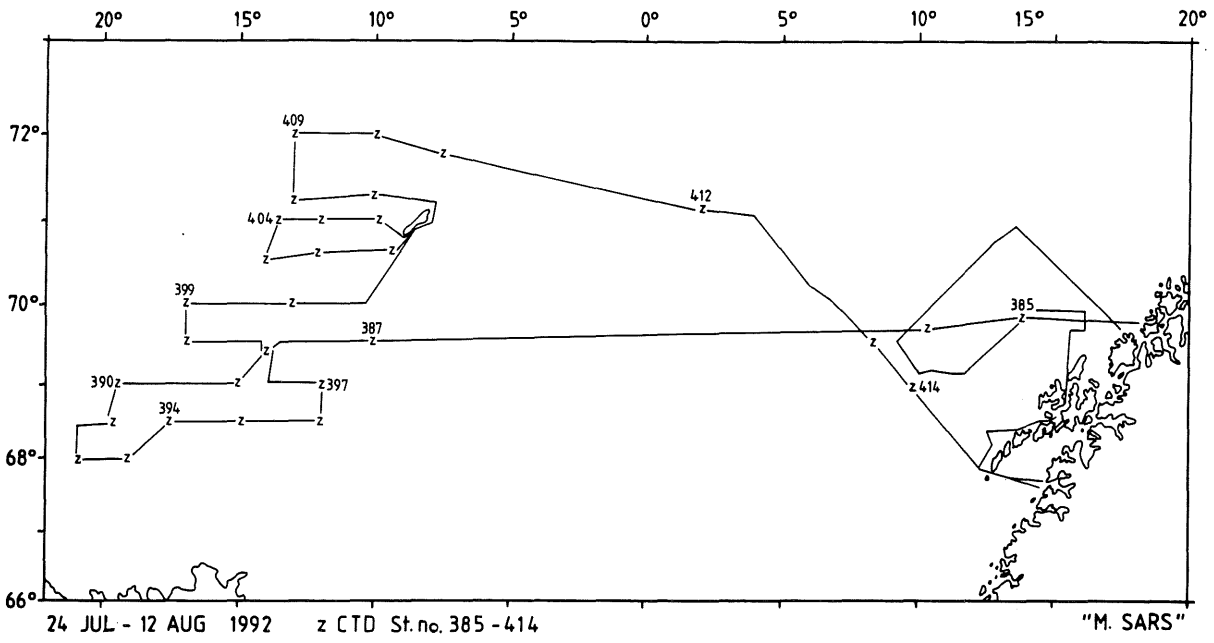


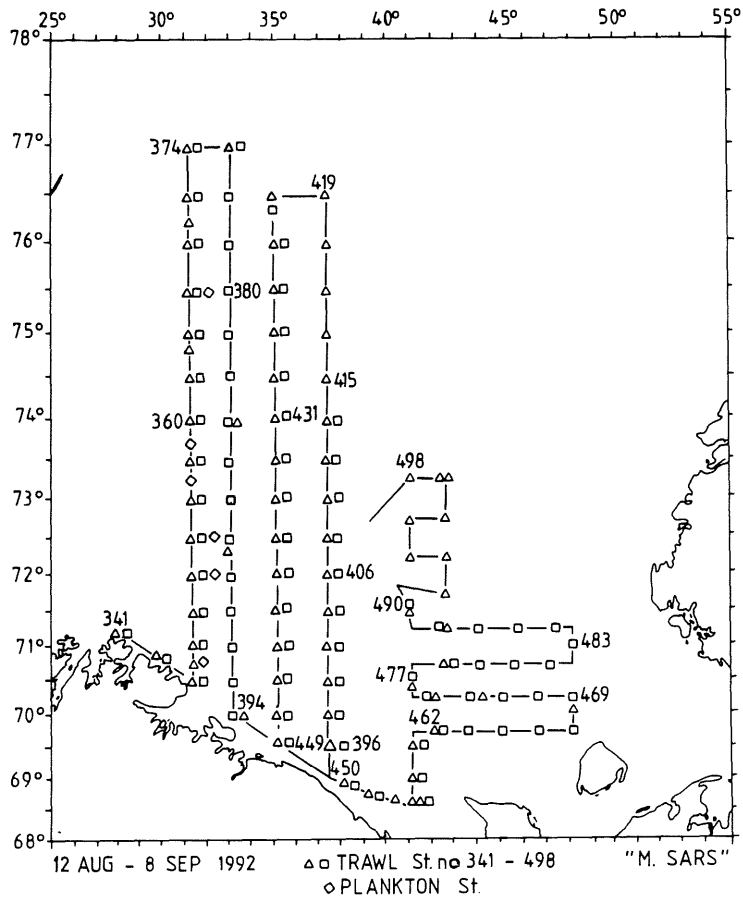
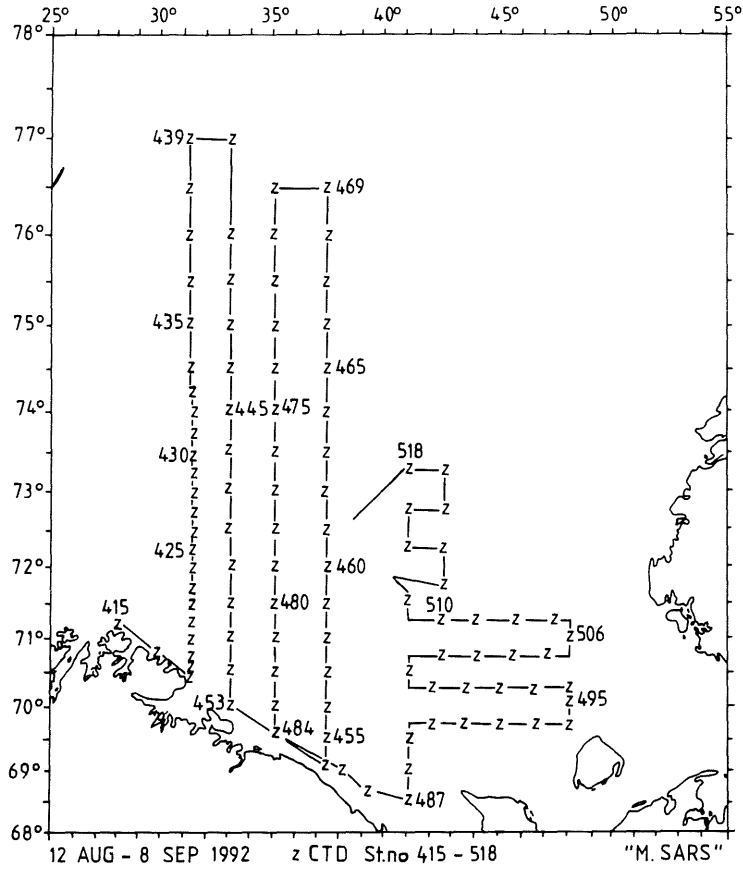


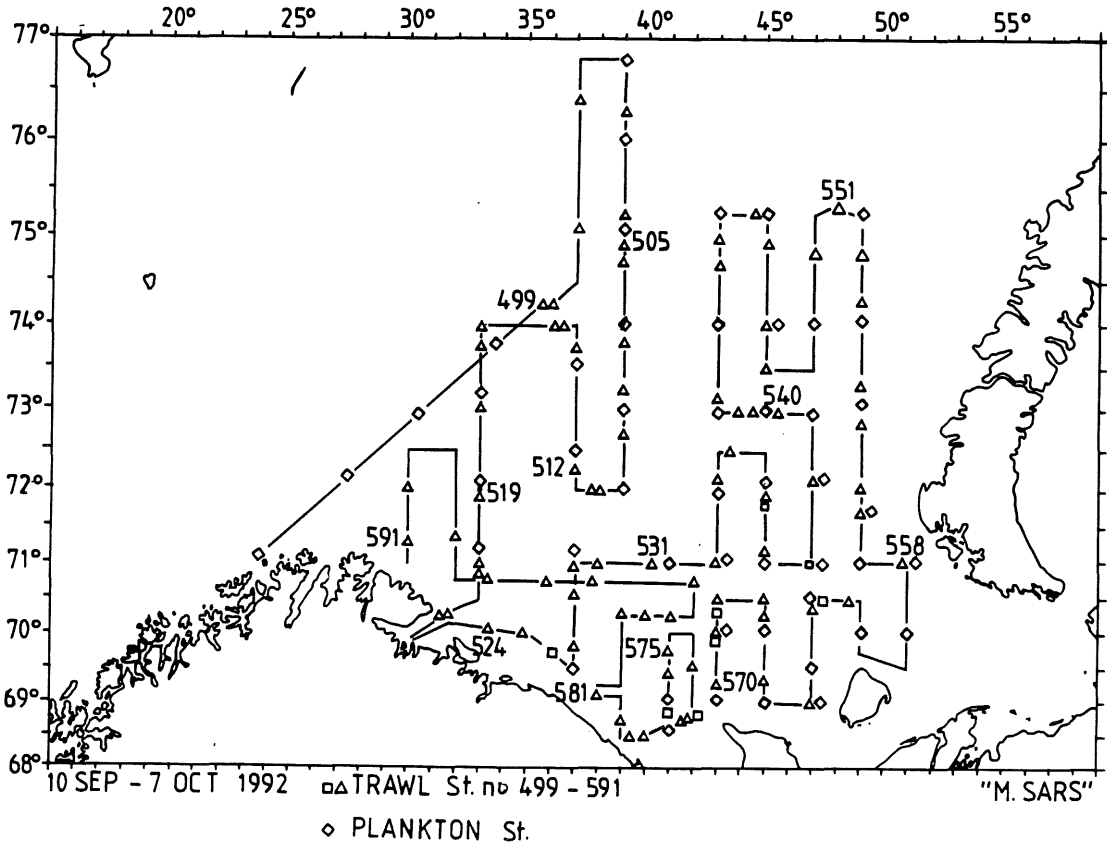
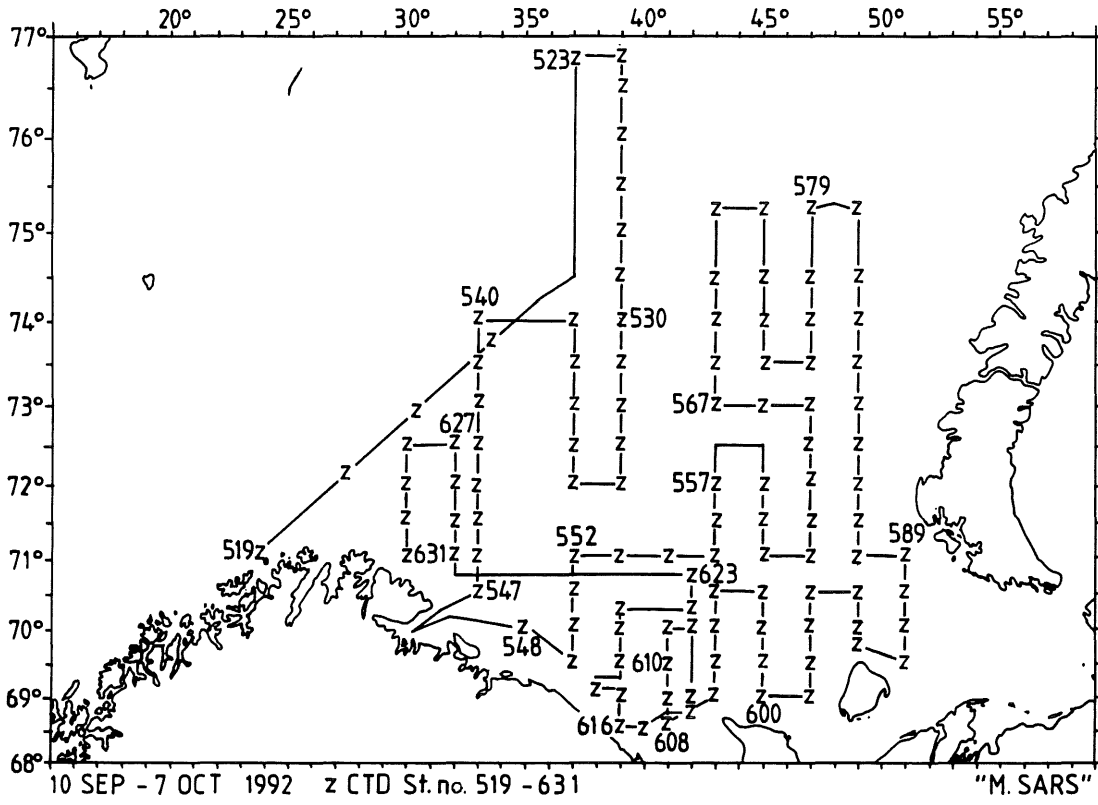


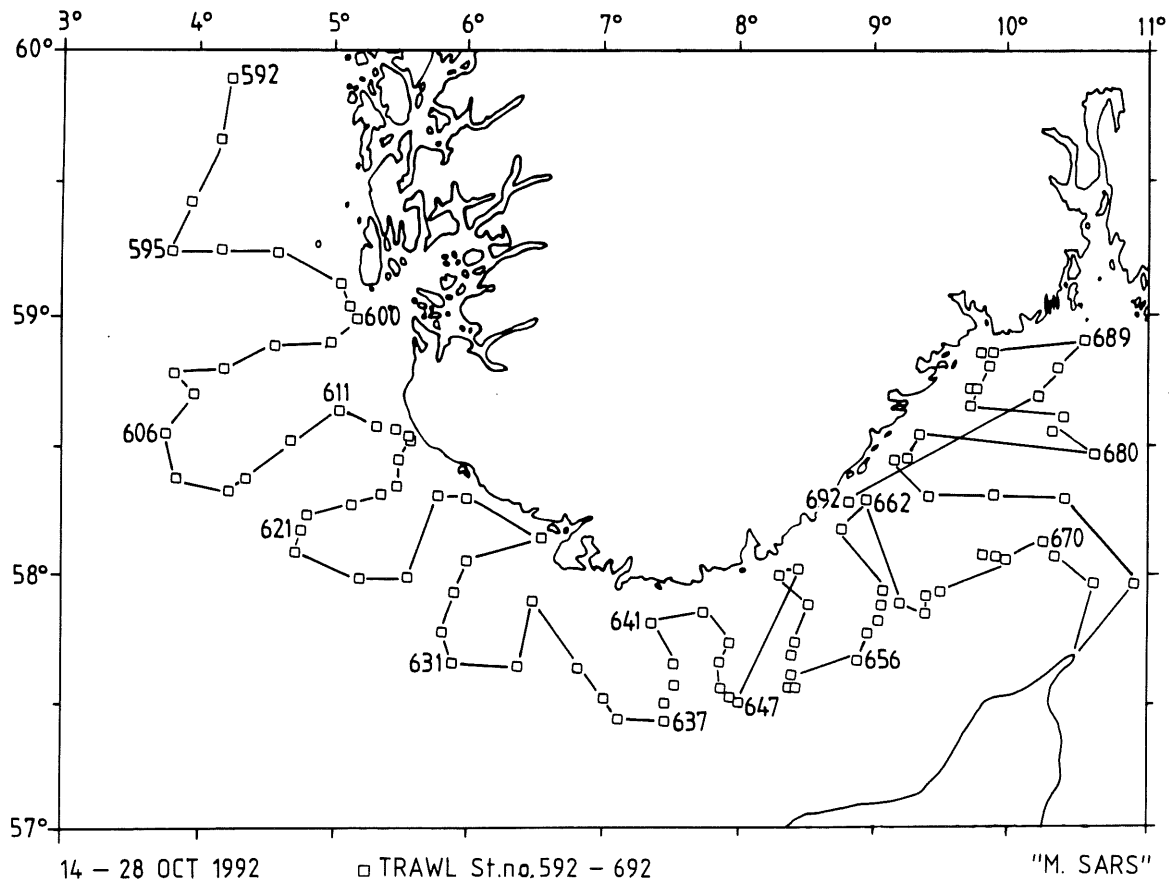
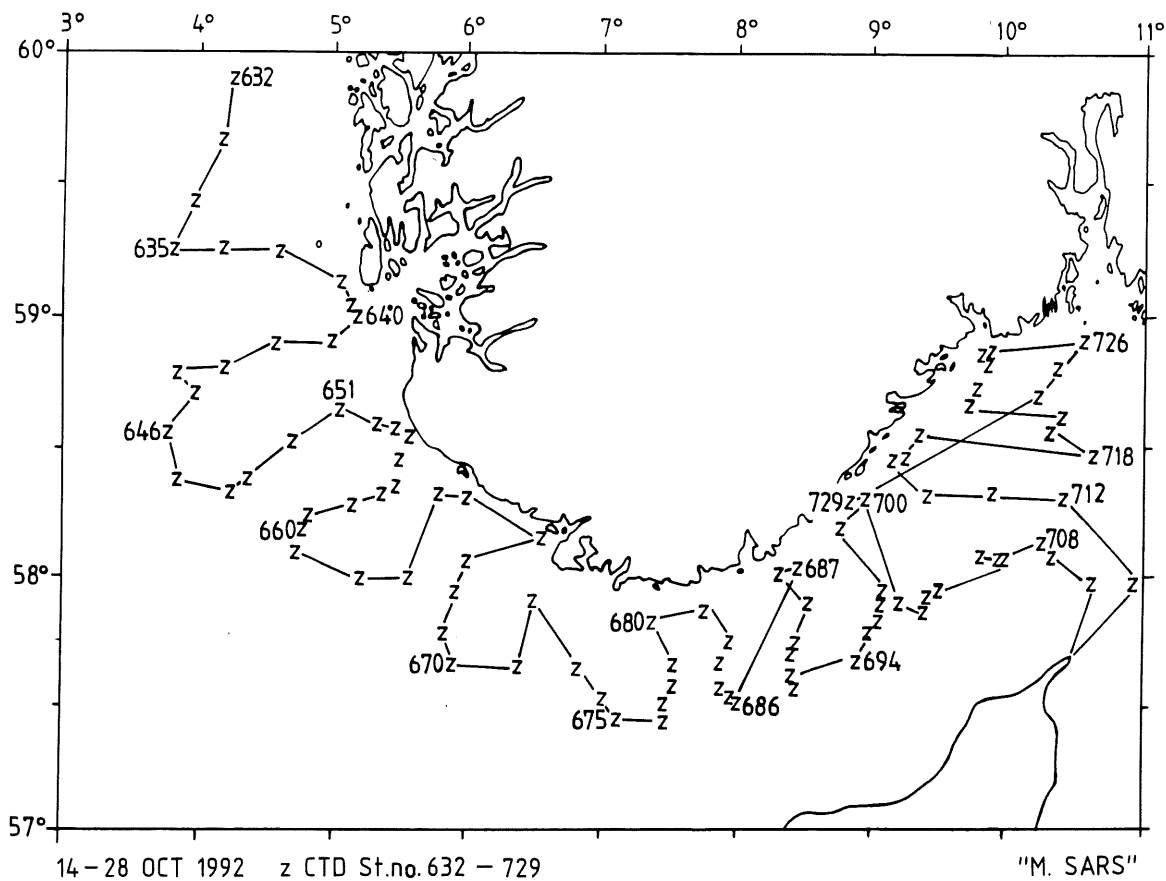
14-24 JUL 1992
 z CTD St. no. 373-384
 Δ TRAWL St. no. 305-314
 M Moc. St.
 ◇ Mic. St.

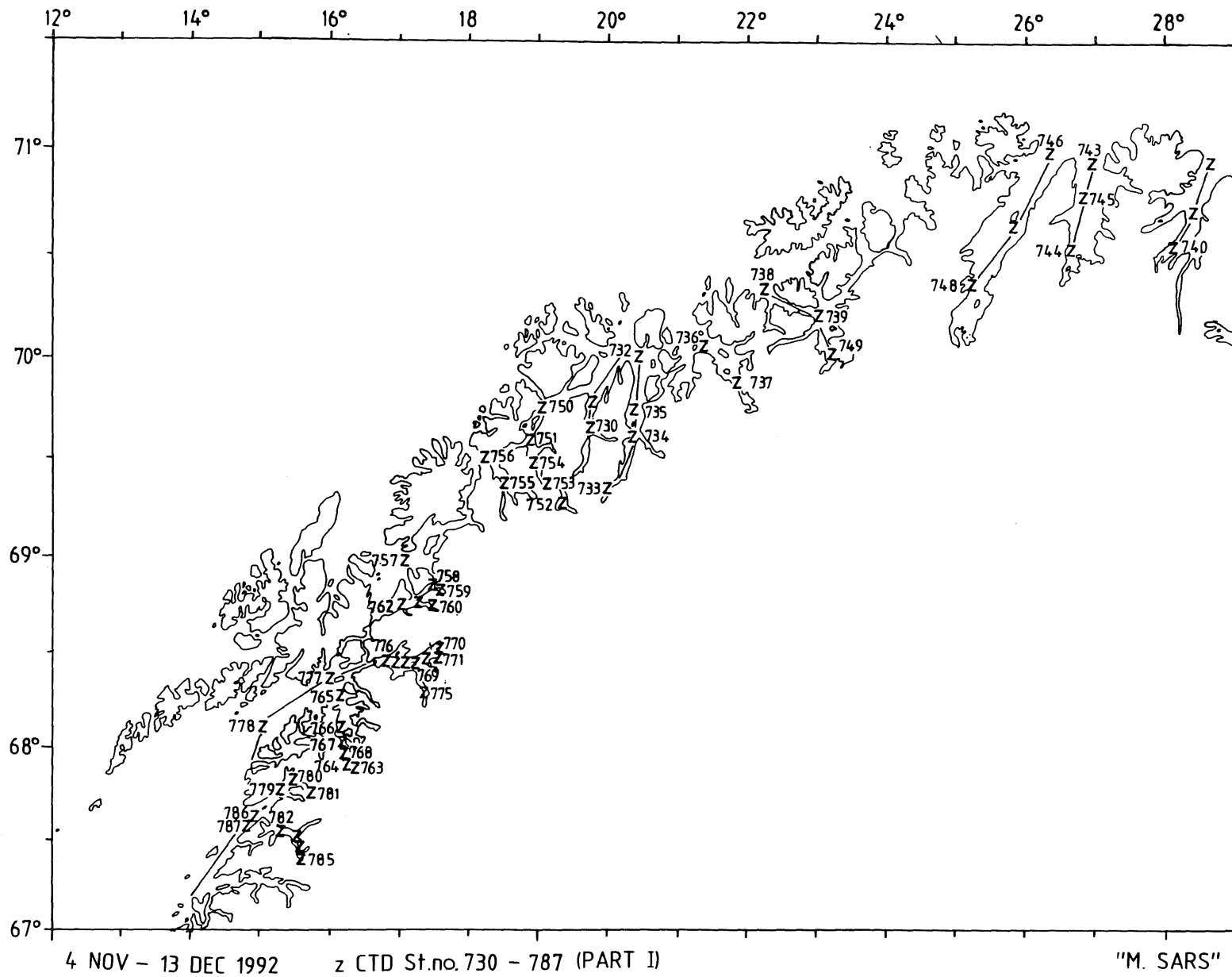
"M. SARS"

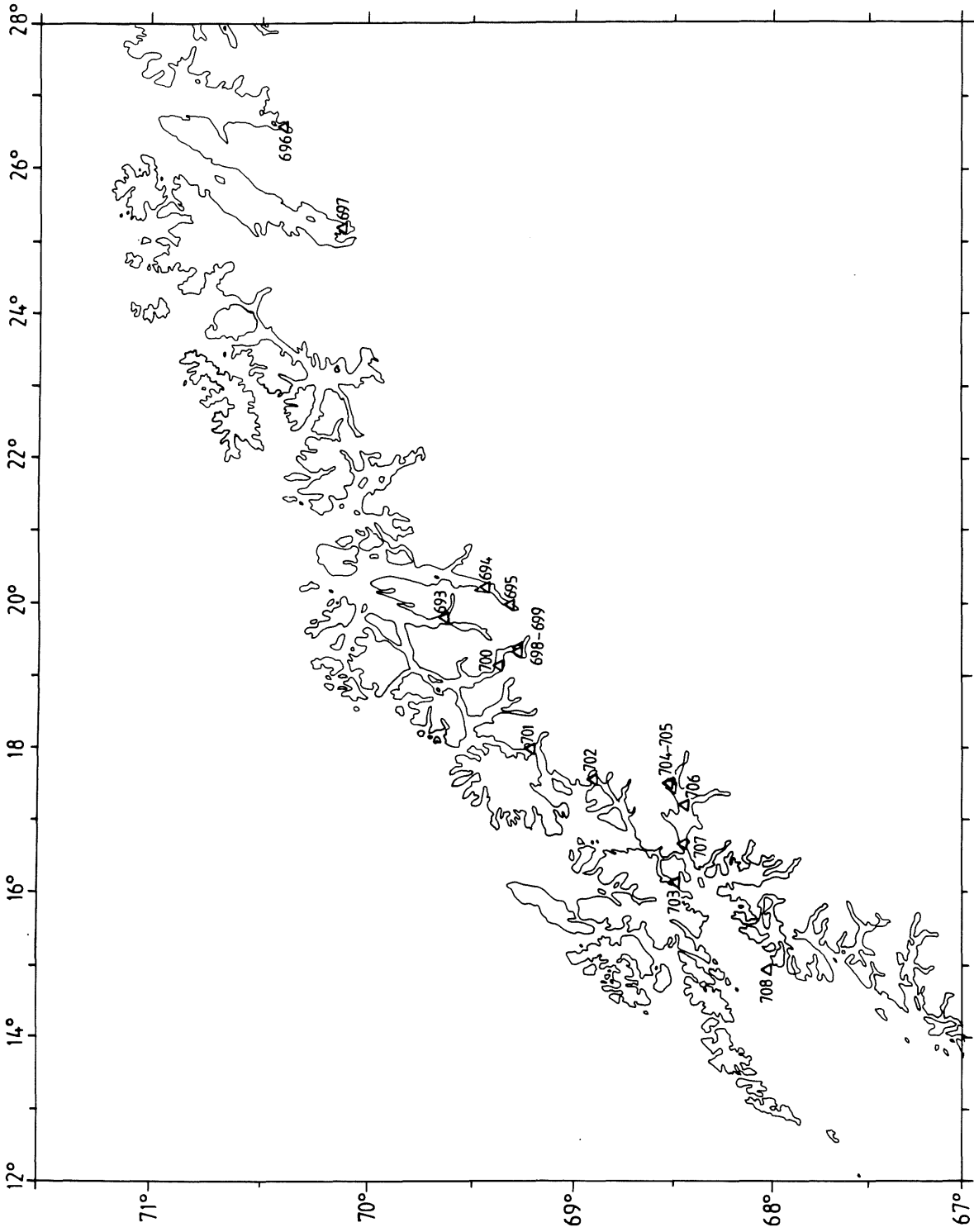






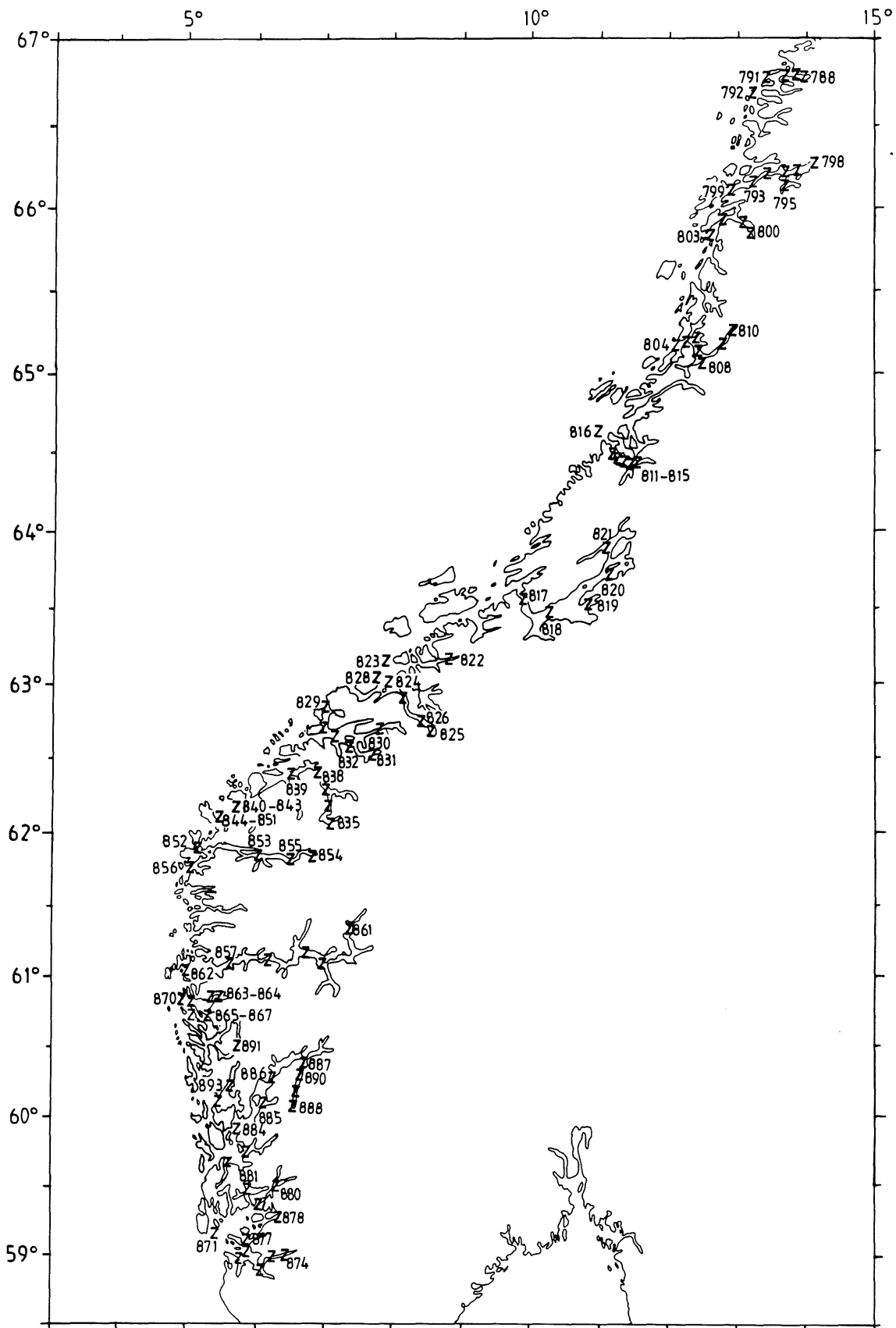






4 NOV - 13 DEC 1992 Δ TRAWL St.no.693-708 (PART I)

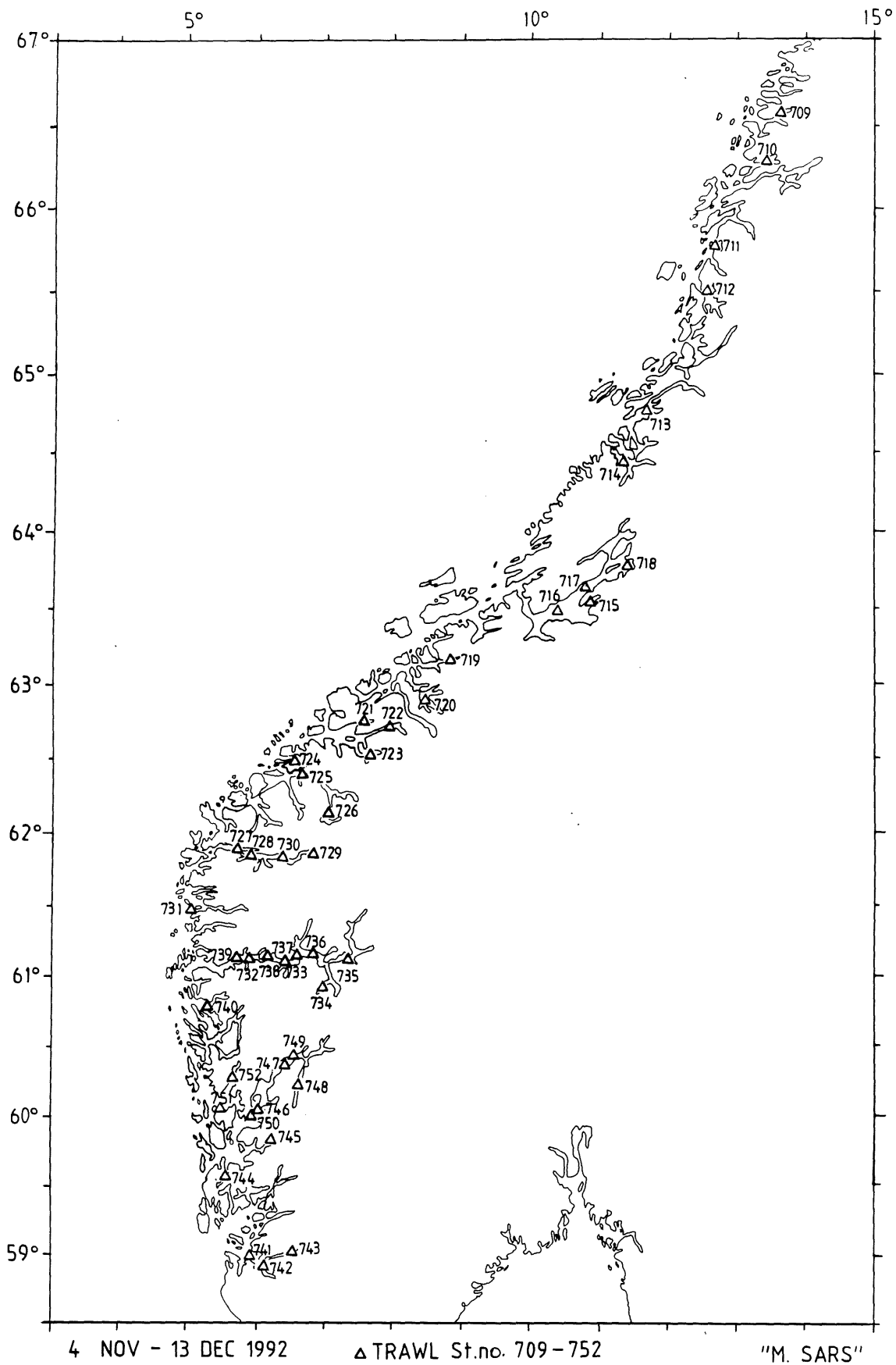
"M. SARS"



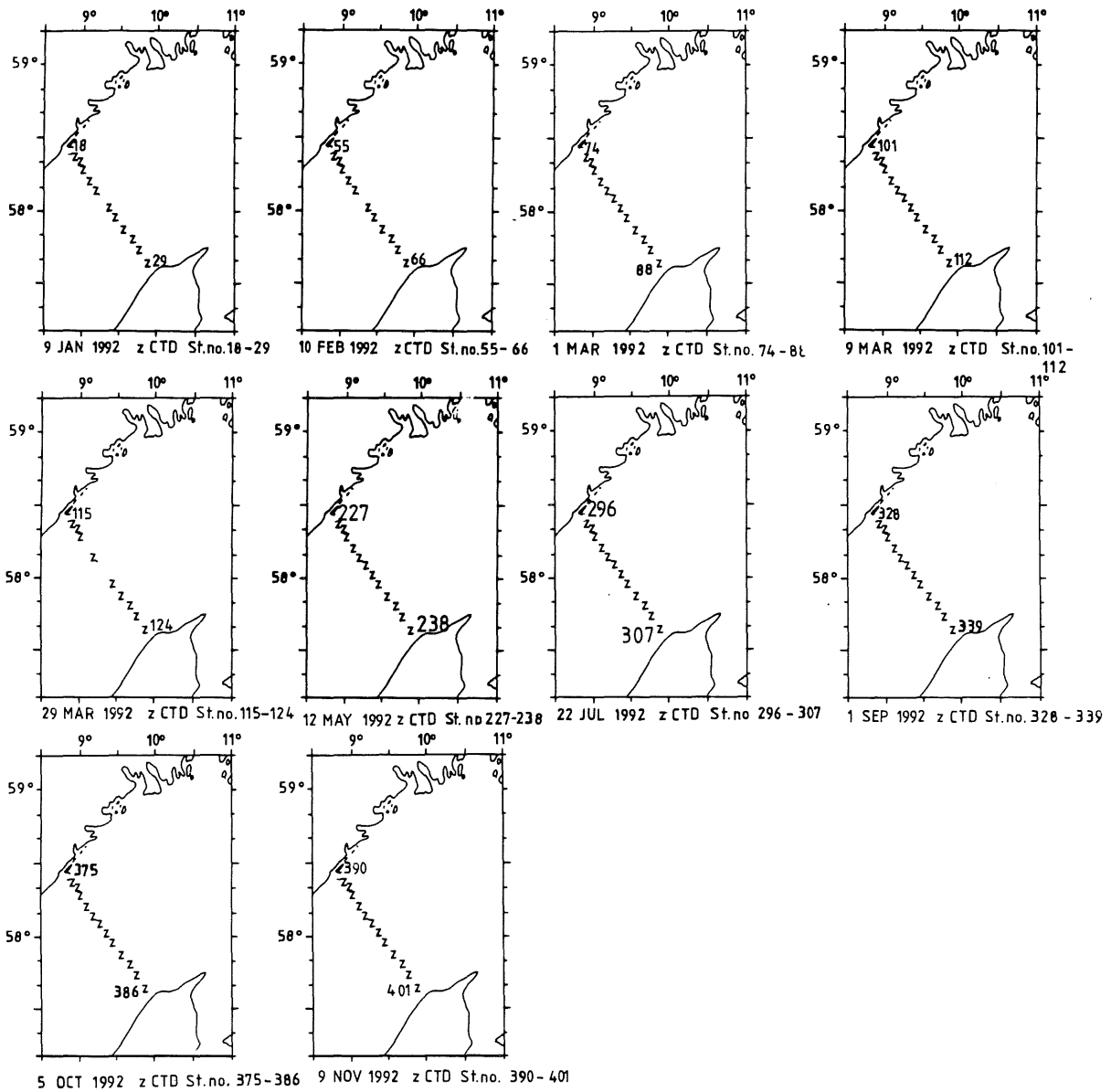
4 NOV - 13 DEC 1992

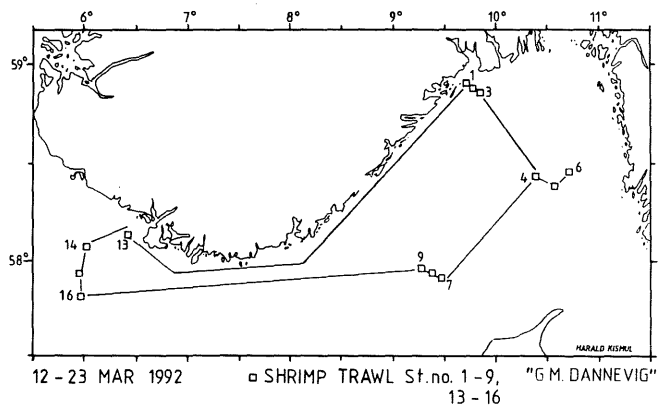
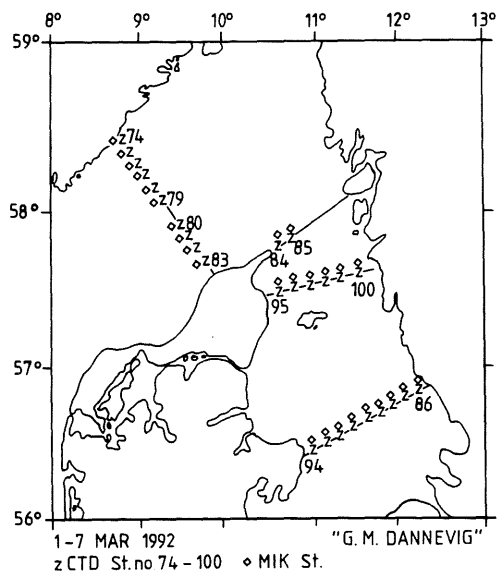
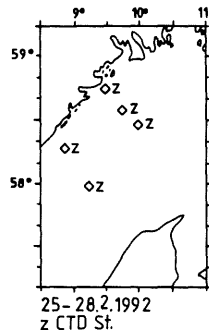
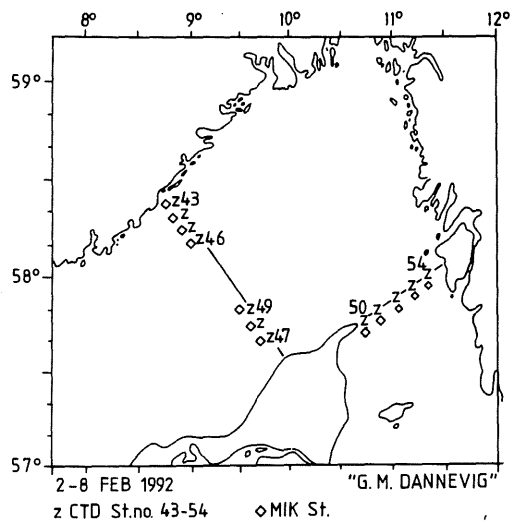
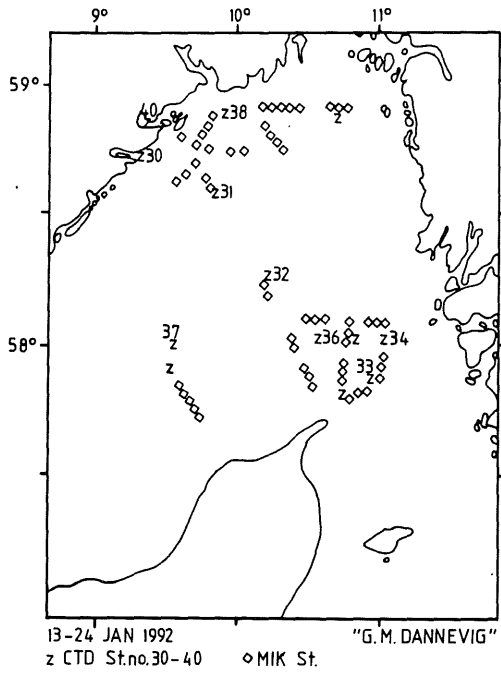
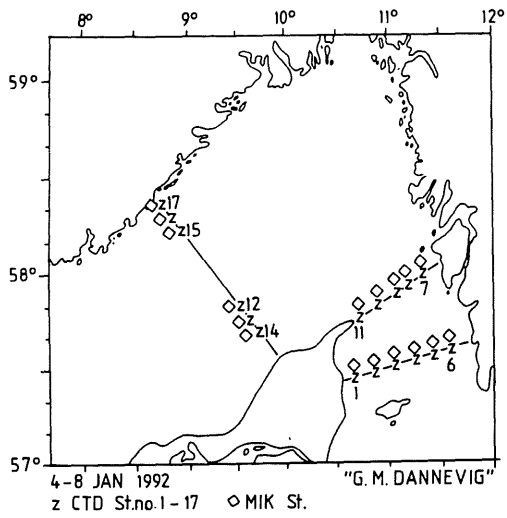
z CTD St.no.788 - 893 (PART II)

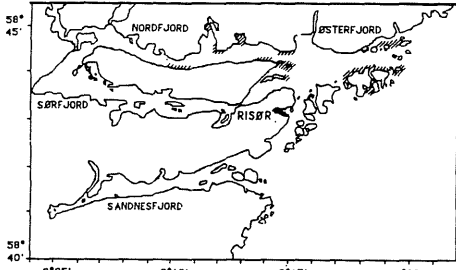
"M. SARS"



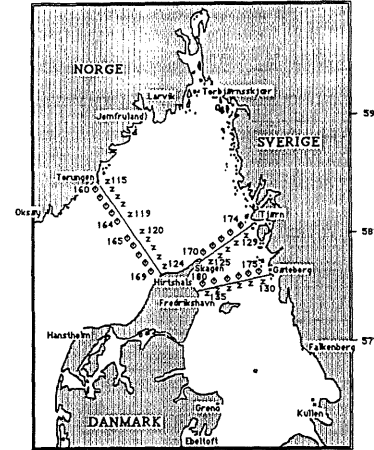
TORUNGEN – HIRTSHALS, "G. M. Dannevig"





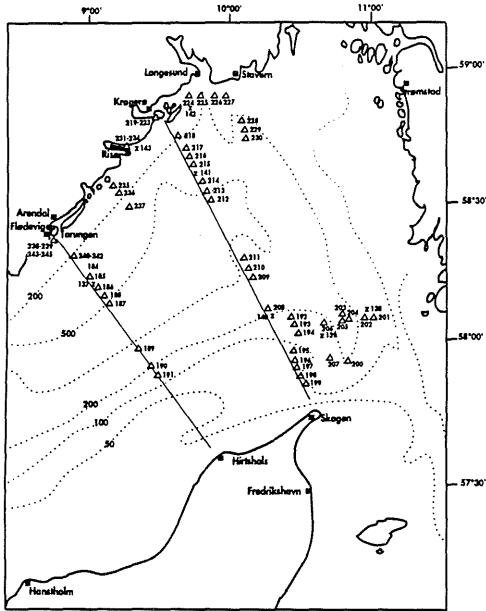


24 - 28 MAR 1992 // FISH TRAPES LOK "G. M. DANNEVIG"



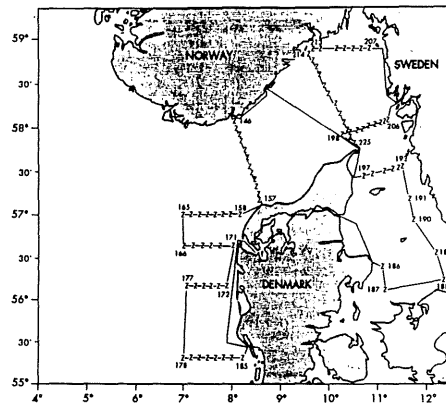
29 MAR - 3 APR 1992 "G. M. DANNEVIG"

z CTD St.no. 115 - 135 o MIK St.no. 160 - 180



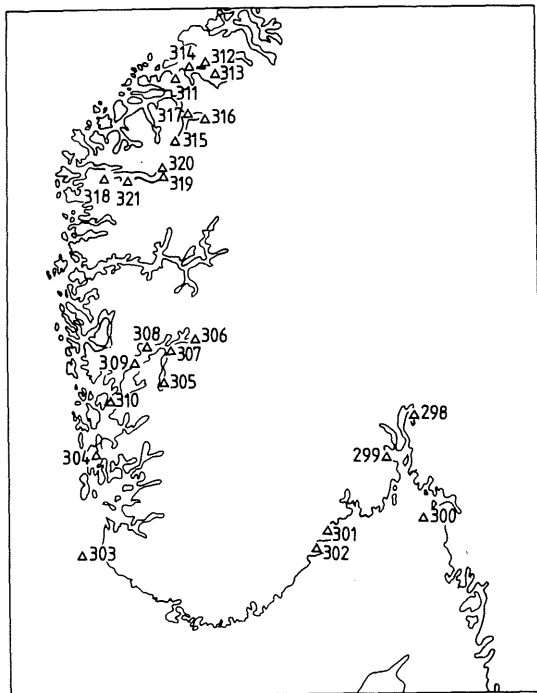
6 - 14 APR 1992 "G. M. DANNEVIG"

Δ MIK St.no. 184 - 245 z CTD St.no. 137 - 143



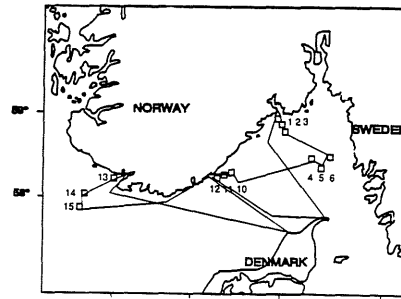
22 APR - 9 MAY 1992 z CTD St.no. 146 - 225

"G. M. DANNEVIG"



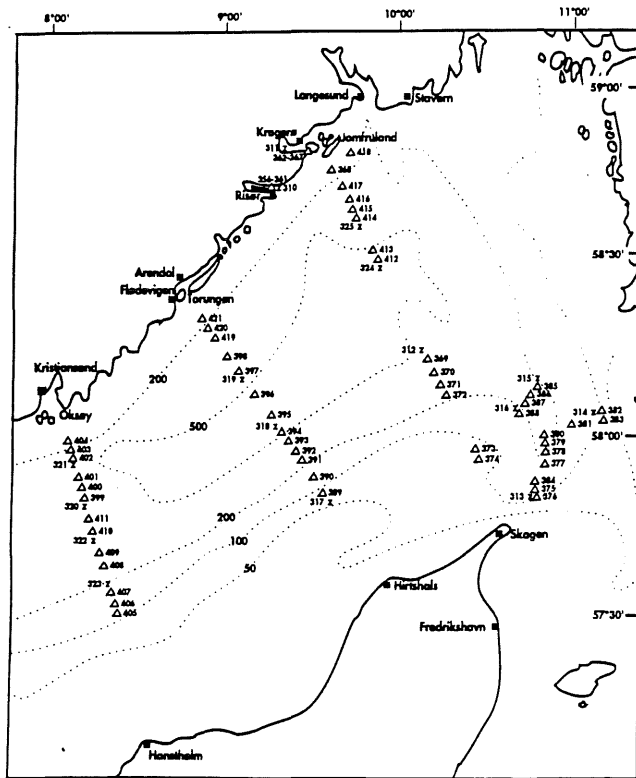
25 MAY - 5 JUN 1992 "G. M. DANNEVIG"

TRAWL St. no. 298-321



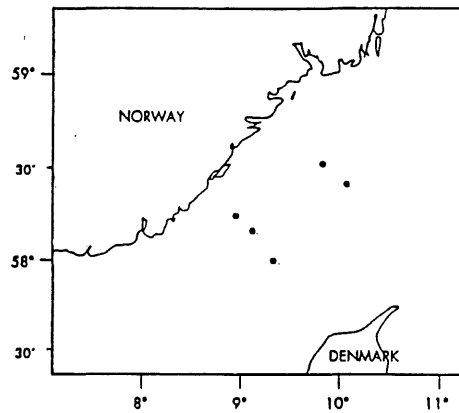
9 - 20 JUN 1992 "G. M. DANNEVIG"

o TRAWL St.

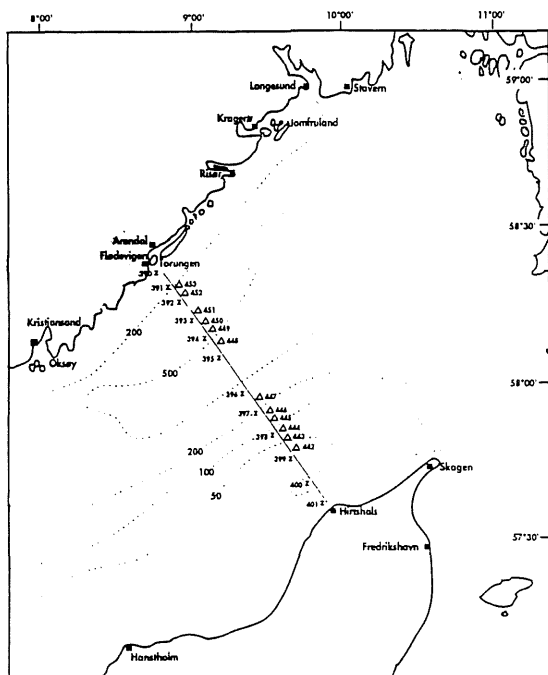


3 - 18 AUG 1992 z CTD St.no. 310 - 325
 Δ MIK St.

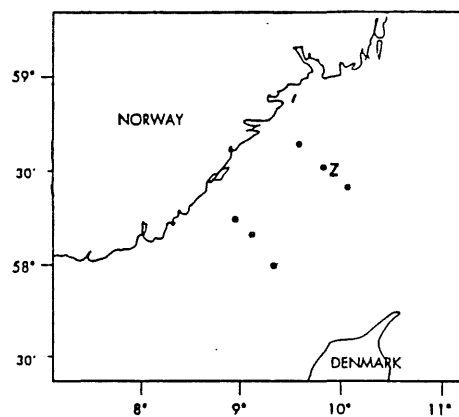
"G.M. Dannevig"



20 - 23 OCT 1992 • MIK St.



9 - 11 NOV 1992 z CTD St.no. 390 - 401
 Δ MIK St.



4 - 7 DEC 1992 • MIK St.
 z CTD St.

