

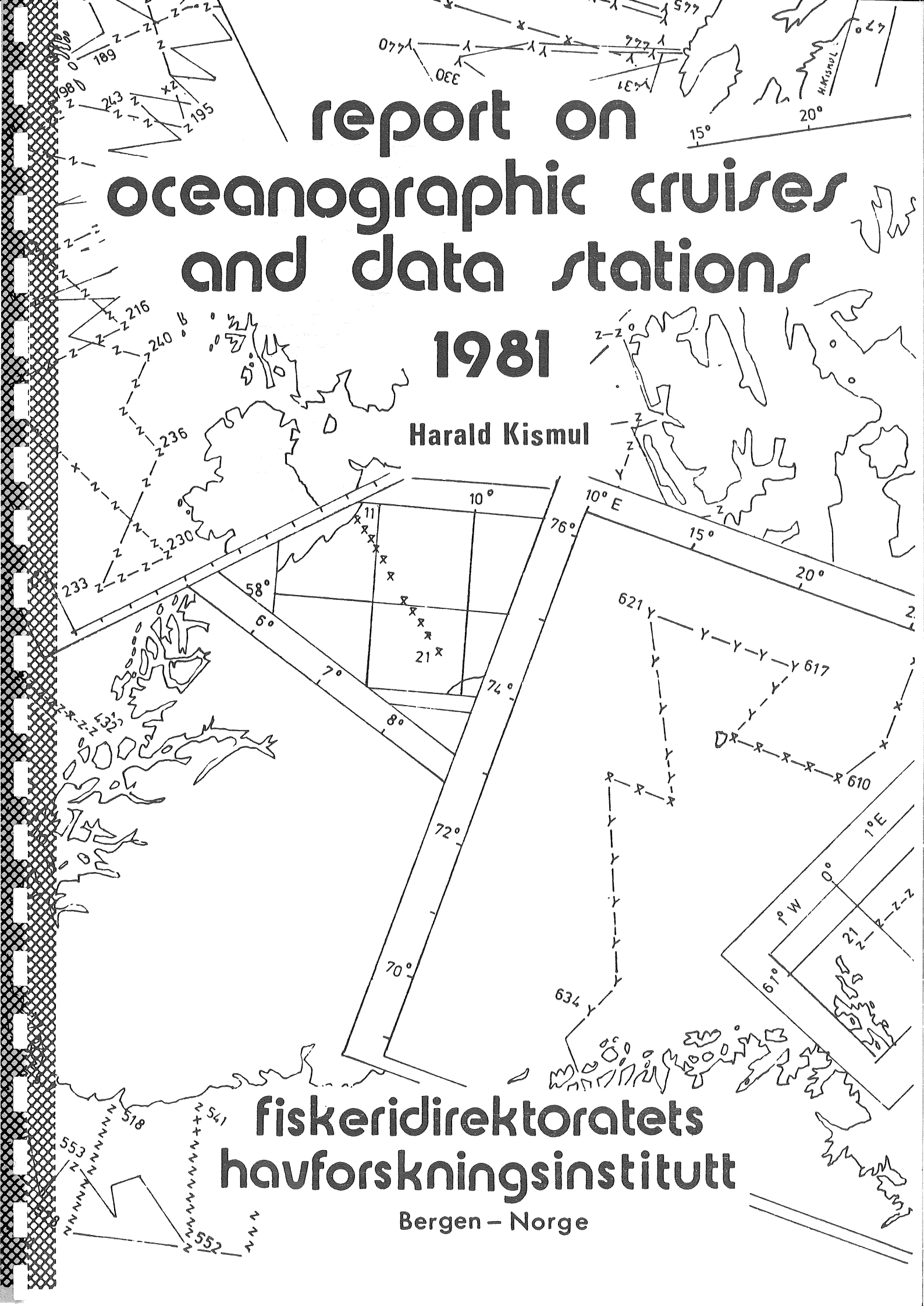
# report on oceanographic cruises and data stations

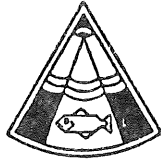
## 1981

### Harald Kismul

fiskeridirektoratets  
havforskningsinstitutt

Bergen - Norge





# report on oceanographic cruises and data stations

Harald Kismul

## Guidelines:

- X Classical oceanogr. stations
- Z Vertical profiles (STD/CTD)
- Y Bathythermograph (BT)
- Δ Moored buoy station
- △ Pelagic Trawl station
- Bottom Trawl station
- ◇ Plankton station
- Clarke
- Taggings
- Λ Surface observations t°C S‰

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ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1981

Ship: G.O. SARRS

Cruise and ship number.	Period of cruises	Number of Stations														Continual observations		Page of track chart										
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Bathythermograph (BT)	Moored Buoy	Oxygen	Nutrients	Oil Hydrocarbons	Petroleum residues	Metals	Primary org. prod.	Petroplank. pigment con.	Sediment samples	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings		Zooplankton	Phytoplankton	Surface temperature	Transparency	Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding	Echo integration	
1/15	6.1 - 21.1		48										10	1						X						X	X	7
2/15	21.1 - 4.3		120										5	78						X						X	X	8 - 9
3/15	9.3 - 4.4		116										27	1						X						X	X	10 - 11
4/15	6.4 - 14.4	1	35										14	9						X						X	X	12
5/15	22.4 - 2.5		51										9	33						X						X	X	13
6/15	3.5 - 16.5		82										27	7						X						X	X	14
7/15	18.6 - 11.7		155				2						21	3						X						X	X	16 - 17
8/15	13.7 - 29.7		53										34	17						X						X	X	18 - 19
9/15	31.7 - 19.8		89										72	1						X						X	X	20 - 21
10/15	21.8 - 4.9		100										69	5	69					X						X	X	22
11/15	10.9 - 4.10		106										53	2						X						X	X	23 - 24
12/15	14.10-30.10		67										14							X						X	X	25-26-27
13/15	4.11 - 2.12		244										36	12						X						X	X	28 - 29

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1981

Ship: JOHAN HJORT

Cruise and ship number.	Period of cruises	Number of Stations														Continual observations					Page of track chart						
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Bathythermograph (BT)	Moored Buoy	Oxygen	Nutrients	Oil Hydrocarbons	Petroleum residues	Metals	Primary org. prod.	Petroplank. pigment con.	Grabs	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings	Zooplankton	Phytoplankton	Surface temperature		Transparency	Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding	Echo integration
1/12	4.1 - 29.1	92	15										46	2						X					X	X	30
2/12	4.2 - 24.2		47																	X					X	X	31
3/12	1.3 - 15.3		45										23	1						X					X	X	32
4/12	15.3 - 31.3		80	14								559	14							X					X	X	33 - 34
5/12	2.4 - 14.4	21	26														100	100		X					X	X	35 - 36
6/12	23.4 - 9.5	50	268														205	205		X					X	X	37-38-39-40
7/12	10.6 - 30.7	1	353										5		14		361	361		X					X	X	41-42-43-44-45-46
8/12	5.8 - 19.8		72		1								23	1			44	44		X					X	X	47
9/12	21.8 - 4.9		63										63		63					X					X	X	48
10/12	7.9 - 2.10		67										64							X					X	X	49
11/12	13.10-29.10		45												121					X					X	X	50
12/12	2.11-19.11		19										49							X					X	X	51 - 52

ICES Annual Report on Oceanographic Cruises and Data Stations.

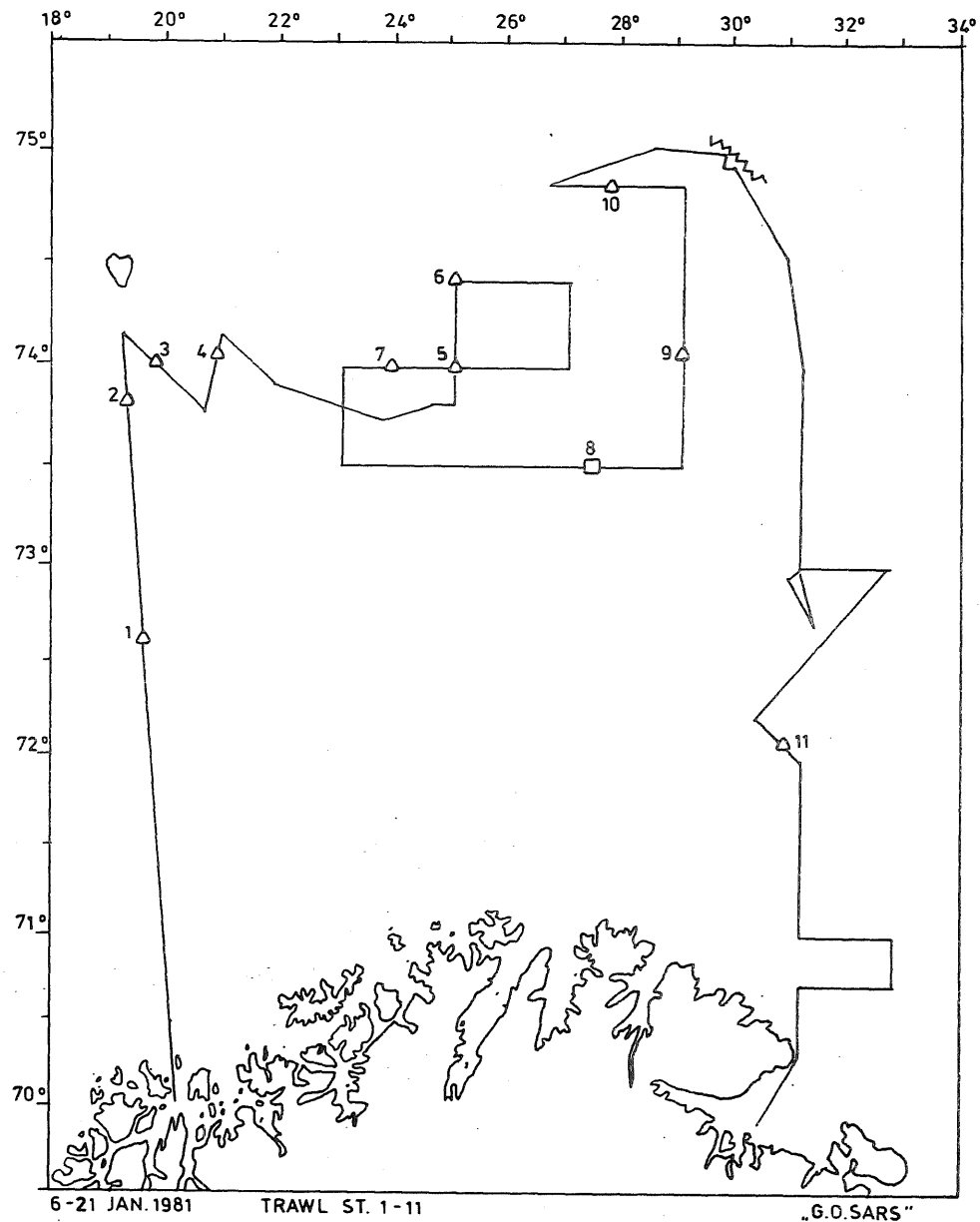
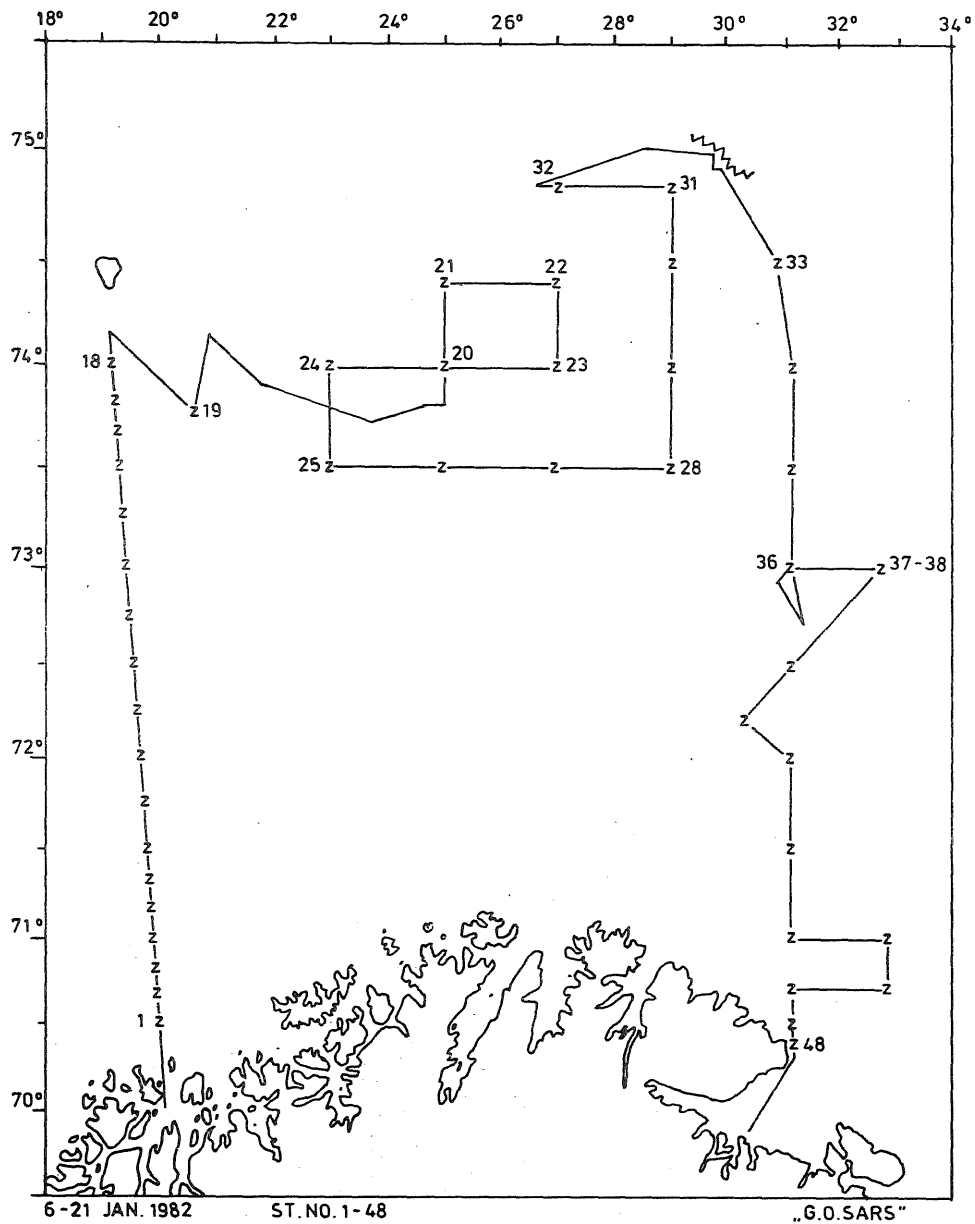
Country: NORWAY

Year: 19 81

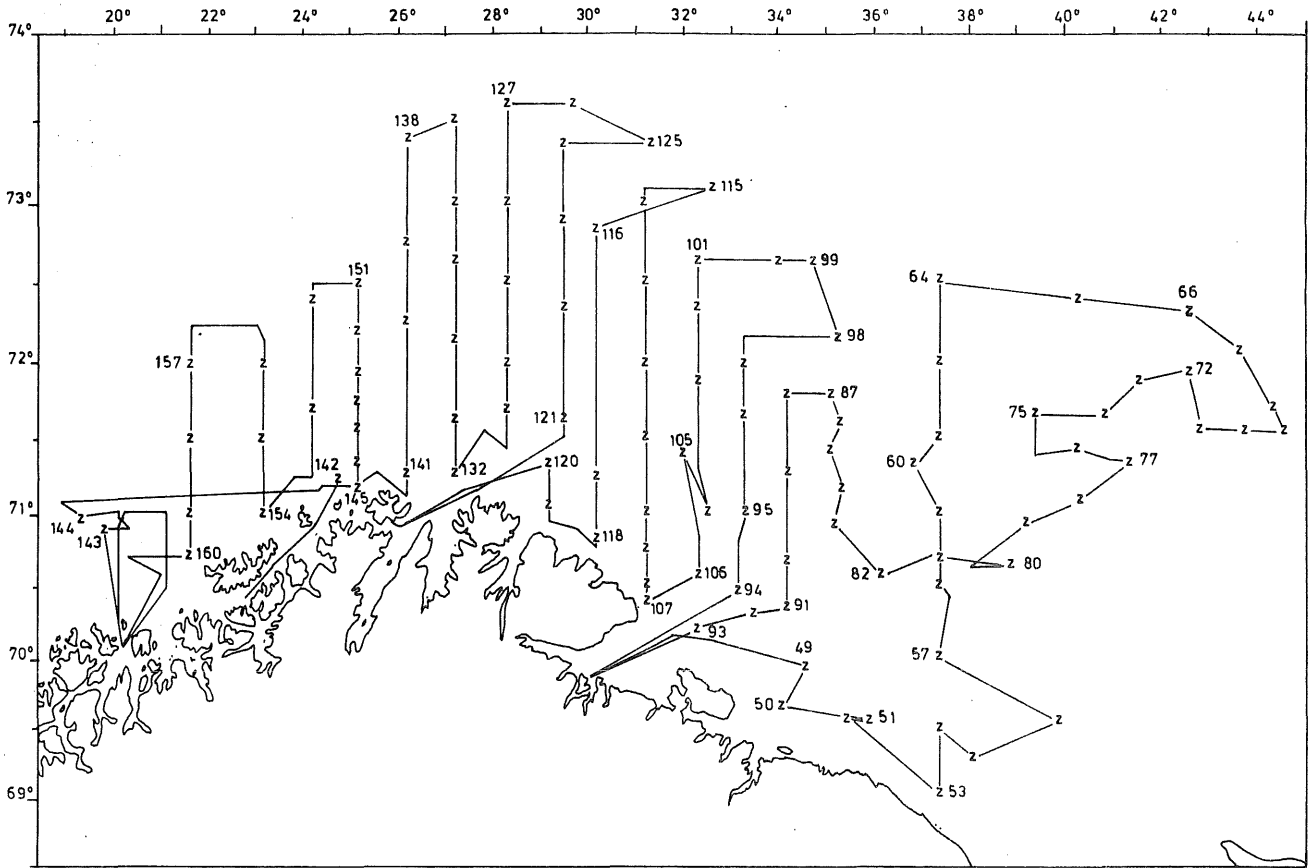
Ship: MICHAEL SARS

Cruise and ship number.	Period of cruises	Number of Stations															Continual observations					Page of track chart				
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Bathythermograph (BT)	Moored Buoy	Oxygen	Nutrients	Oil Hydrocarbons	Petroleum residues	Metals	Primary org. prod.	Petroplank. pigment con.	Sediment samples	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings	Zooplankton	Phytoplankton	Surface temperature	Transparency		Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding
1/11	27.1 - 21.2		41											55			61		x					x	x	53 - 54
2/11	25.2 - 13.3		228											1			2	2	x					x	x	55
3/11	18.3 - 12.4		21										18				151	151	x					x	x	56 - 57
4/11	23.4 - 29.4		12																x					x	x	58
5/11	30.4 - 10.5		230														274	274	x					x	x	59 - 60
6/11	12.5 - 15.6													106					x					x	x	61
7/11	11.7 - 31.7												7	17					x					x	x	62
8/11	2.8 - 19.8		91										67	4					x					x	x	63 - 64
9/11	21.8 - 4.9		84										86	1	86				x					x	x	65 - 66
10/11	7.9 - 10.10		115											76					x					x	x	67 - 68
11/11	14.10-12.11	31	51										6	30		34			x					x	x	69 - 70



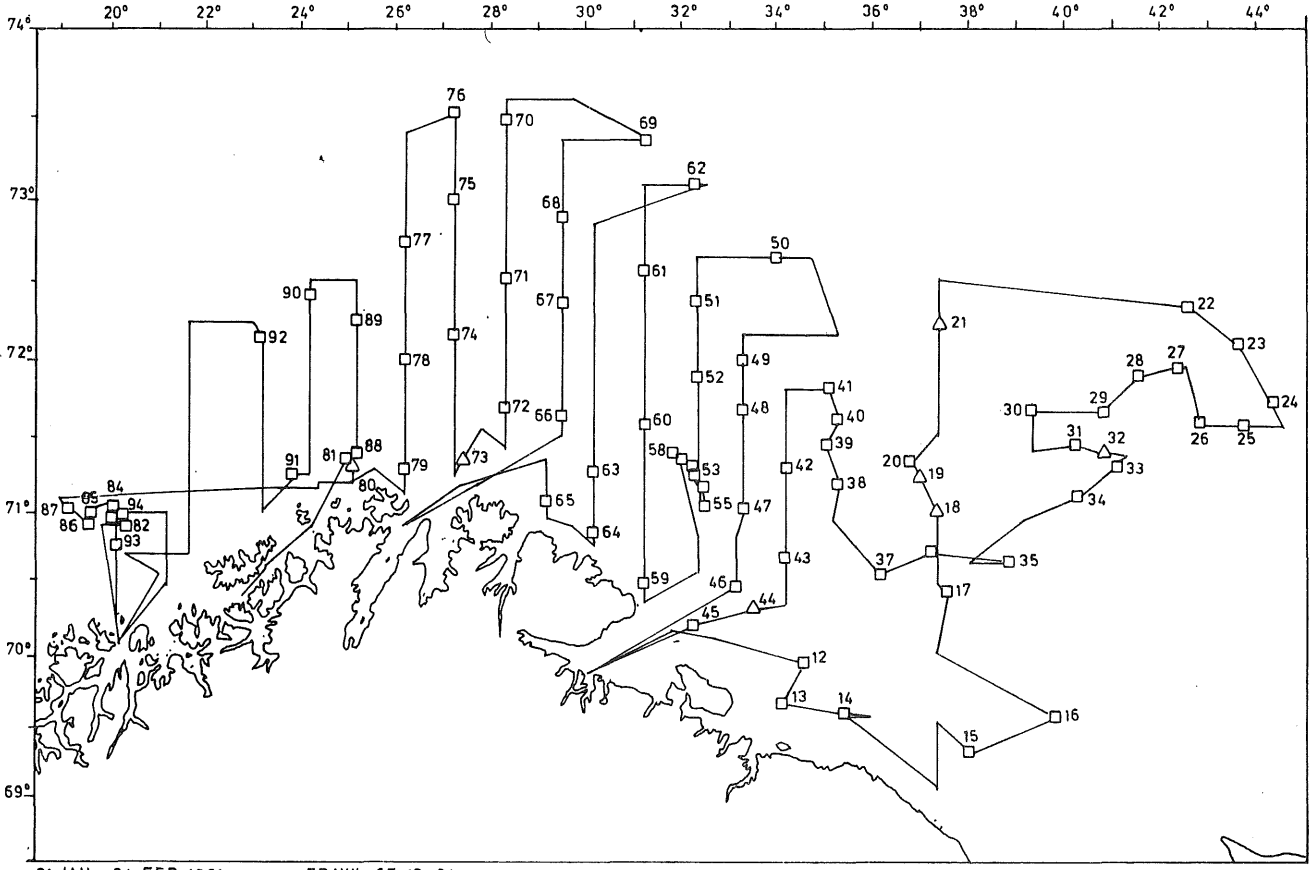




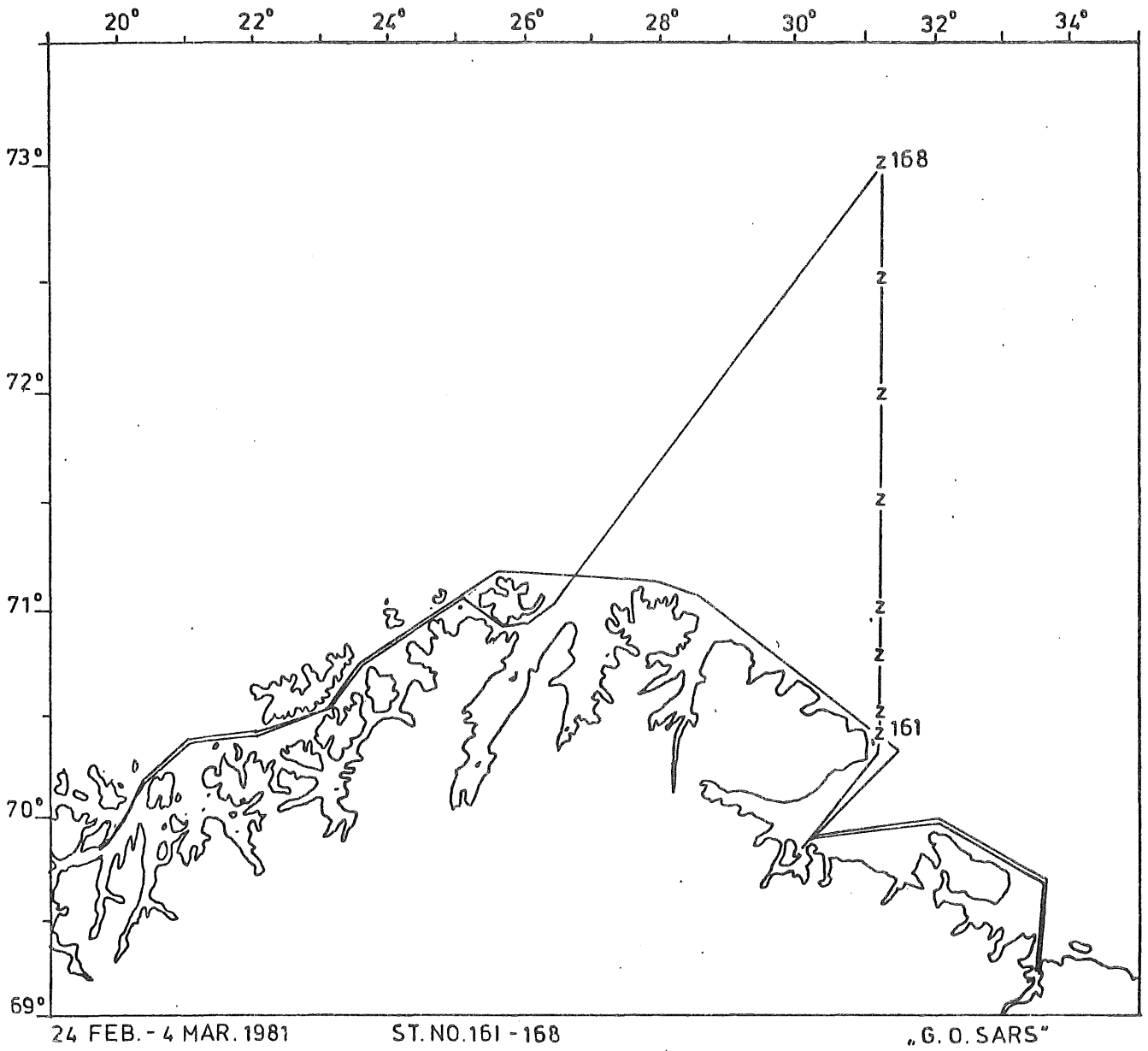


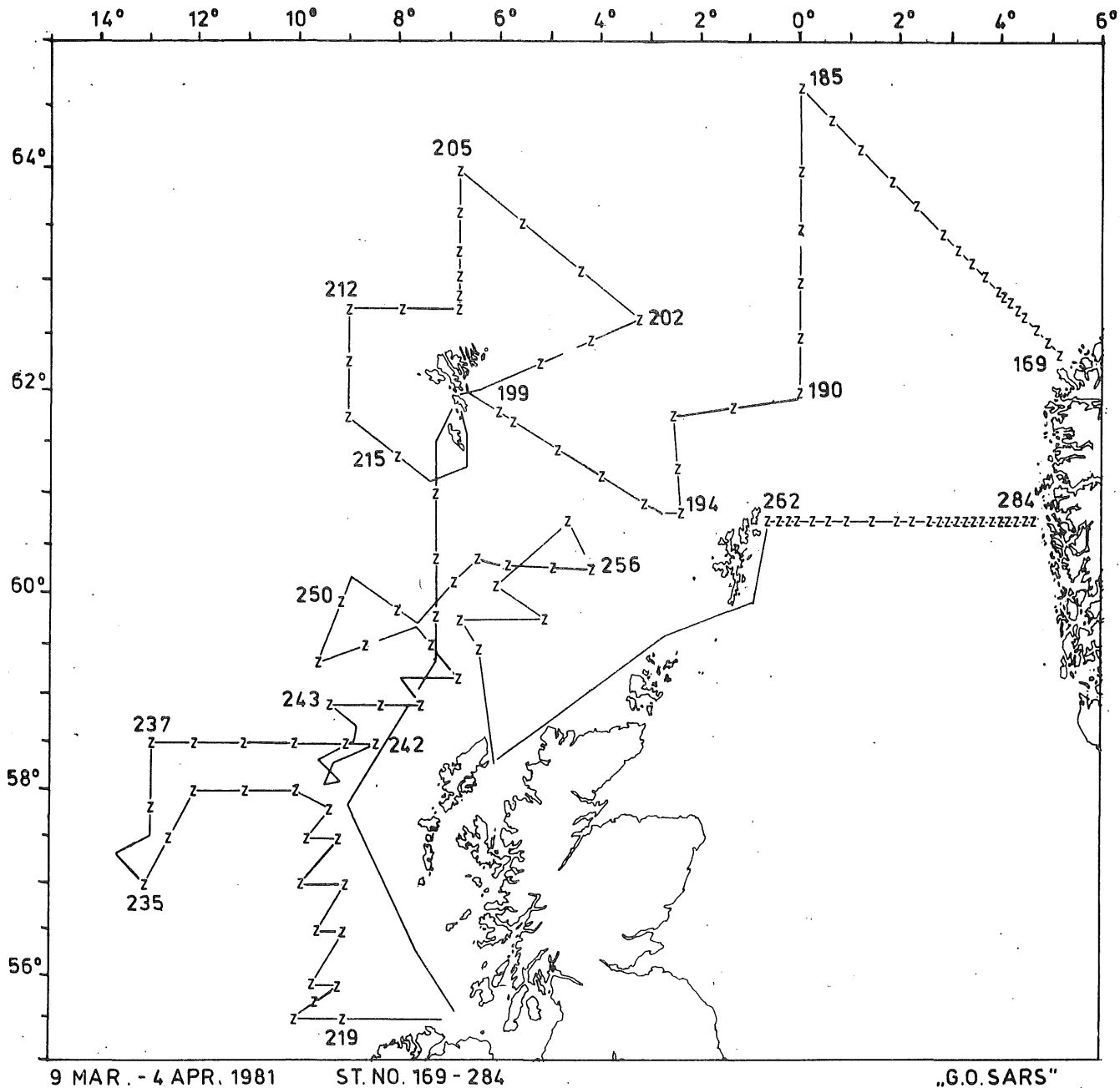
21 JAN - 24 FEB. 1981 ST.NO. 49 - 160

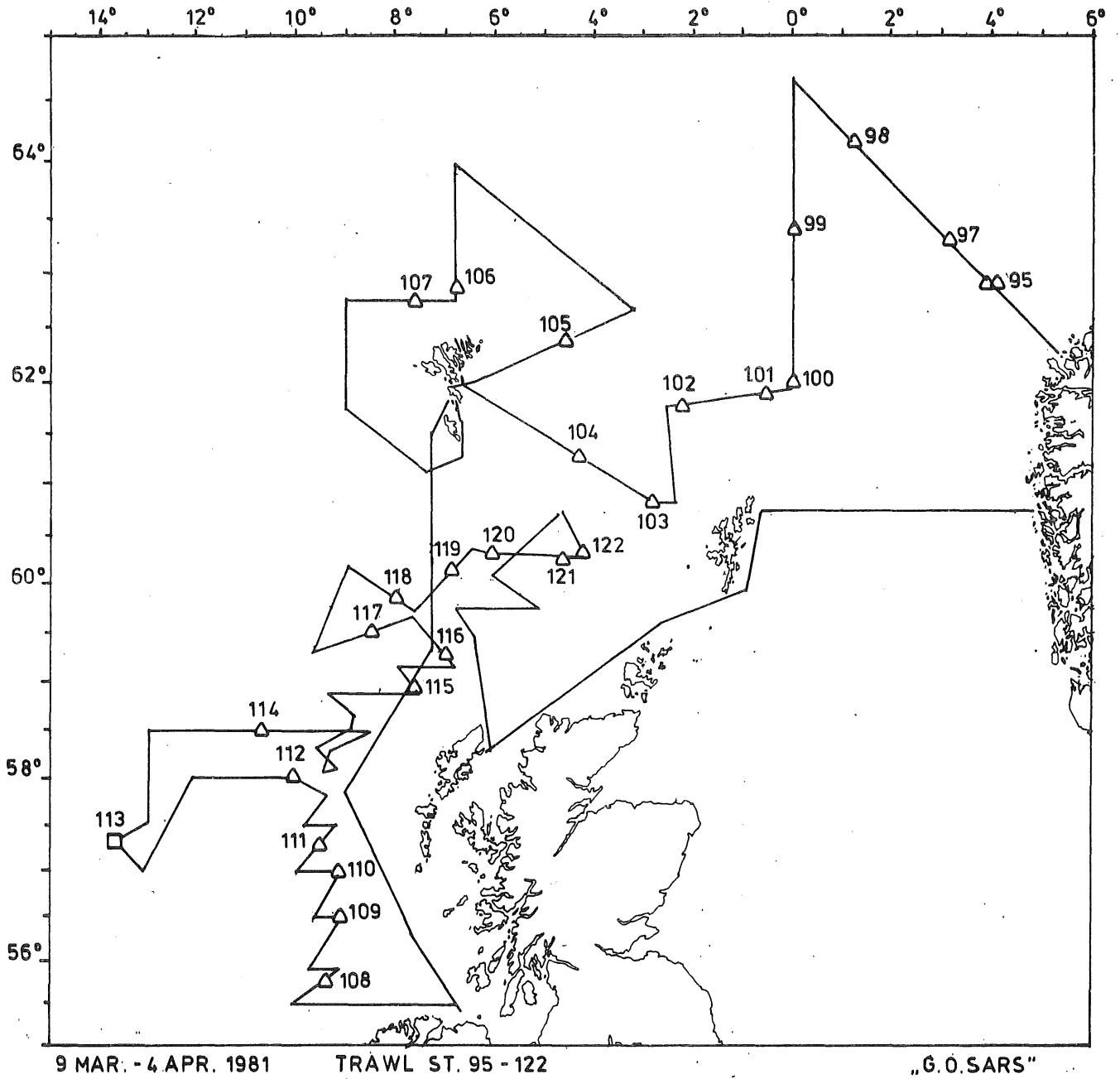
„G.O.SARS“

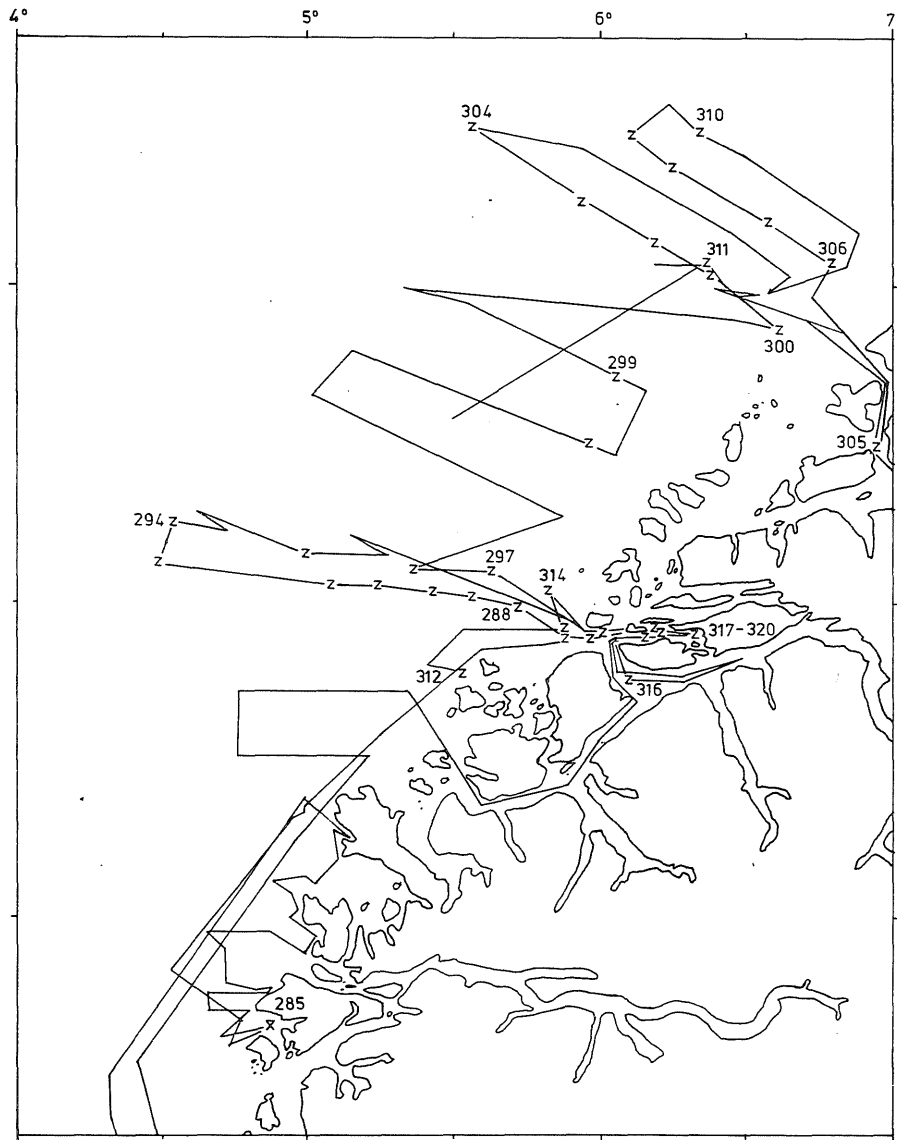


21 JAN. - 24 FEB. 1981 TRAWL ST. 12 - 94



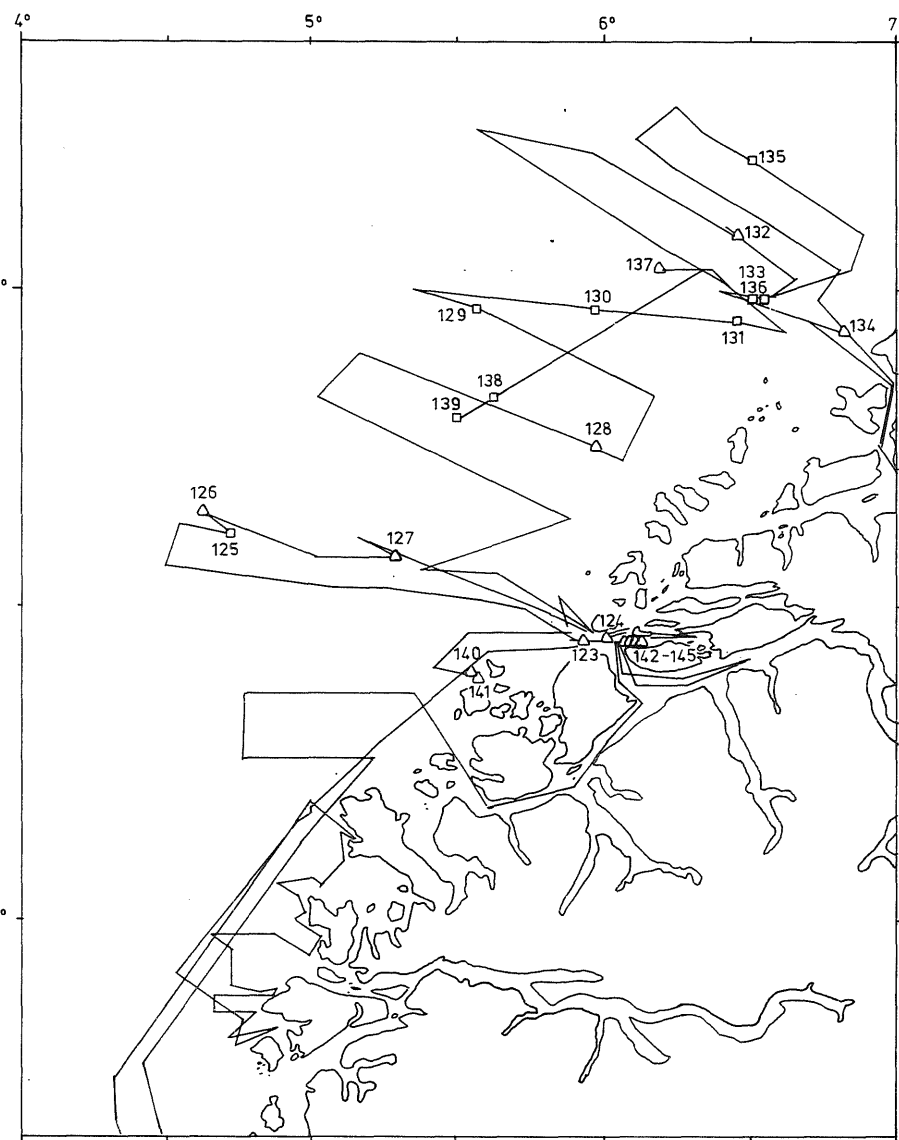






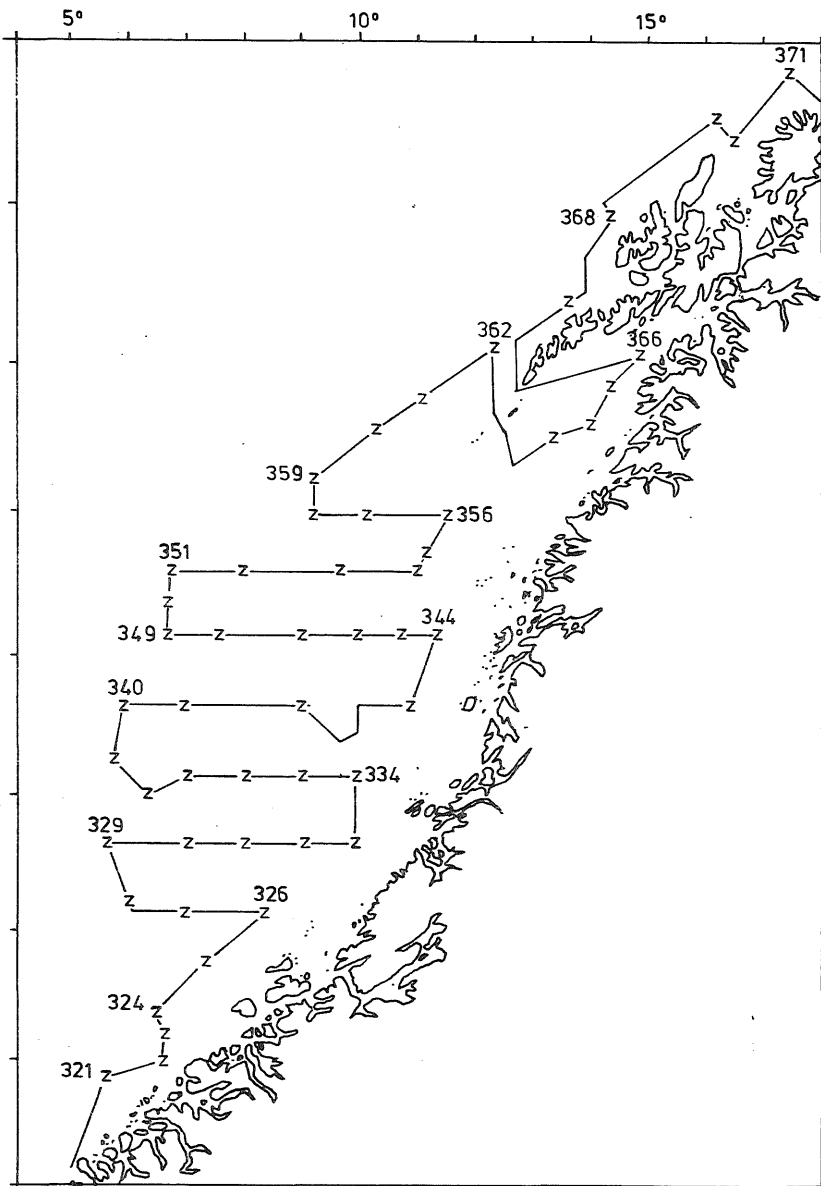
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ST. NO. 285 - 320



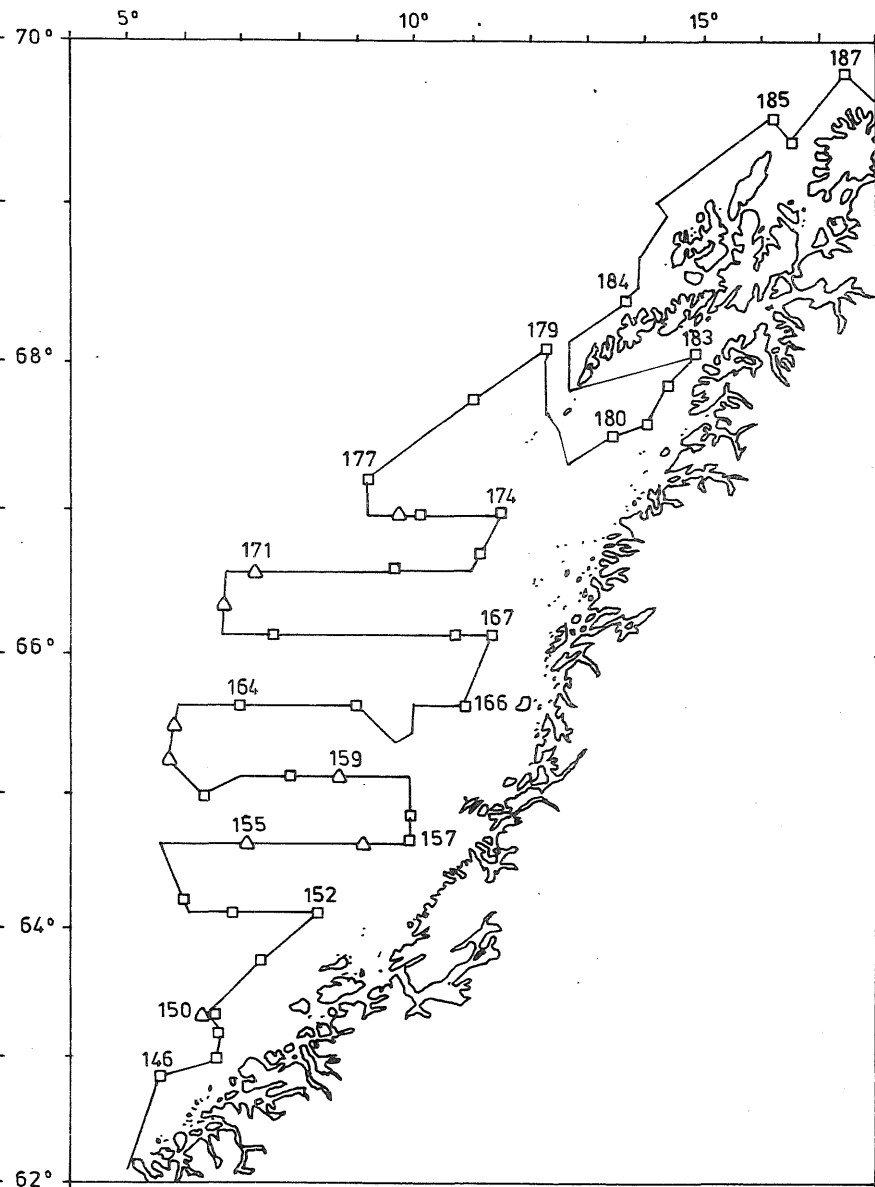
TRAWL ST. 123 - 145

"G.O.SARS"



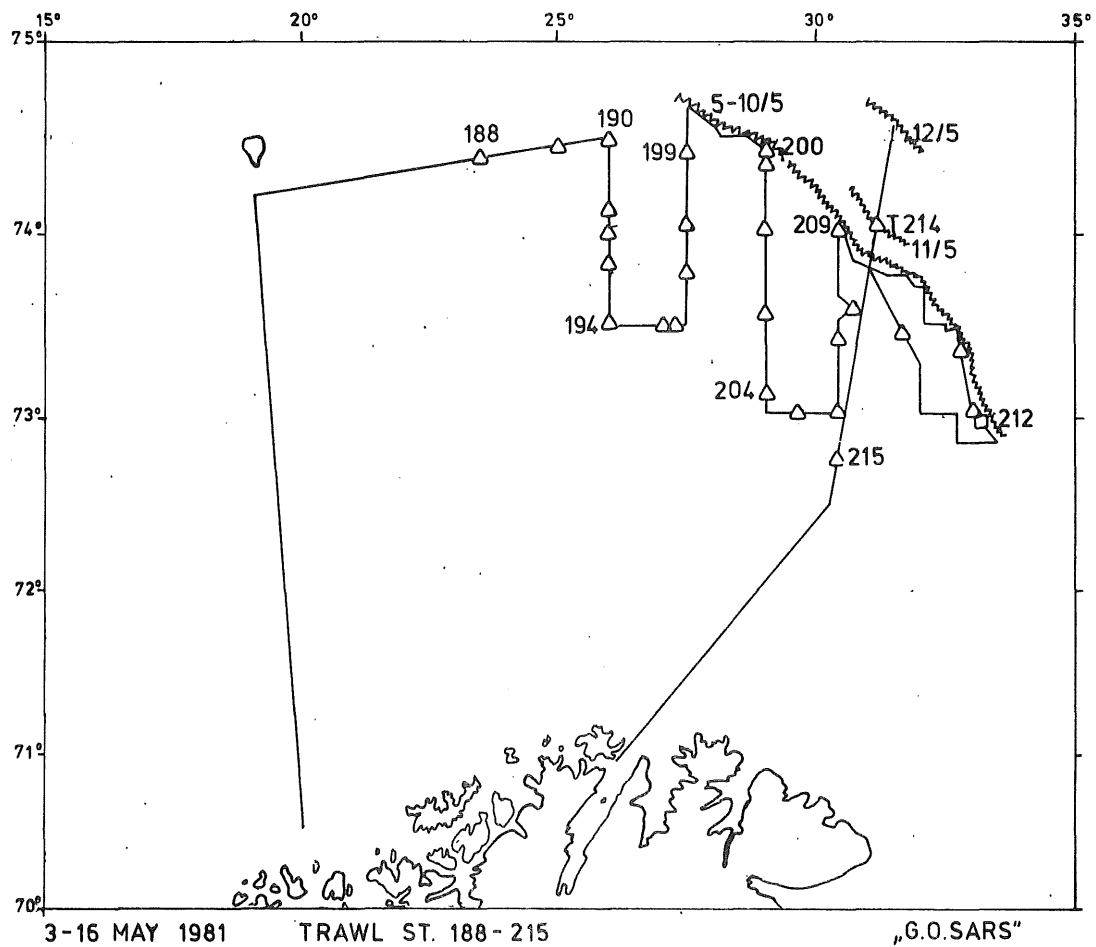
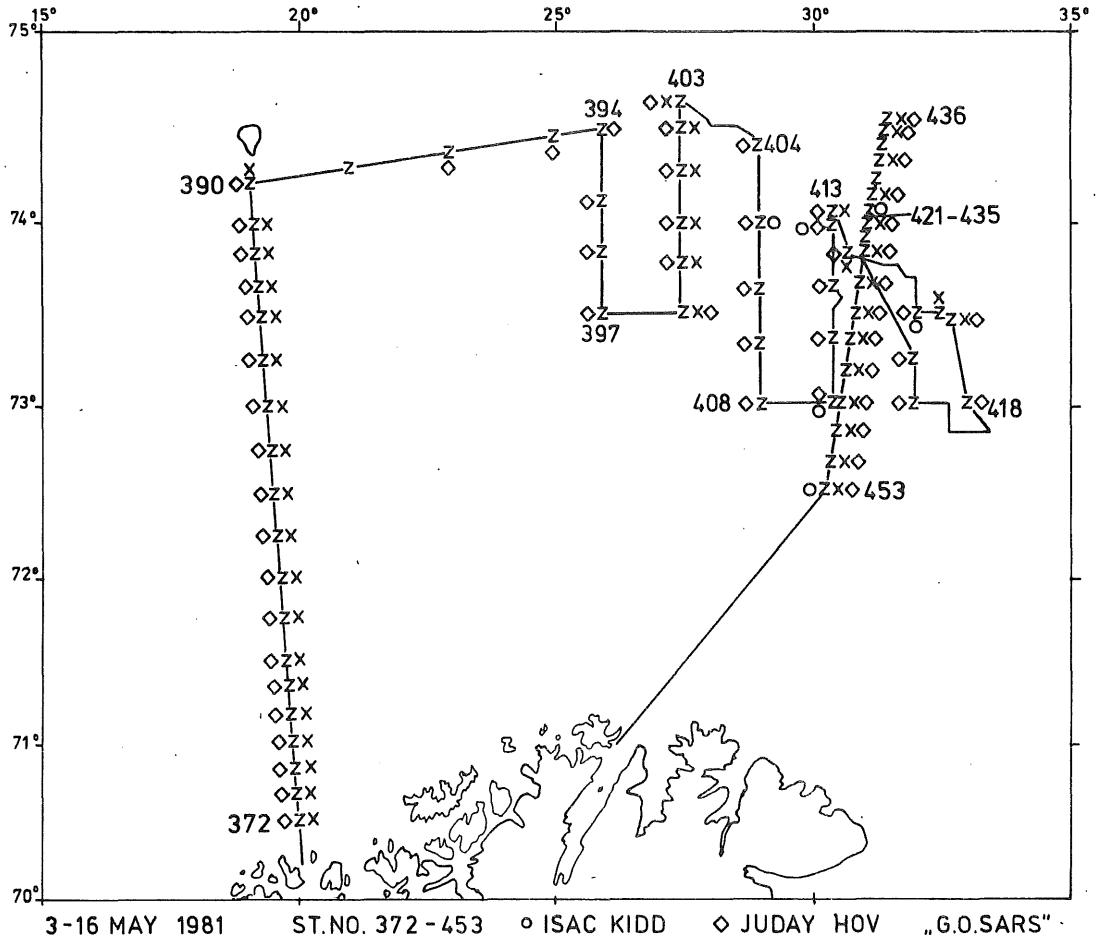
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ST. NO. 321-371



TRAWL ST. 146 - 187

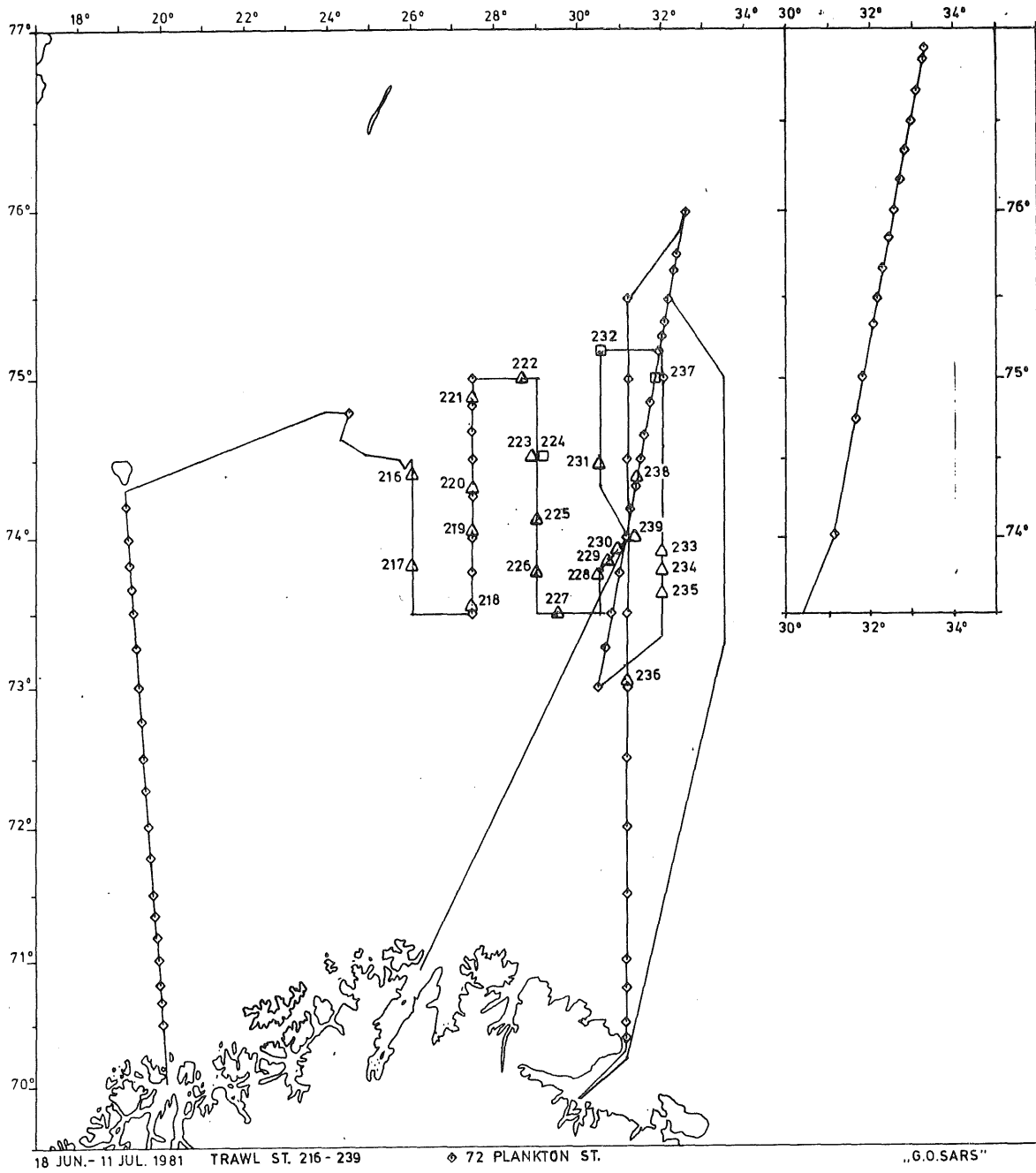
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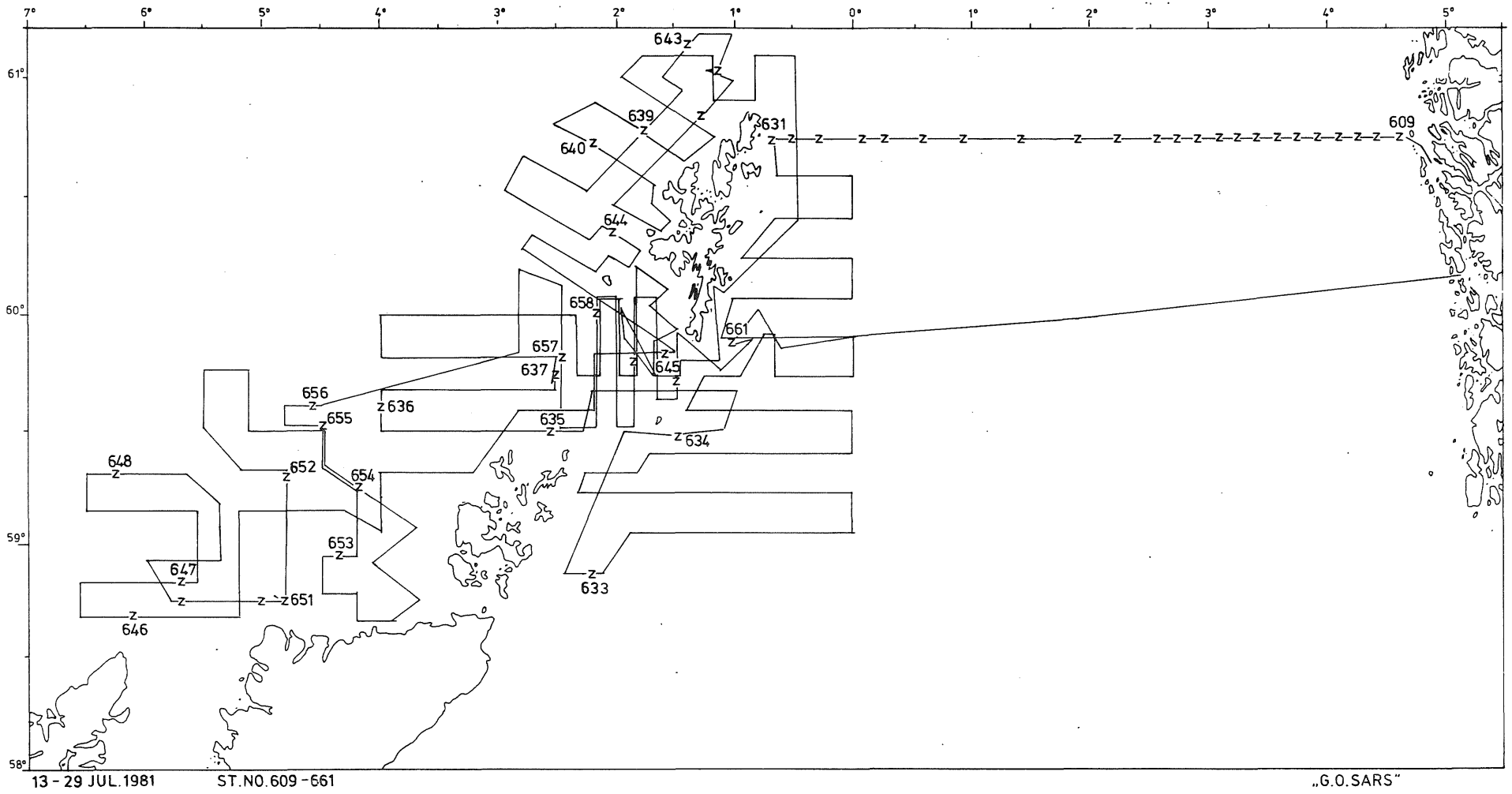


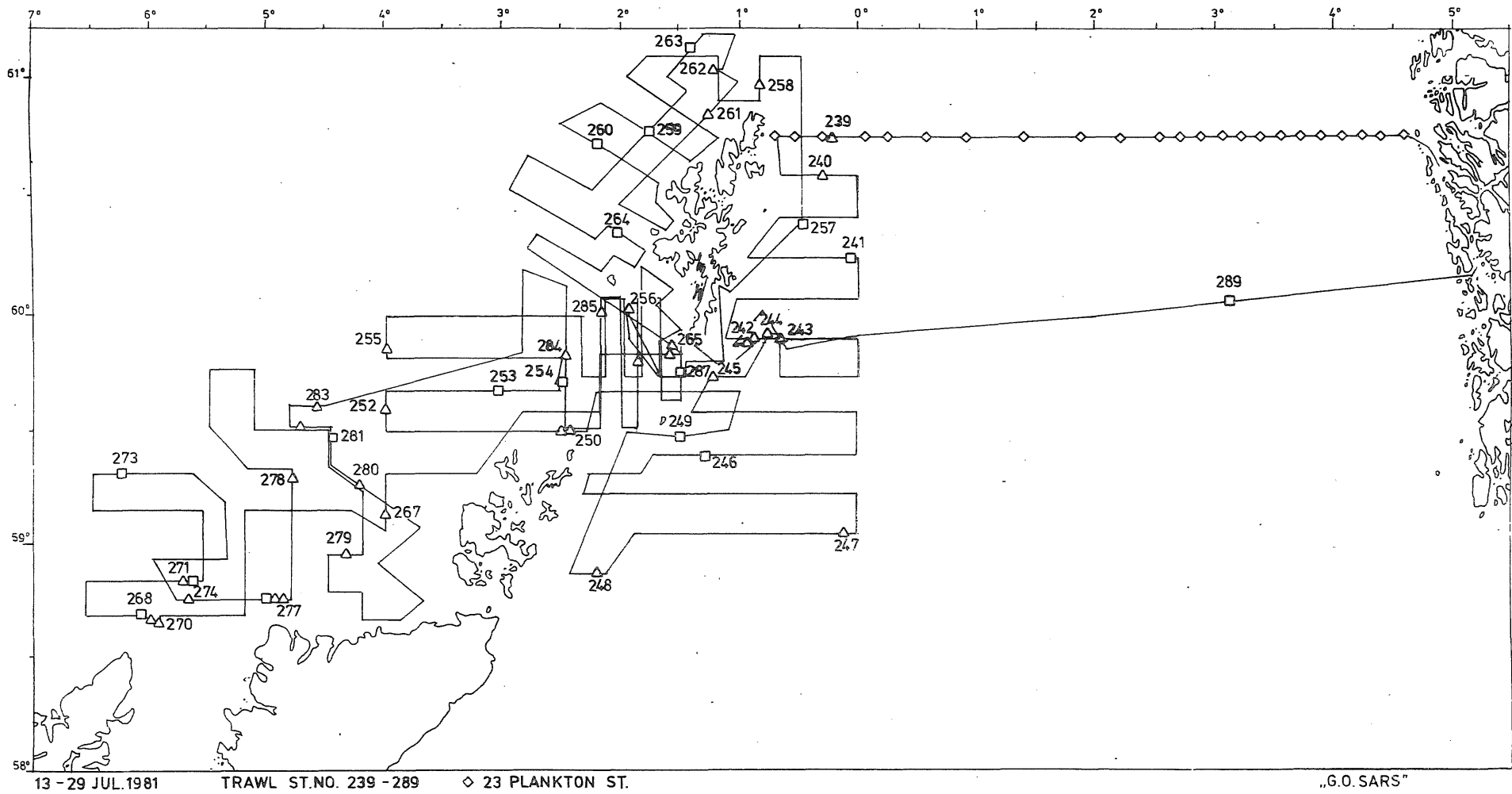


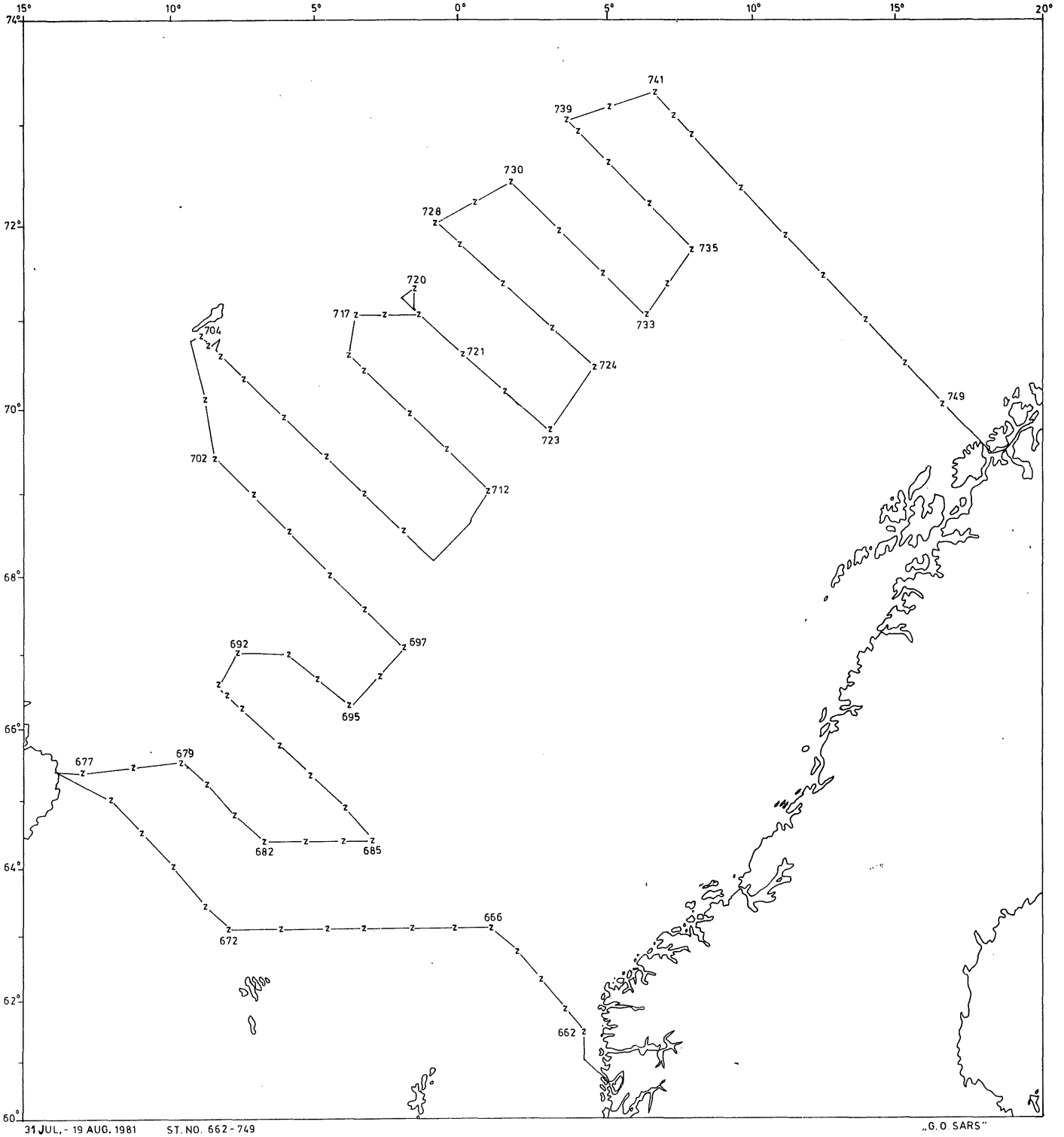


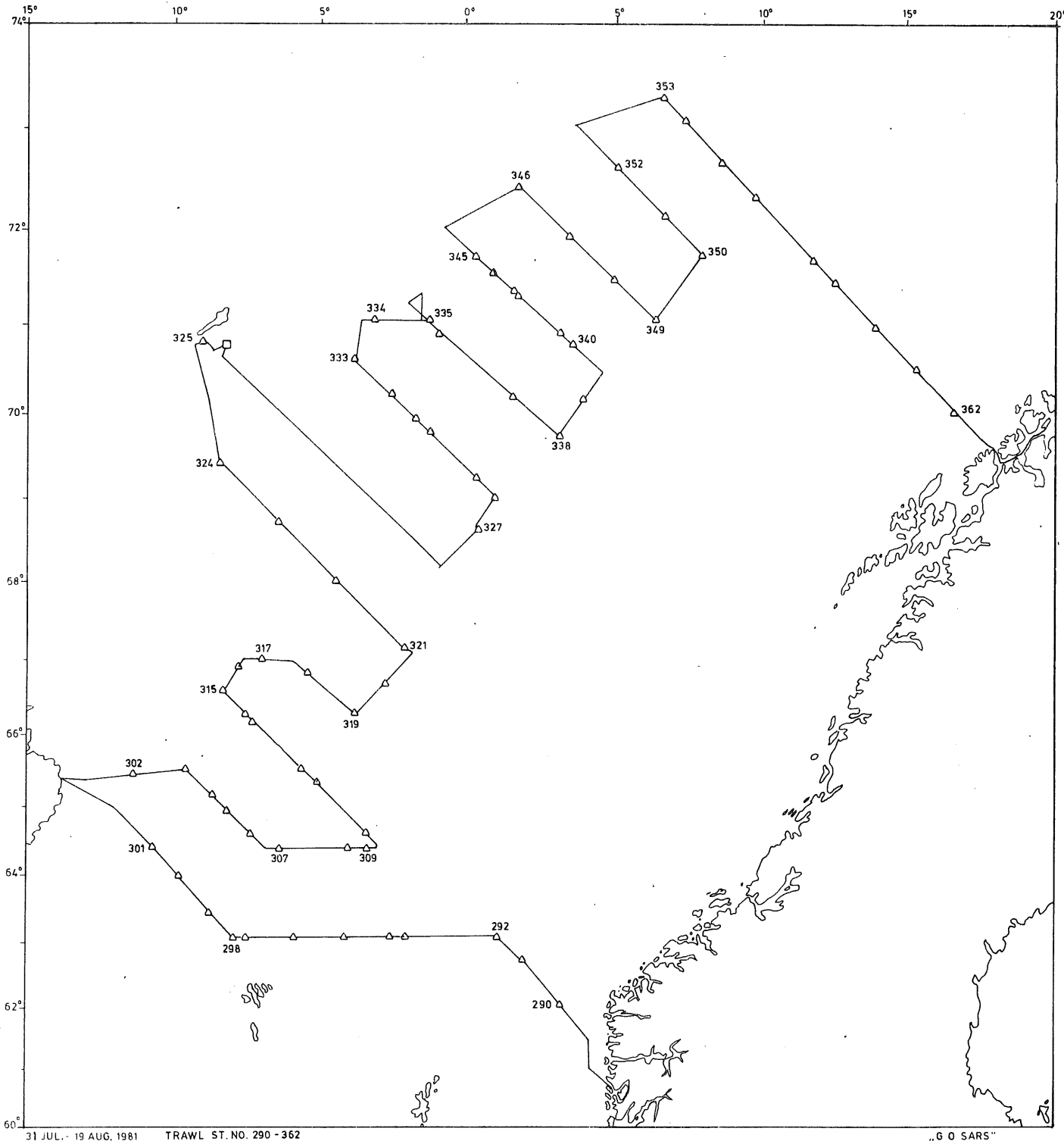


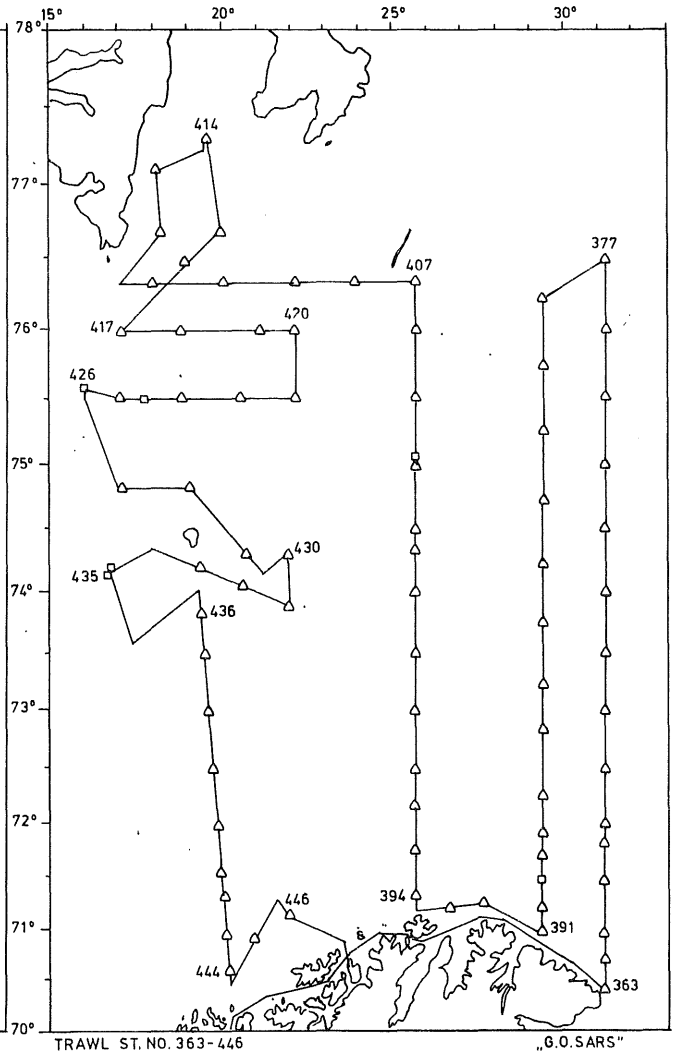
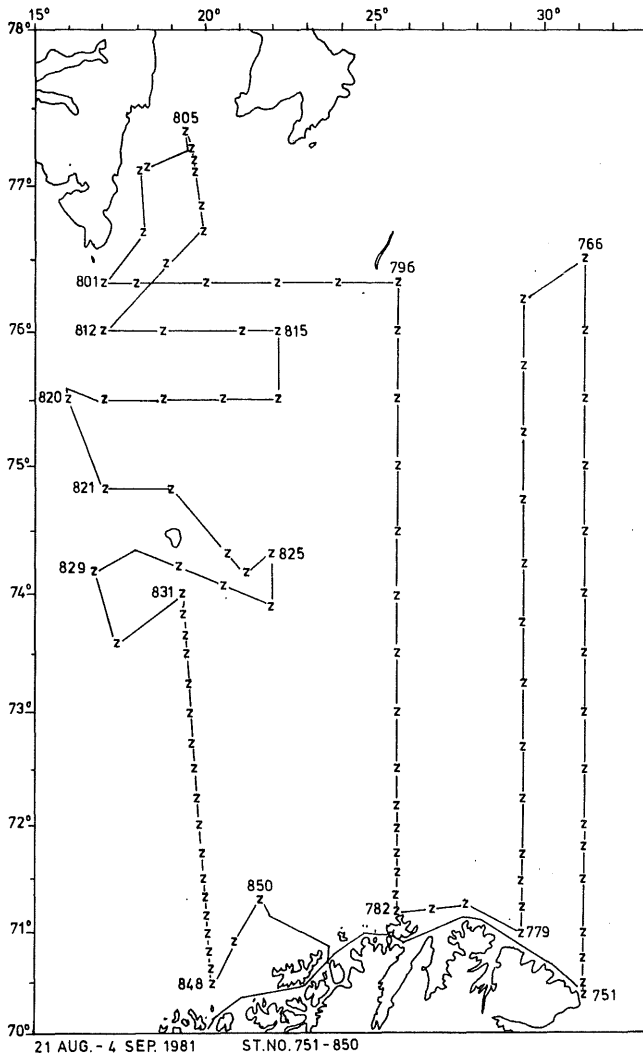


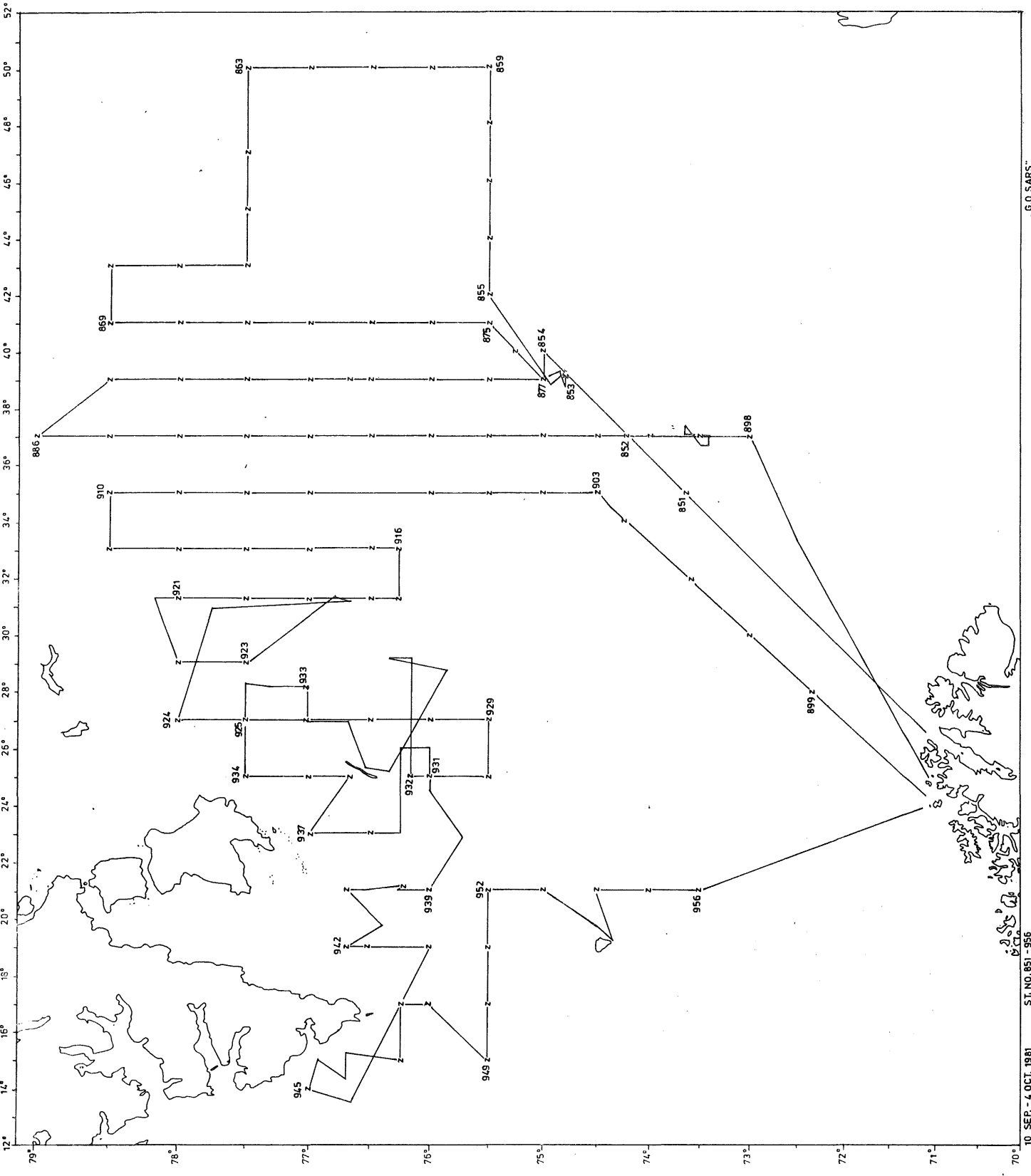










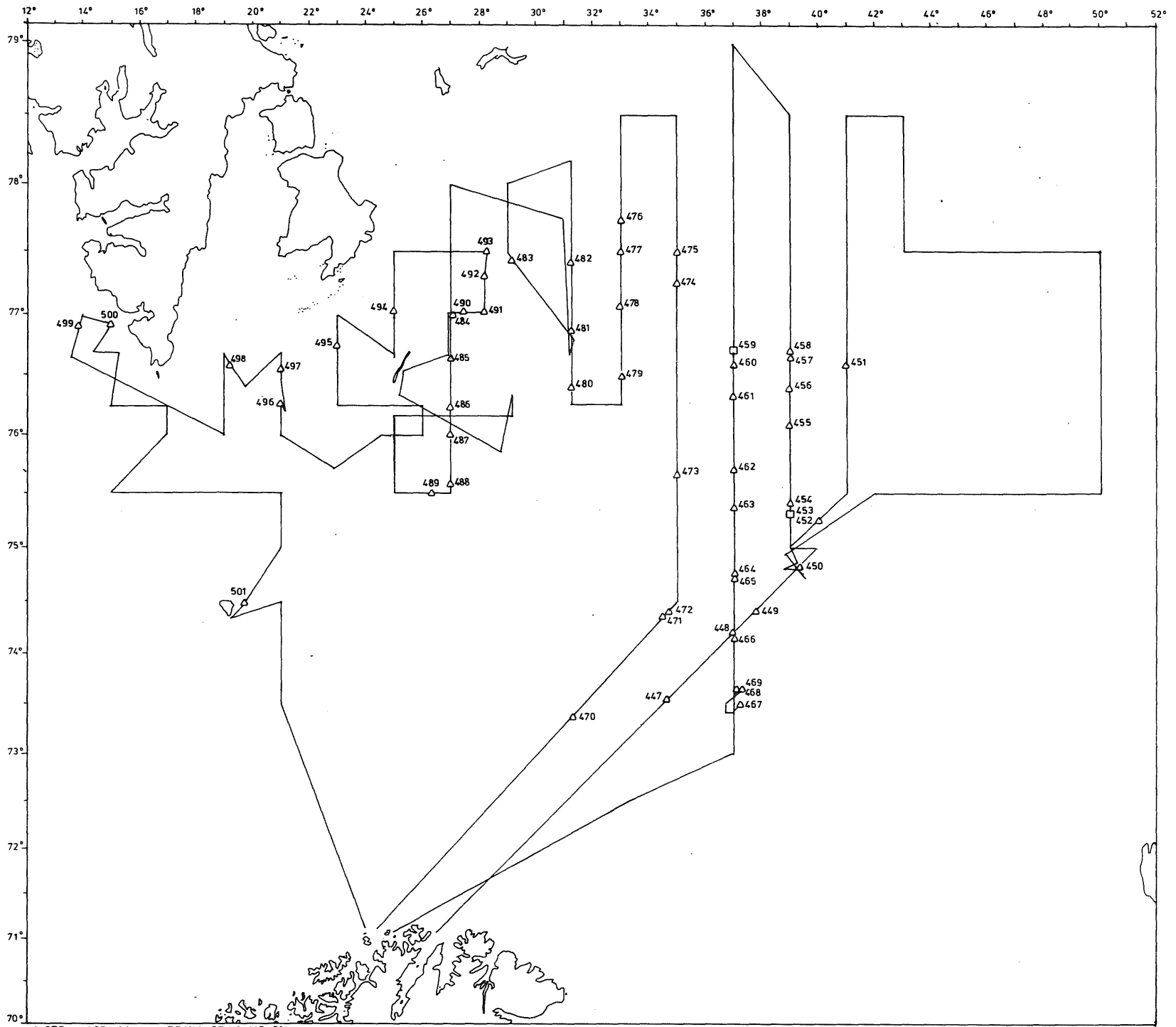


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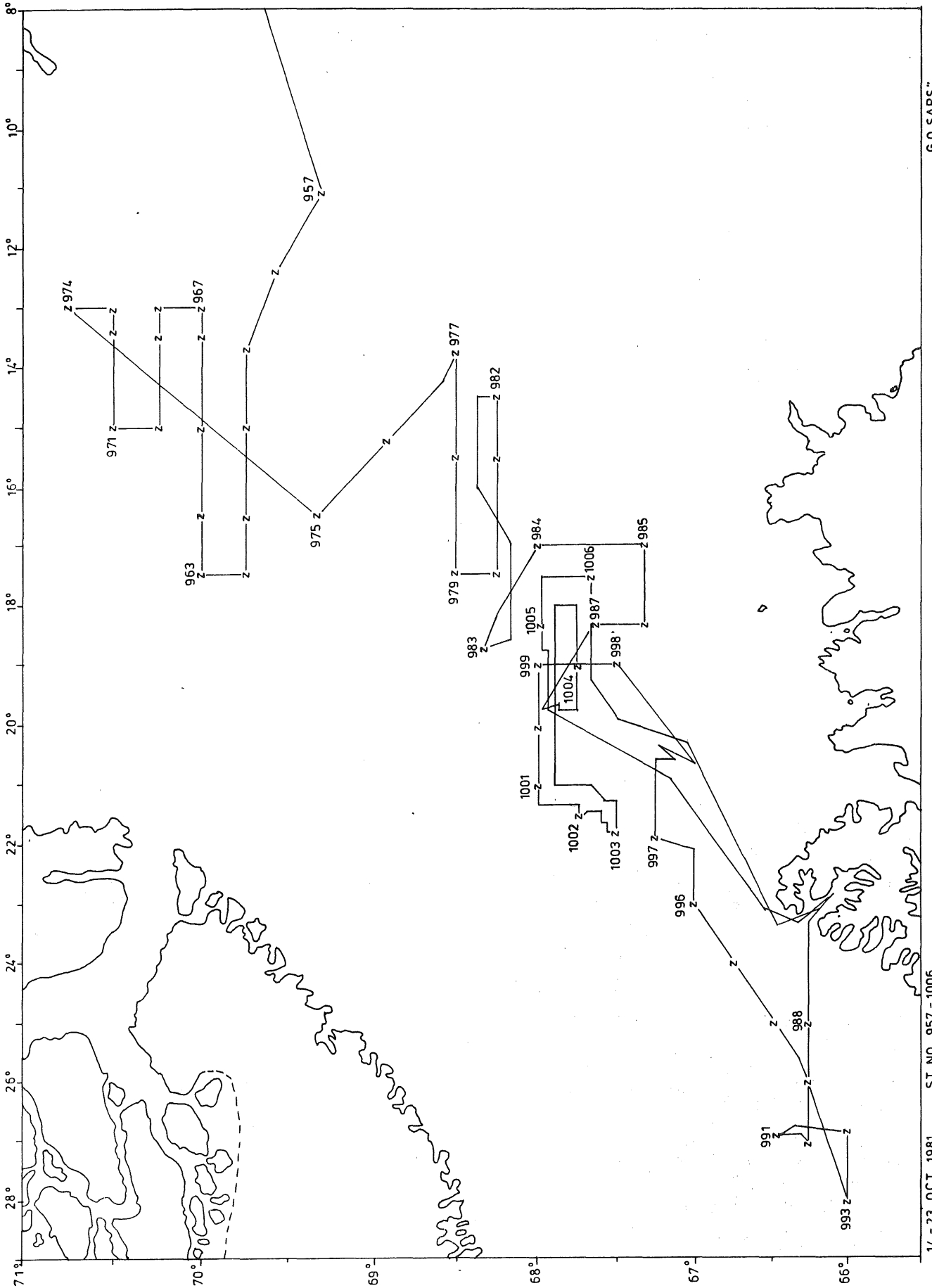
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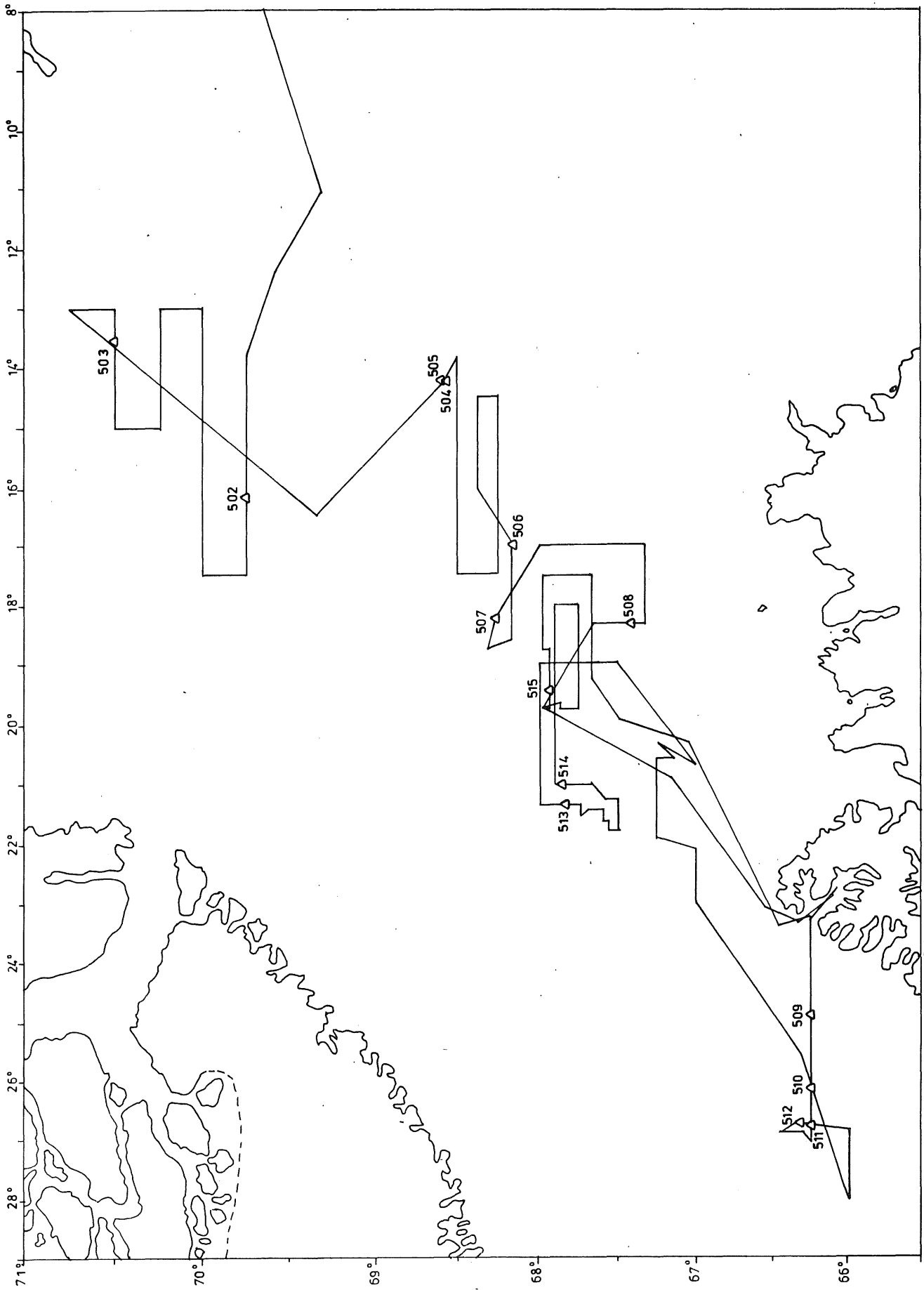
..G.O.SAR5..



..G.O.SARS"

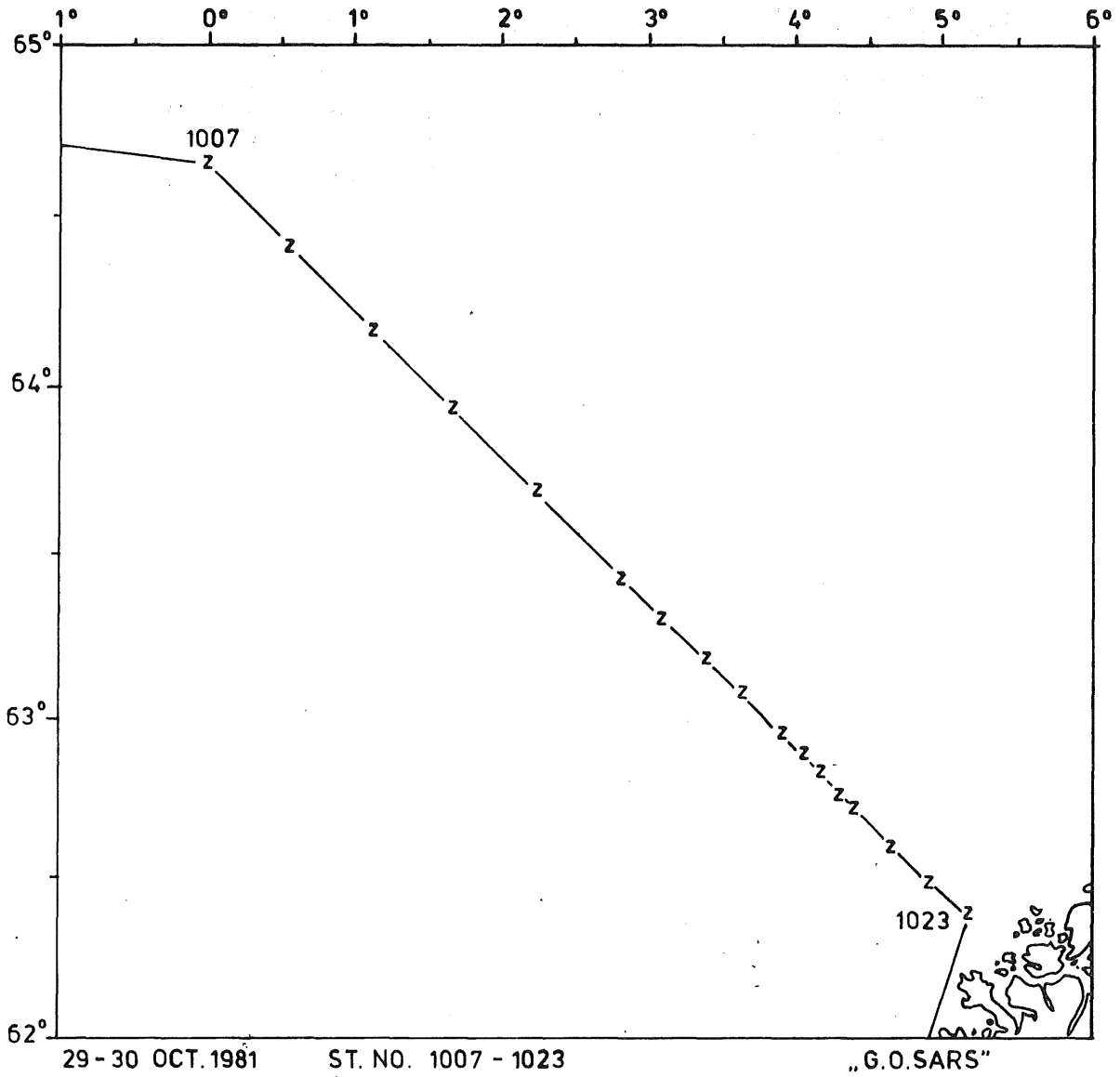
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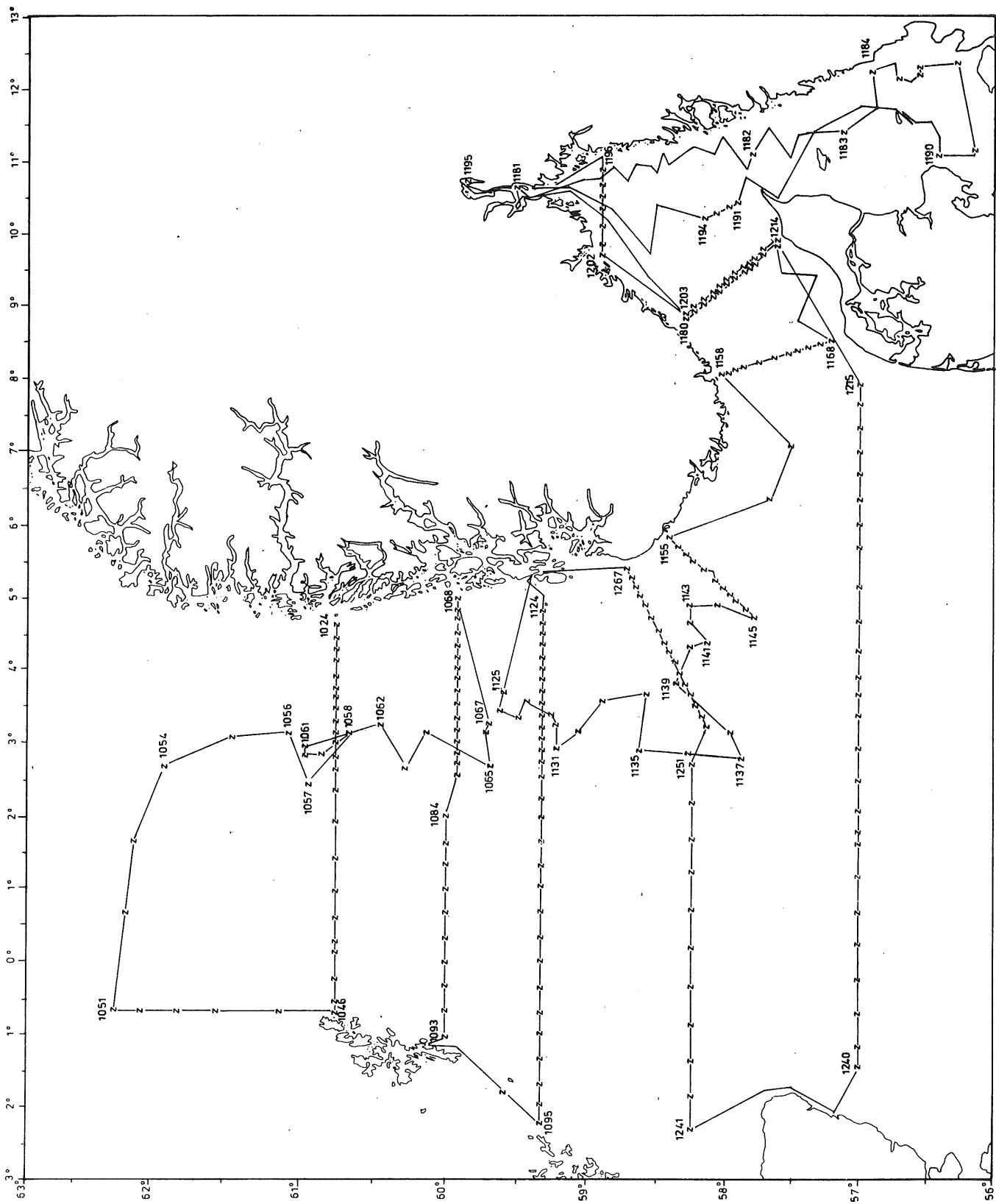
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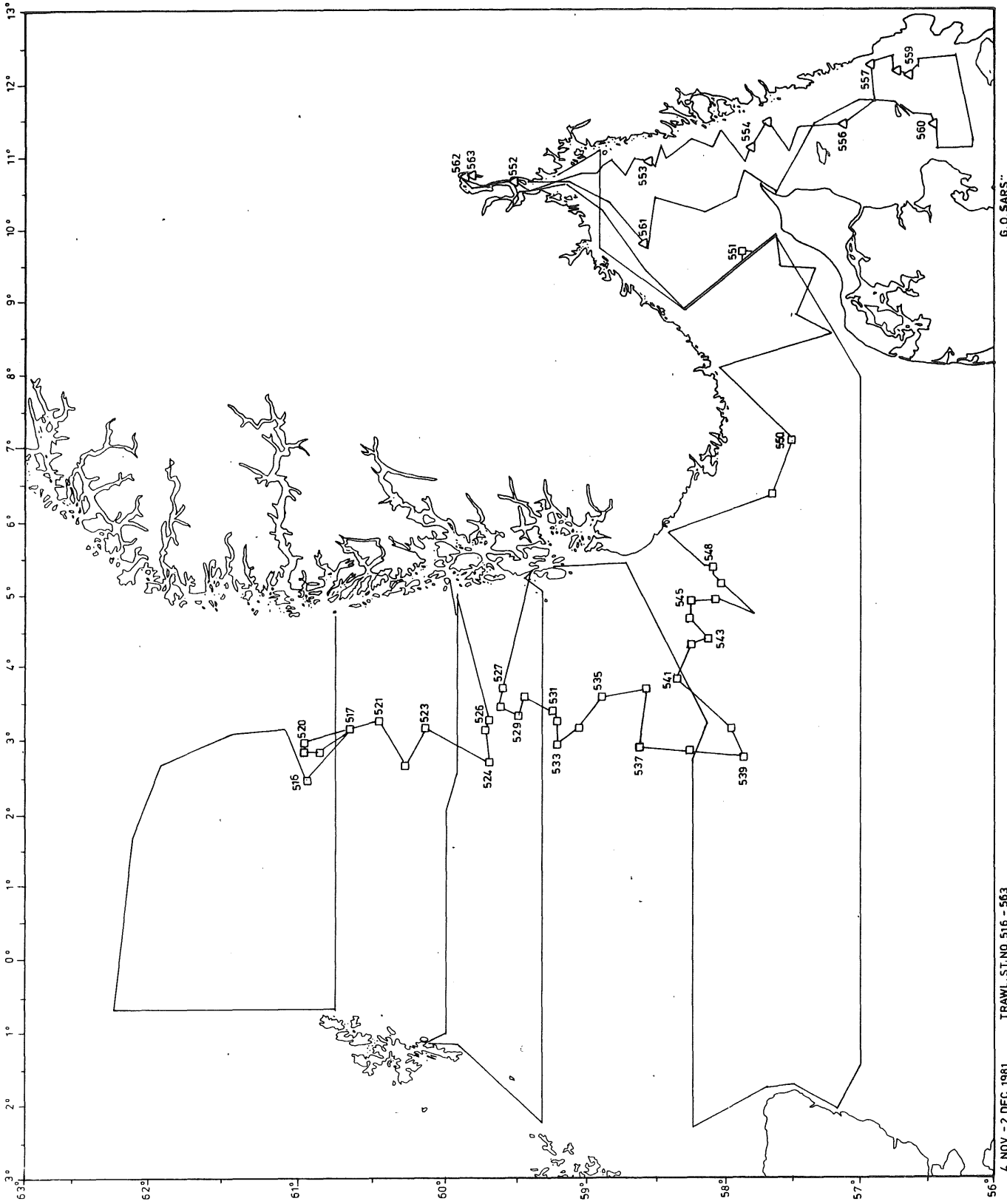


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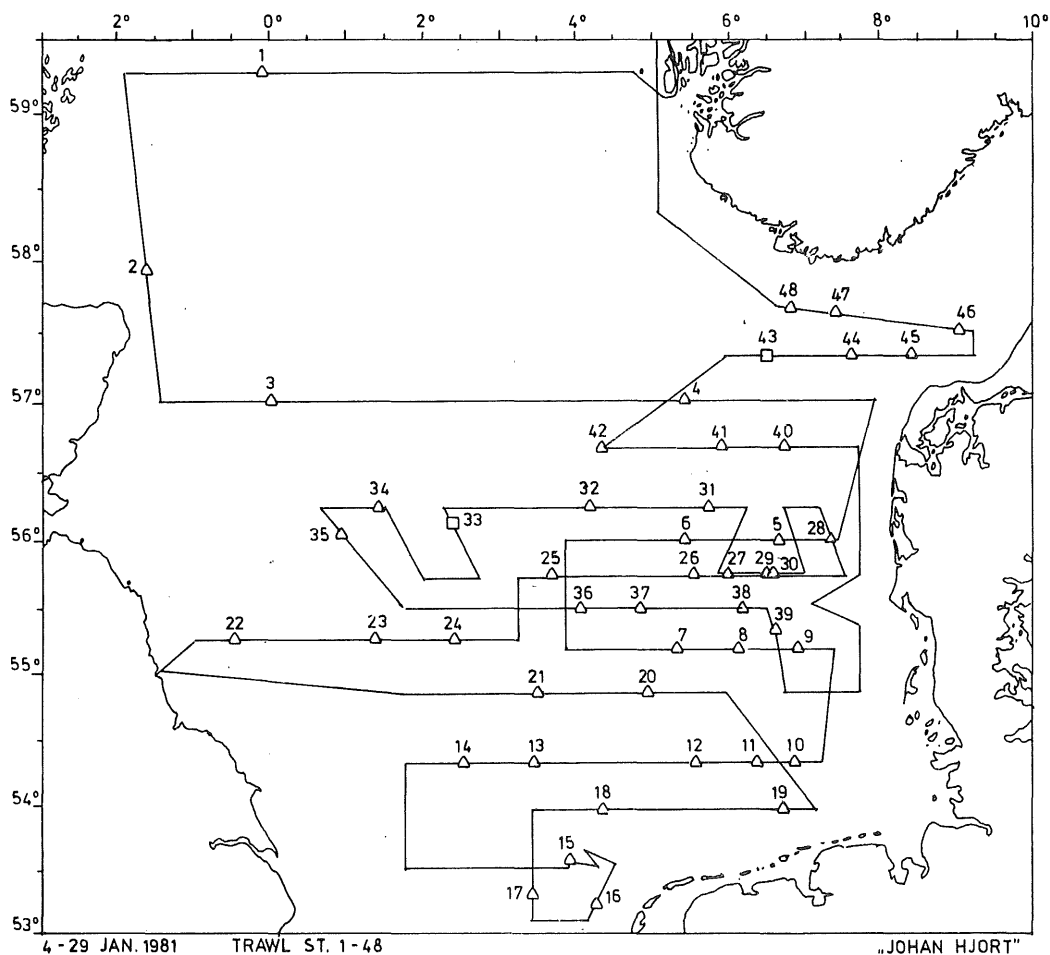
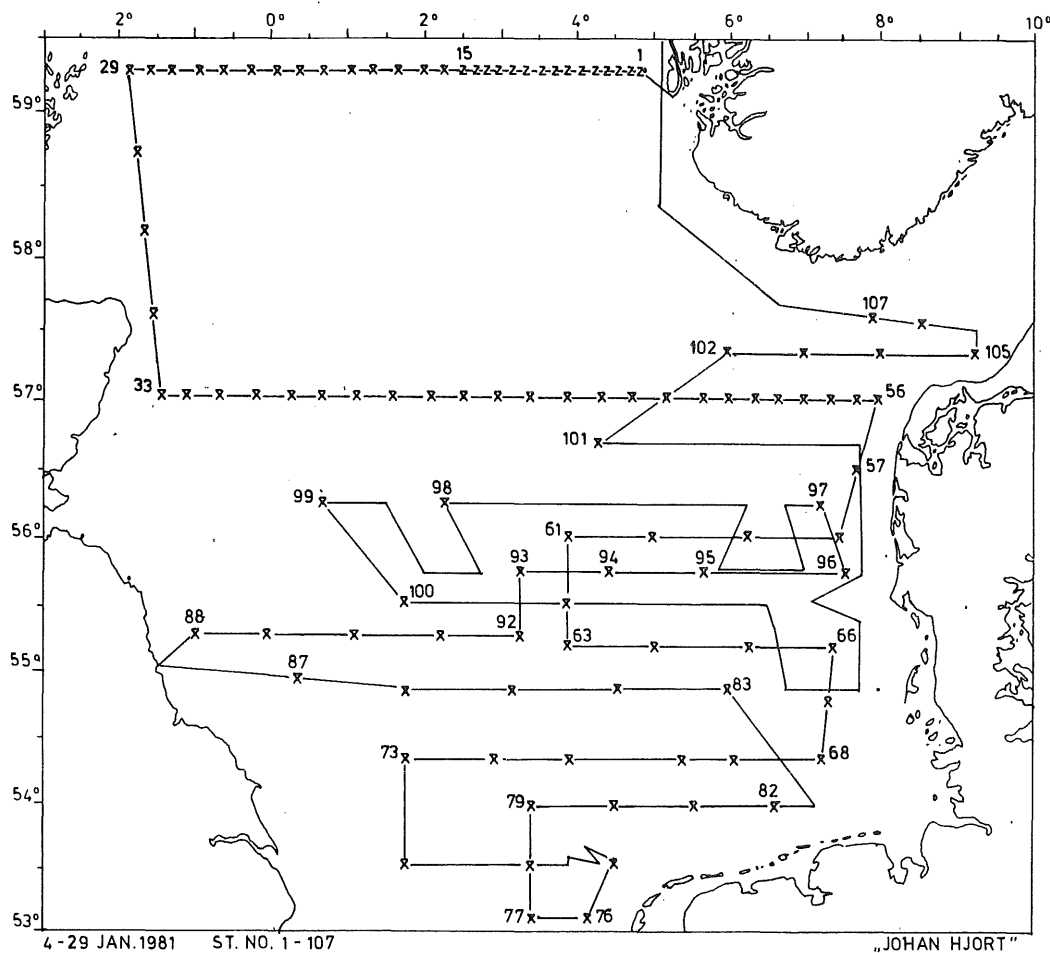


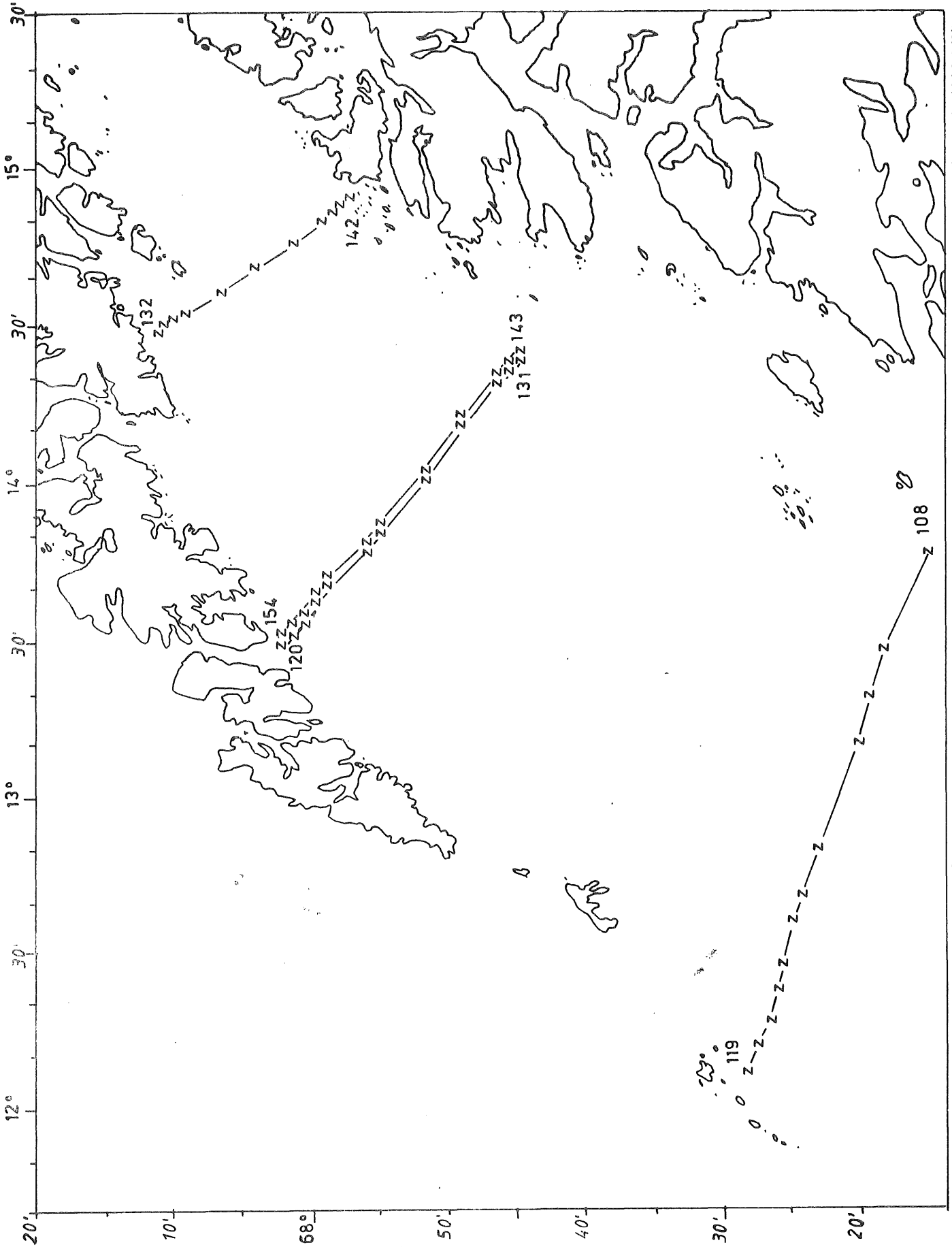


.G.O.SARS..

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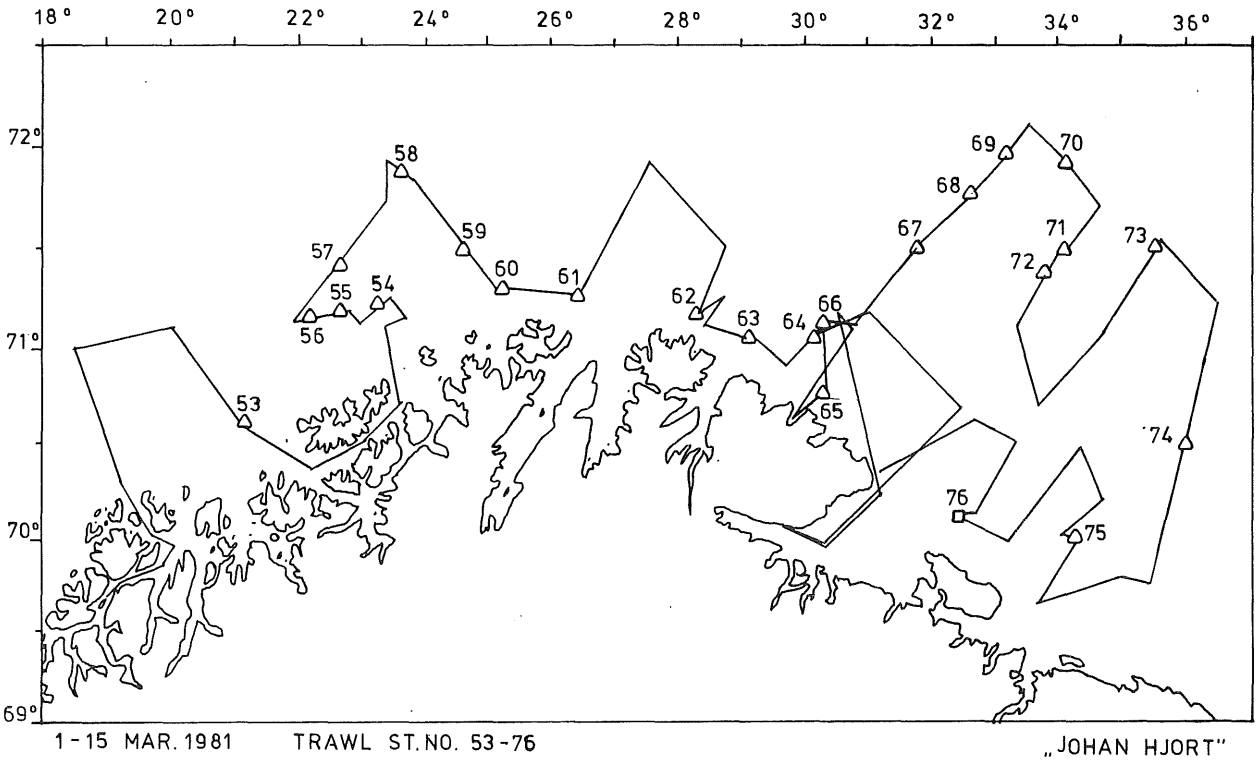
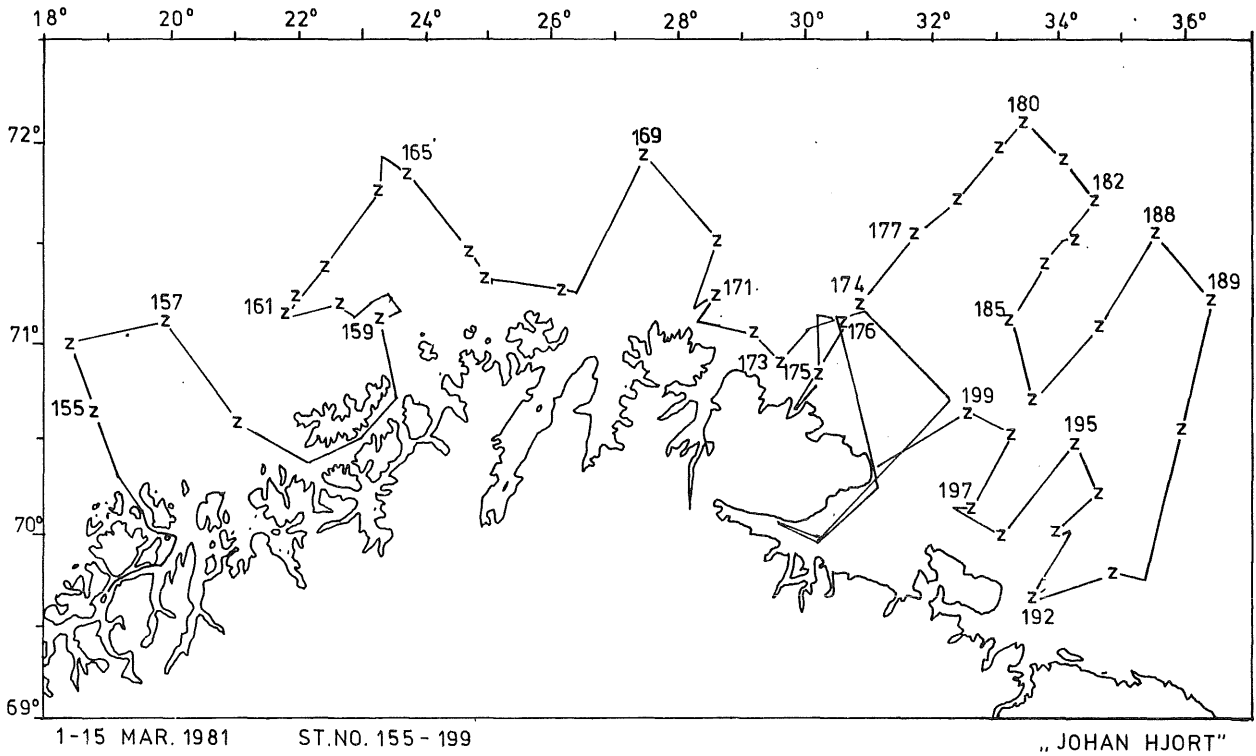


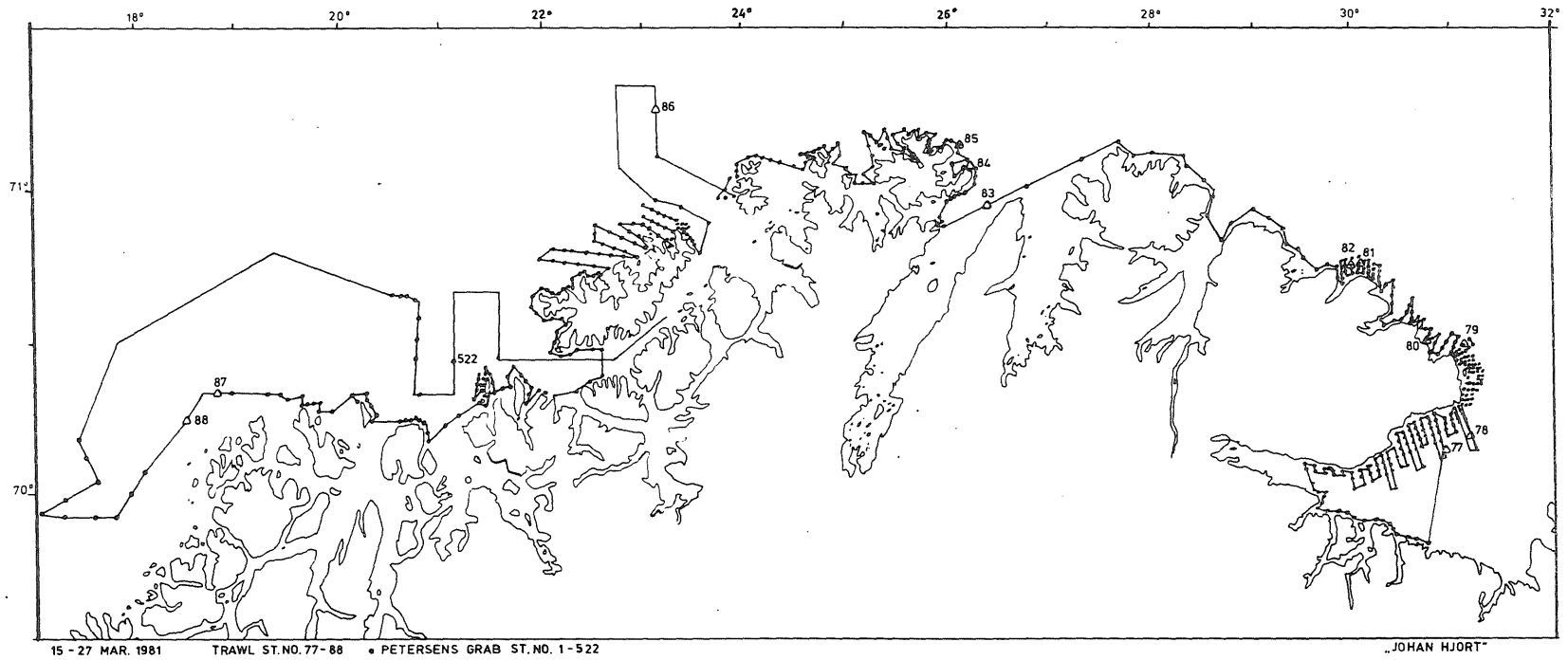
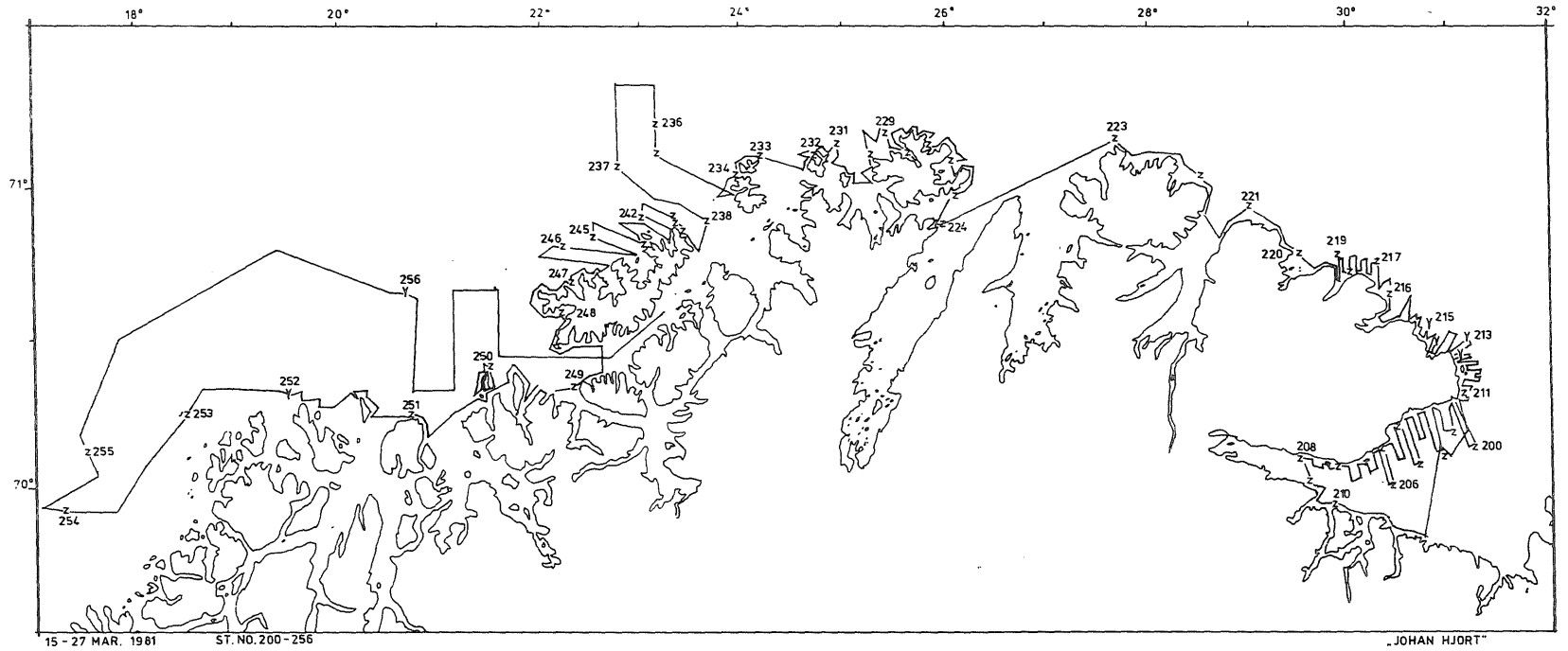


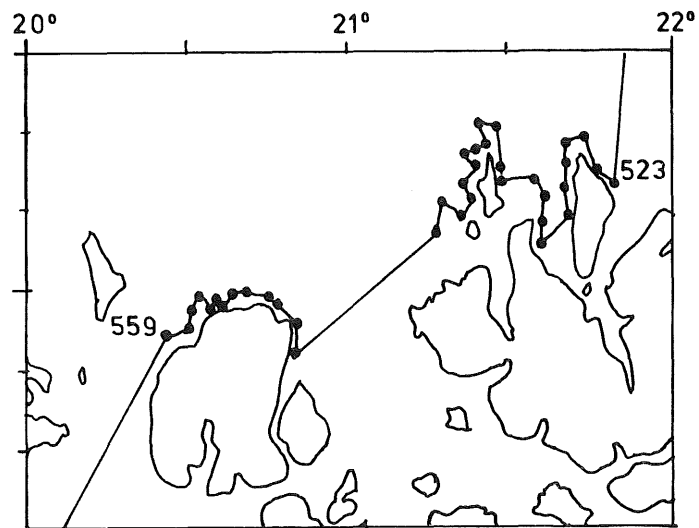
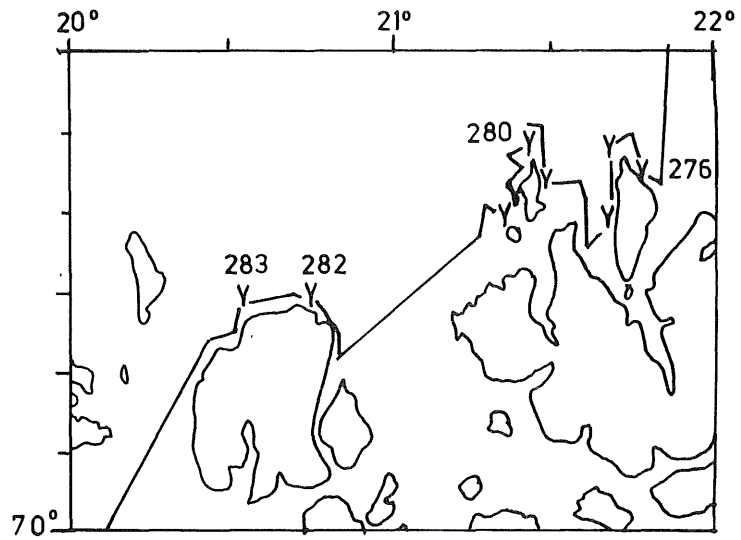
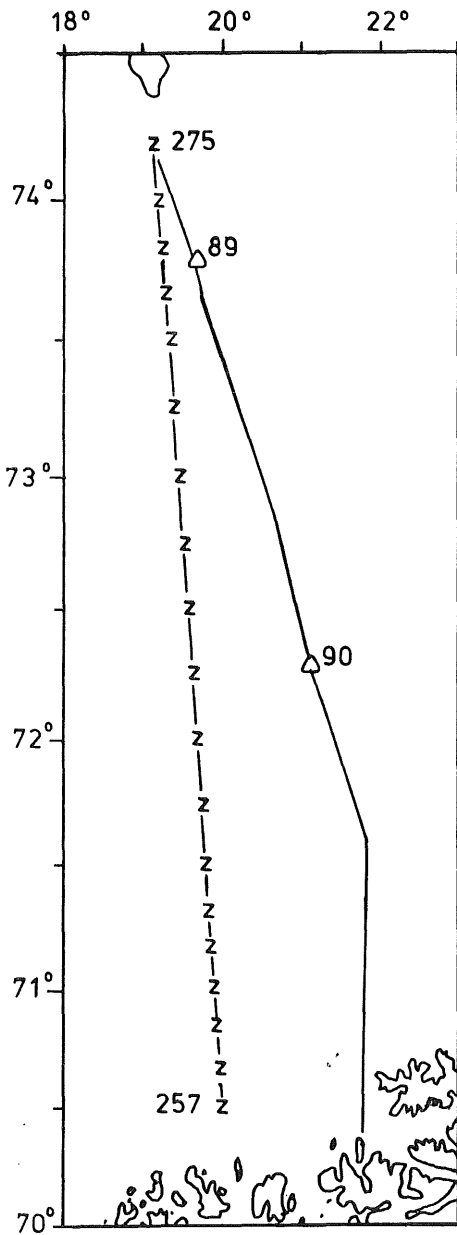
„JOHAN HJORT“

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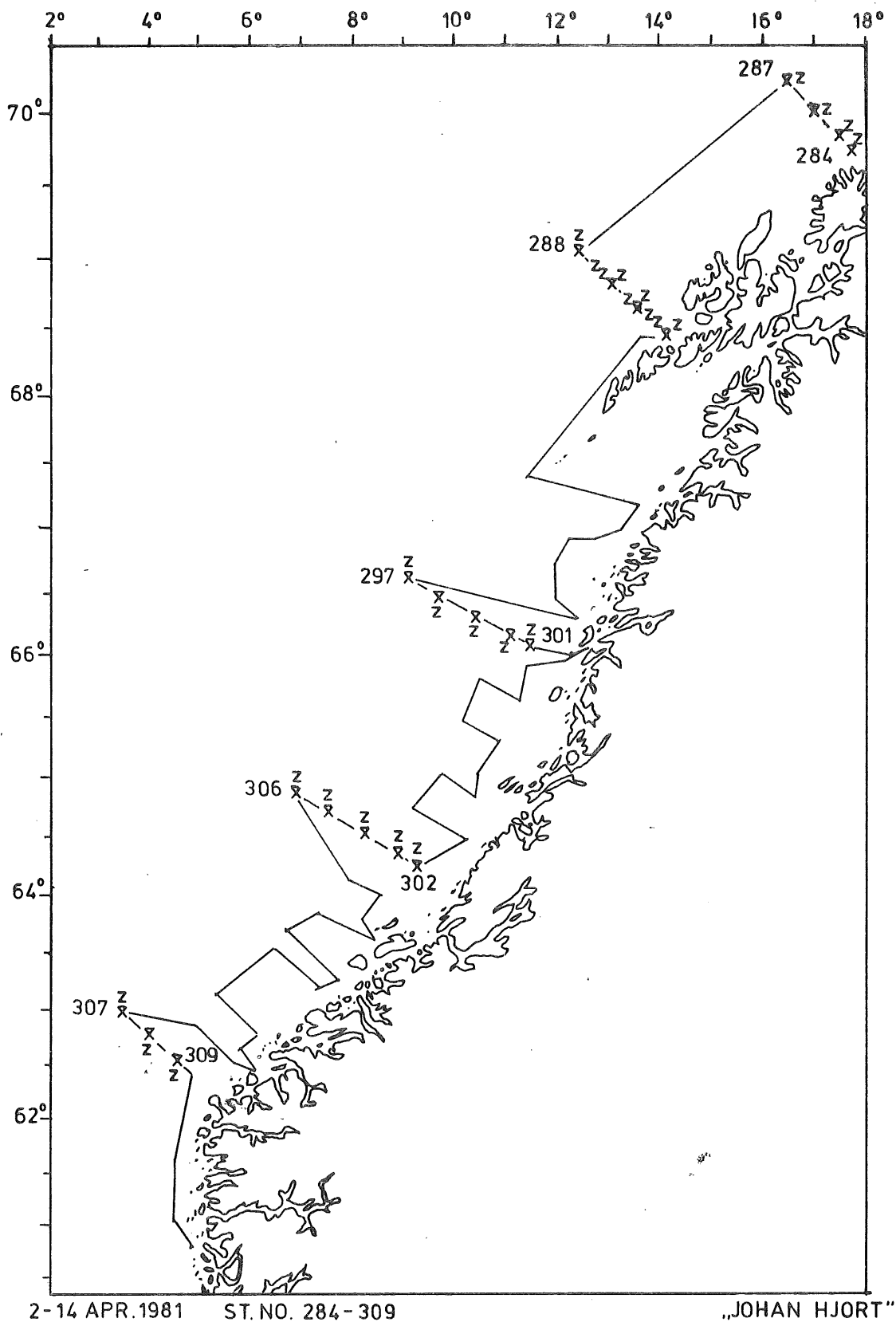


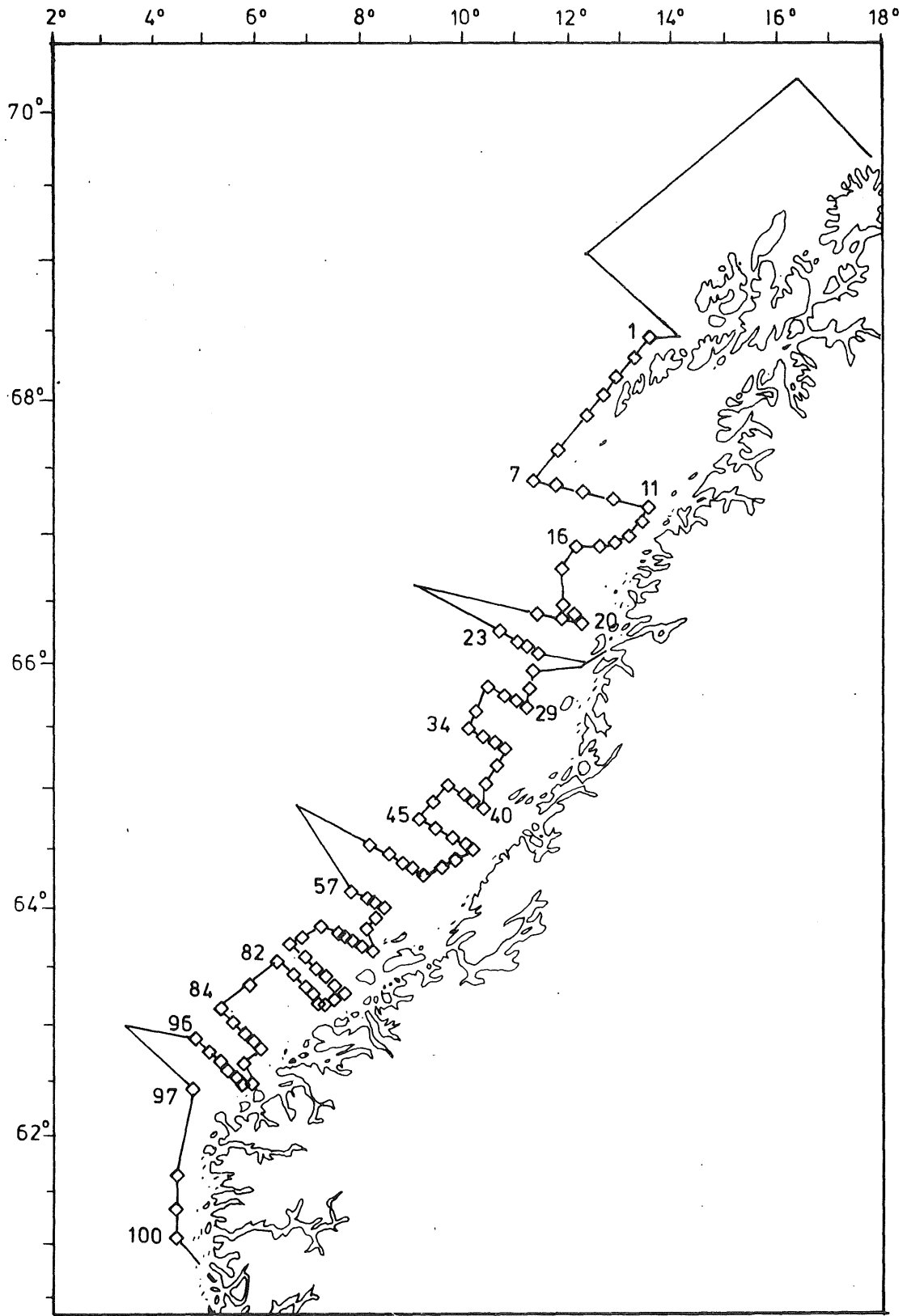


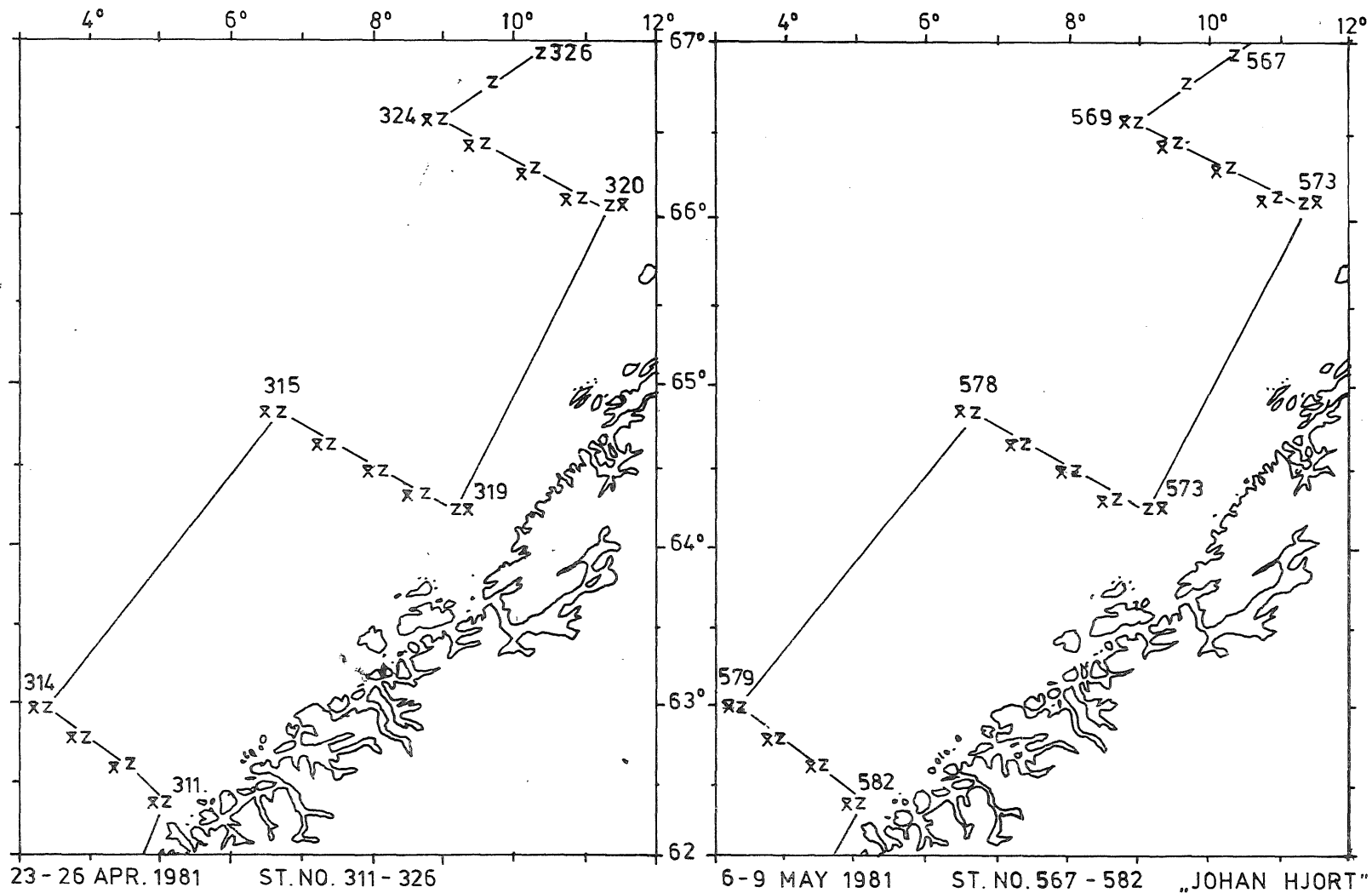


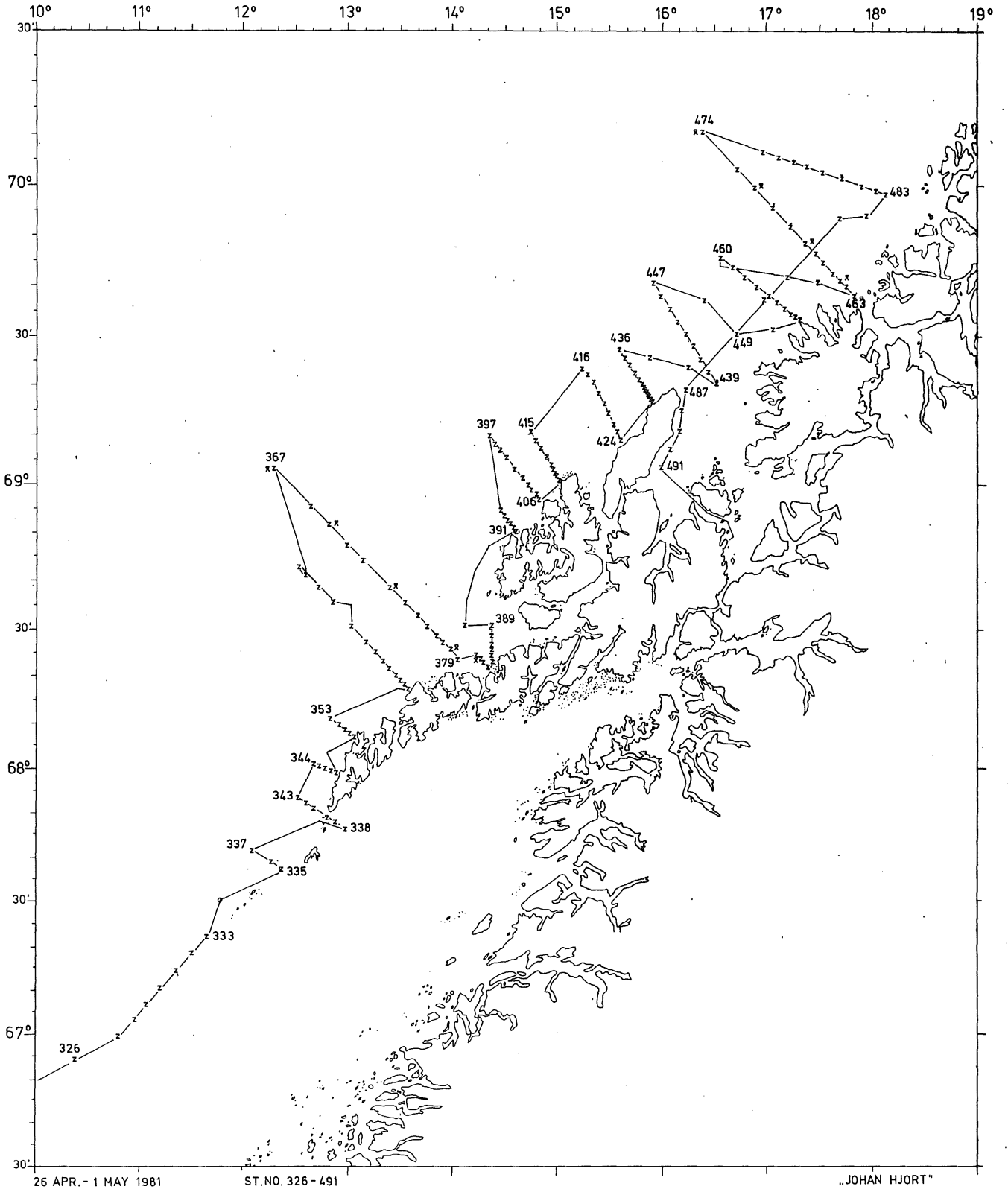
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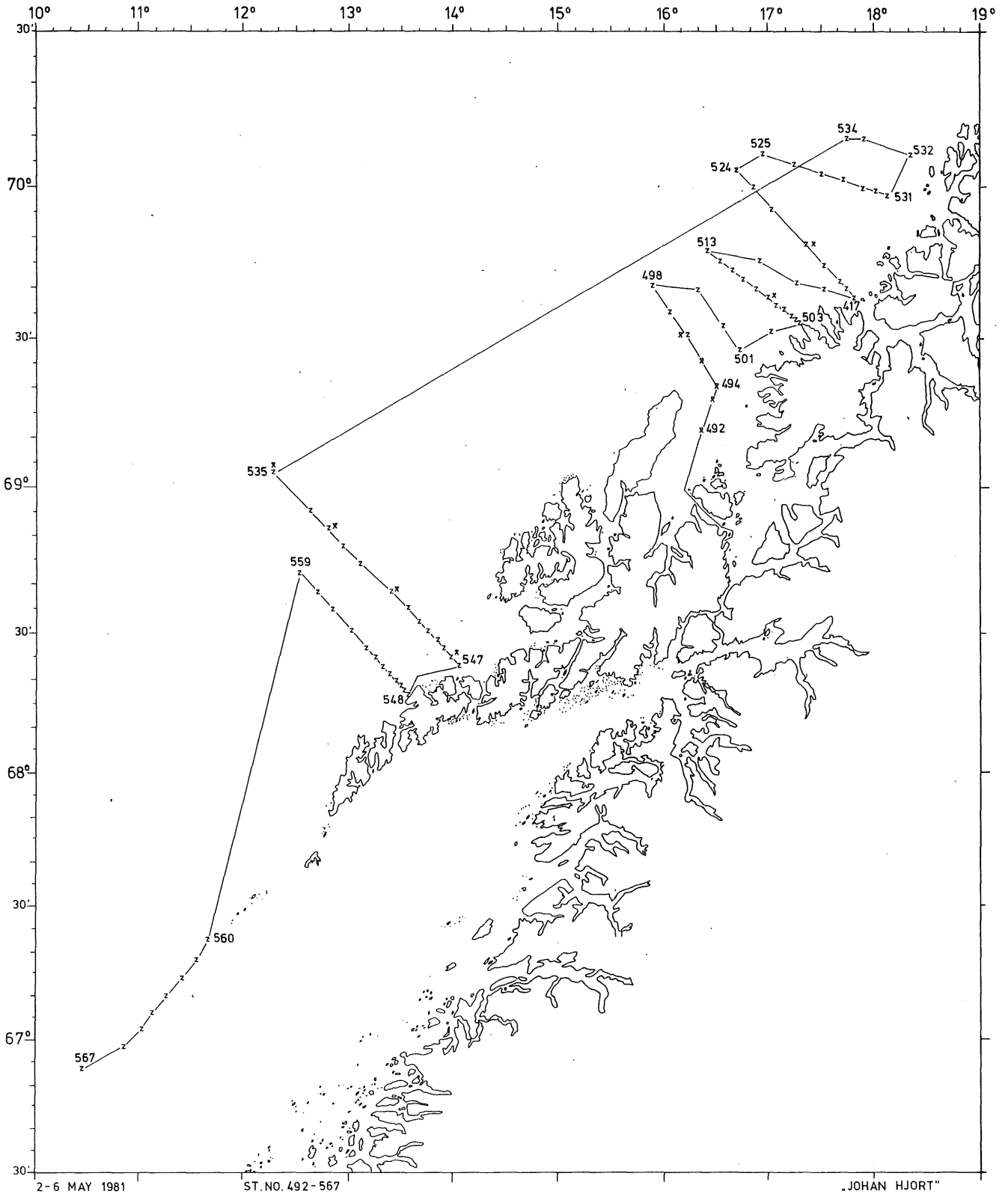
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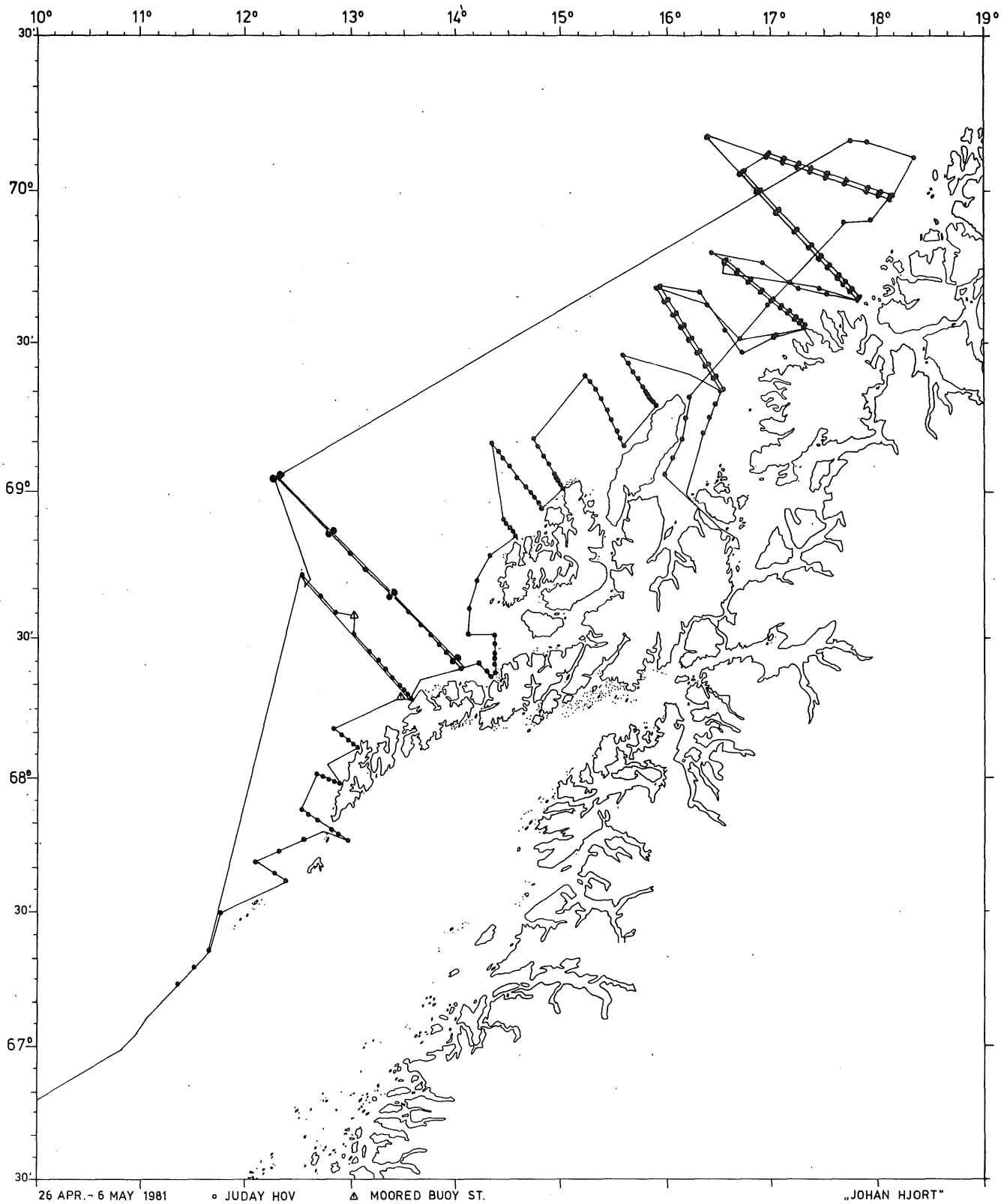


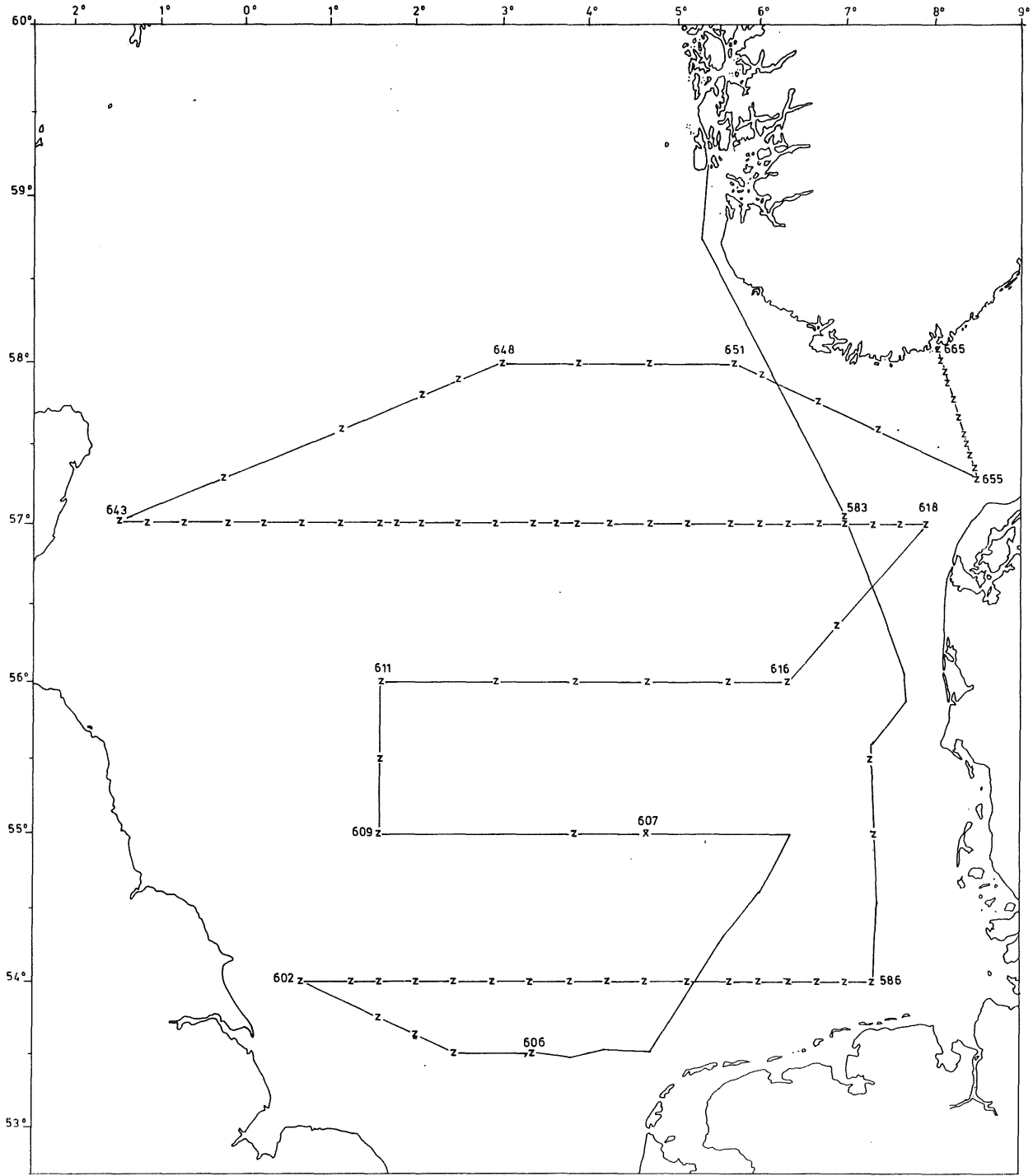








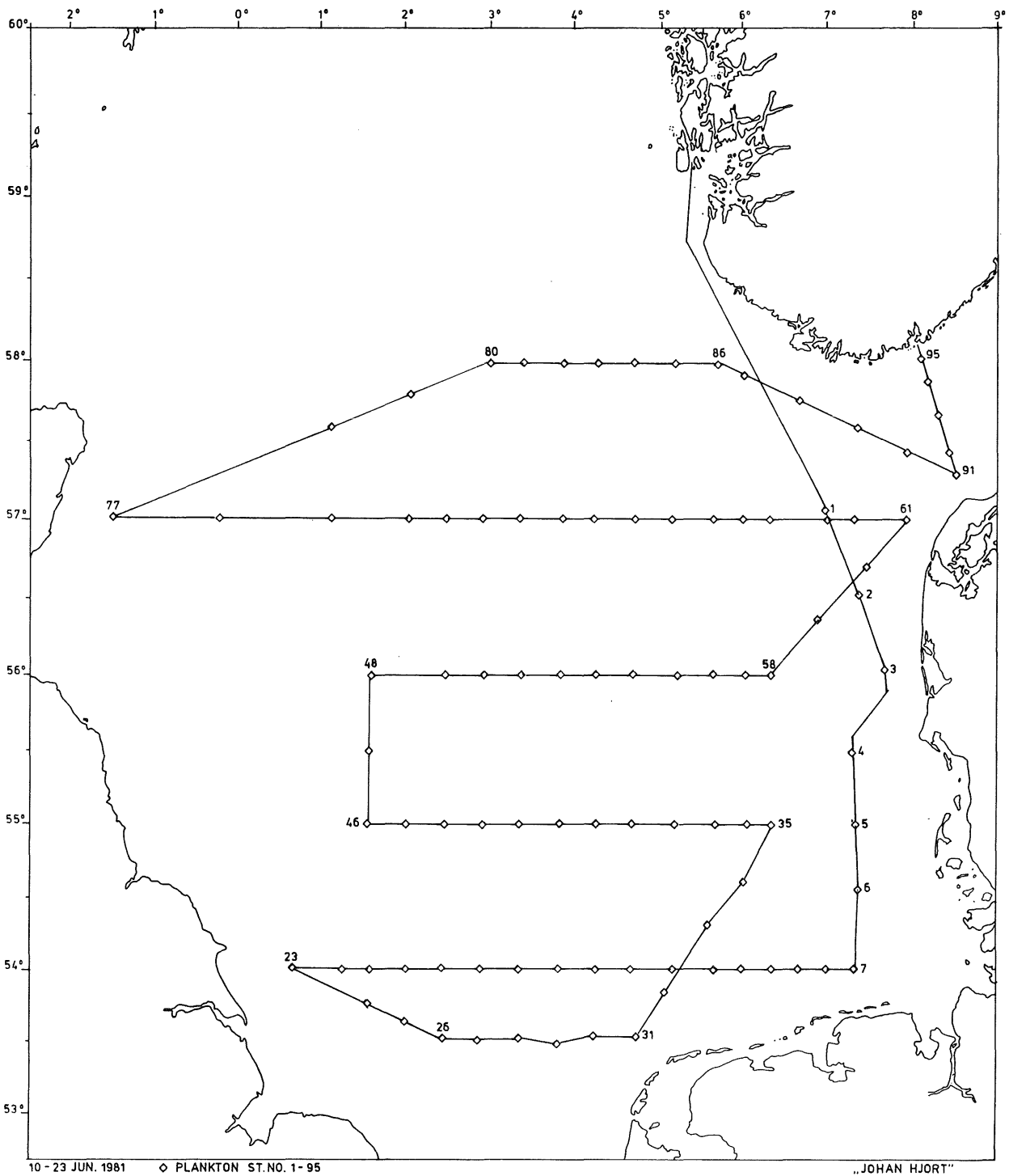


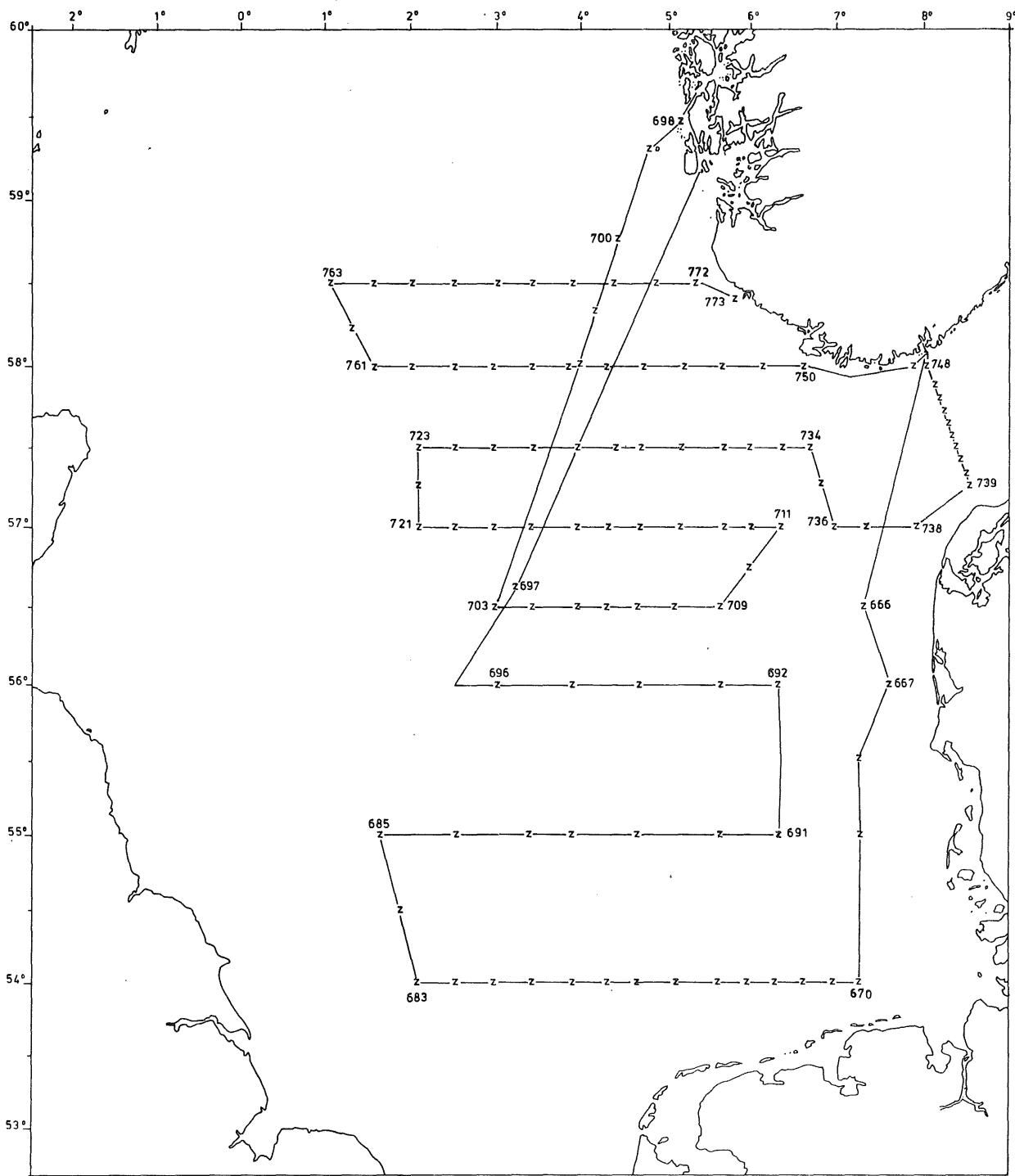


10 - 23 JUN. 1981

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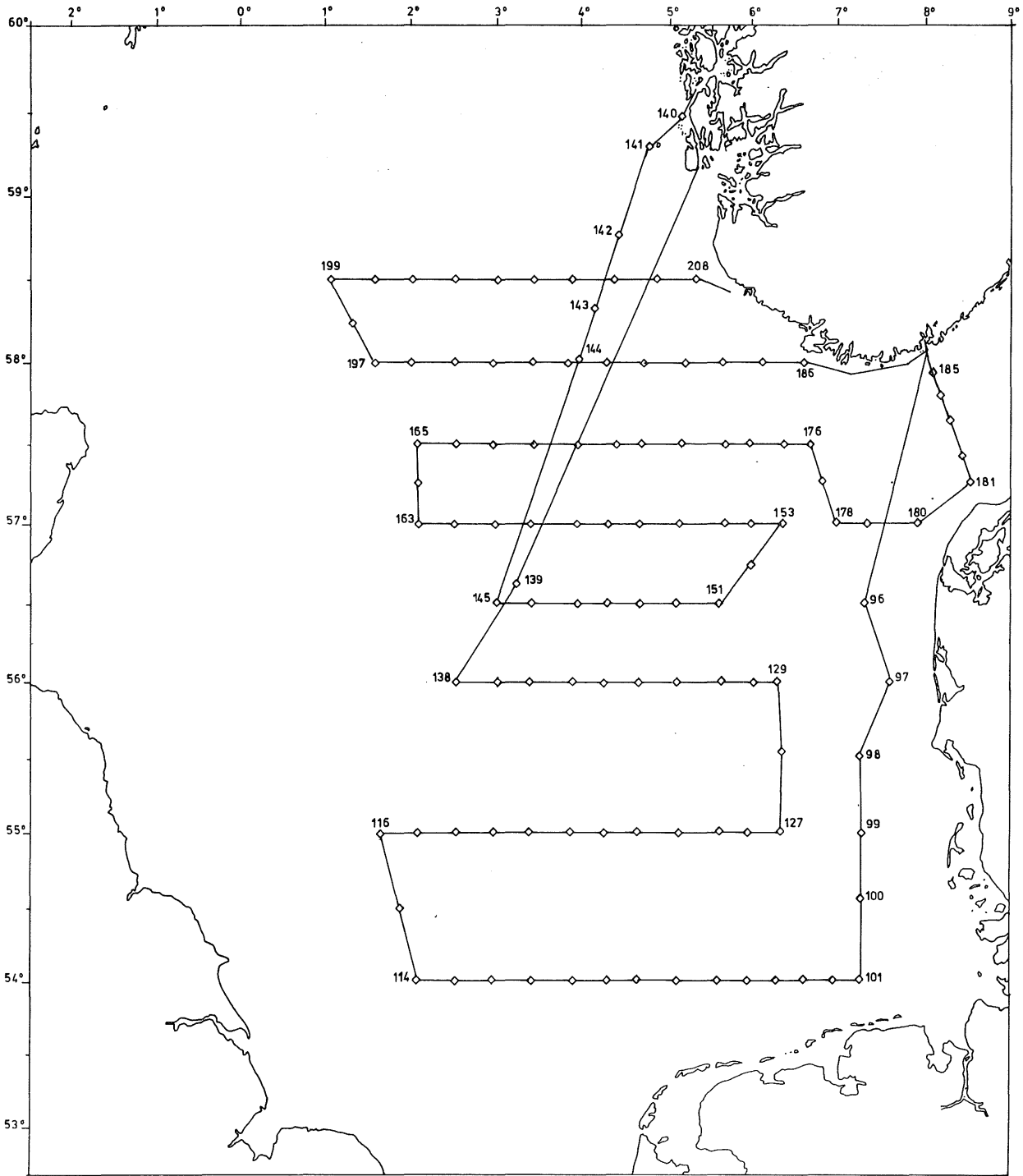
„ JOHAN HJORT ”

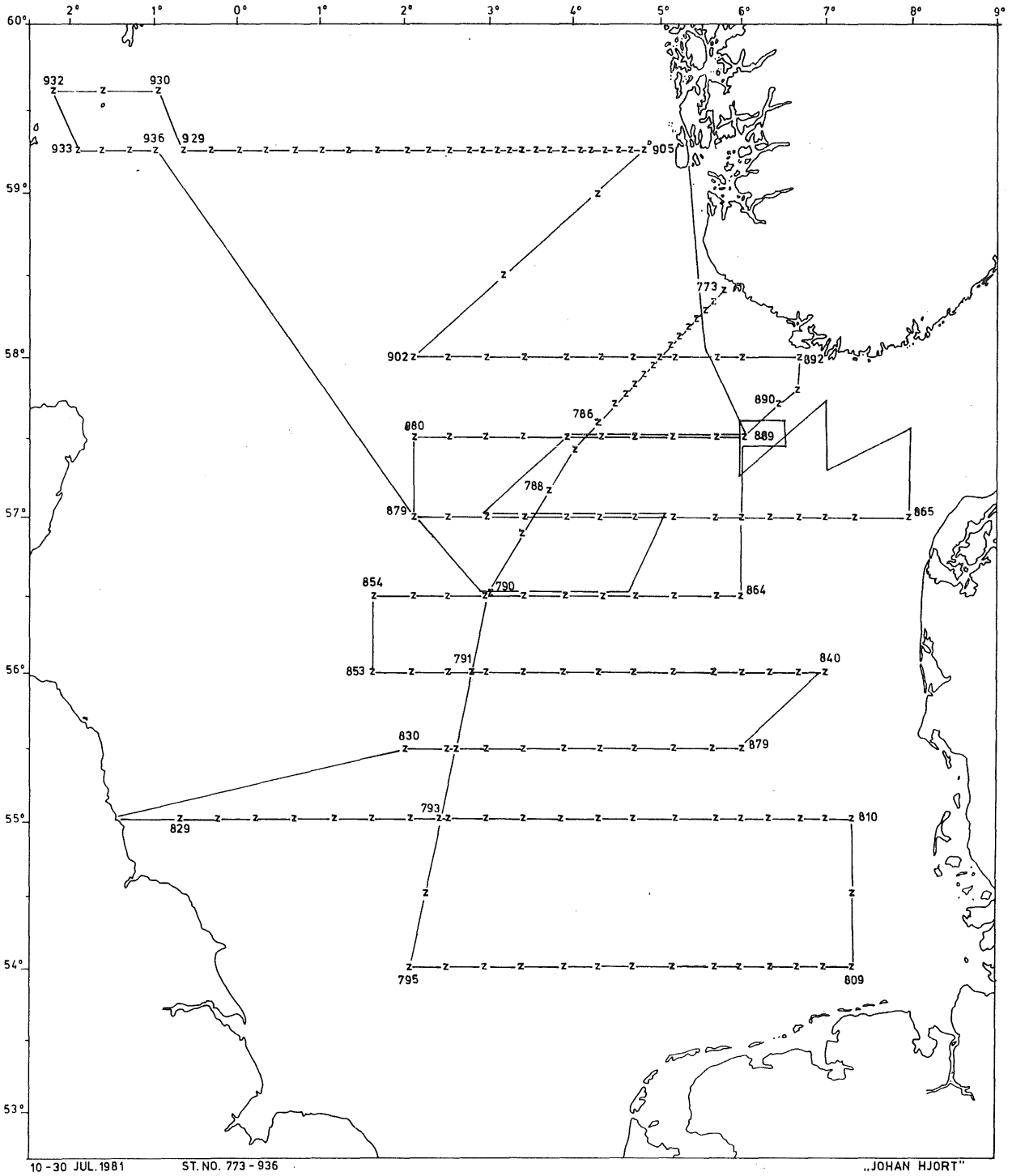


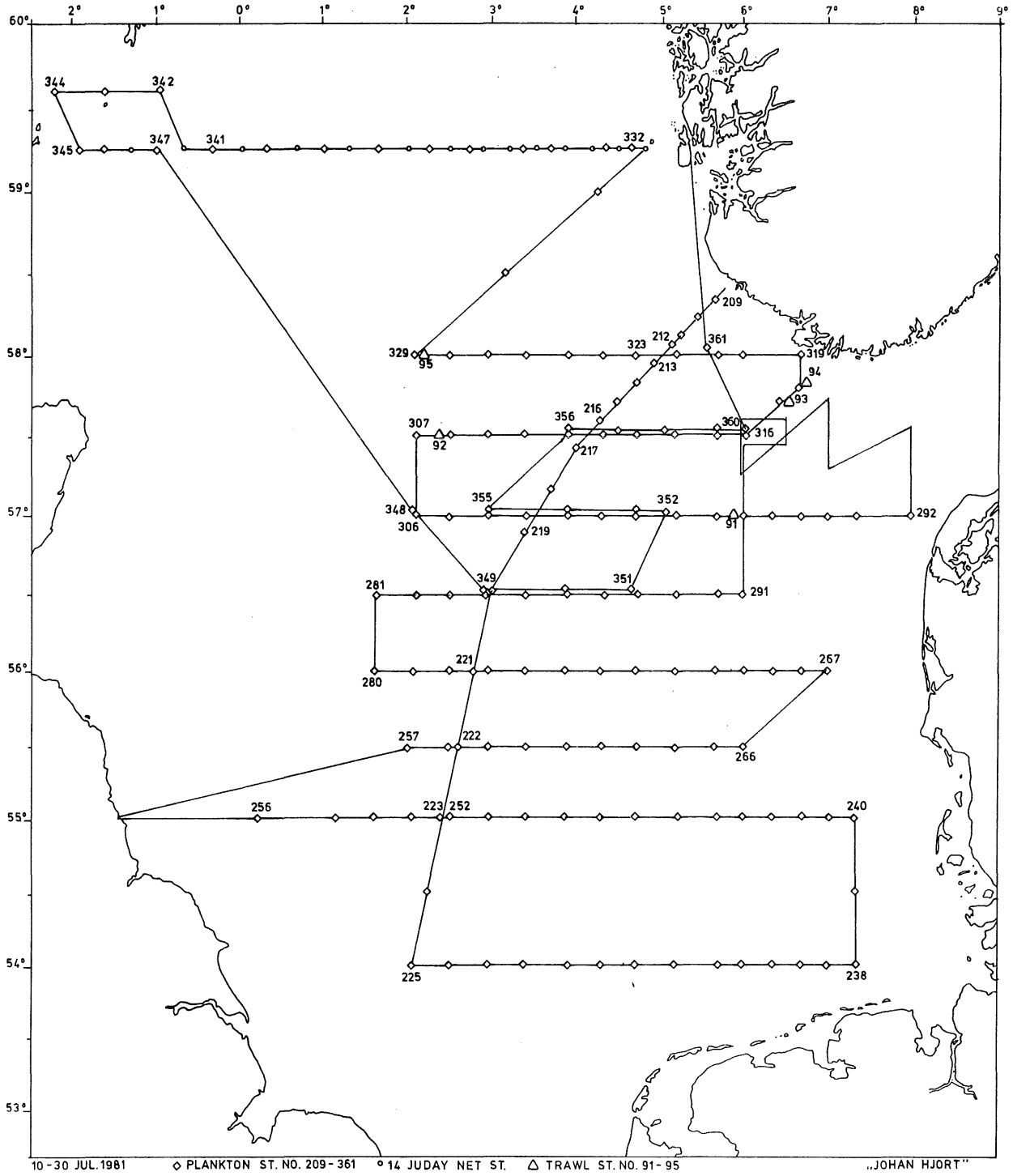


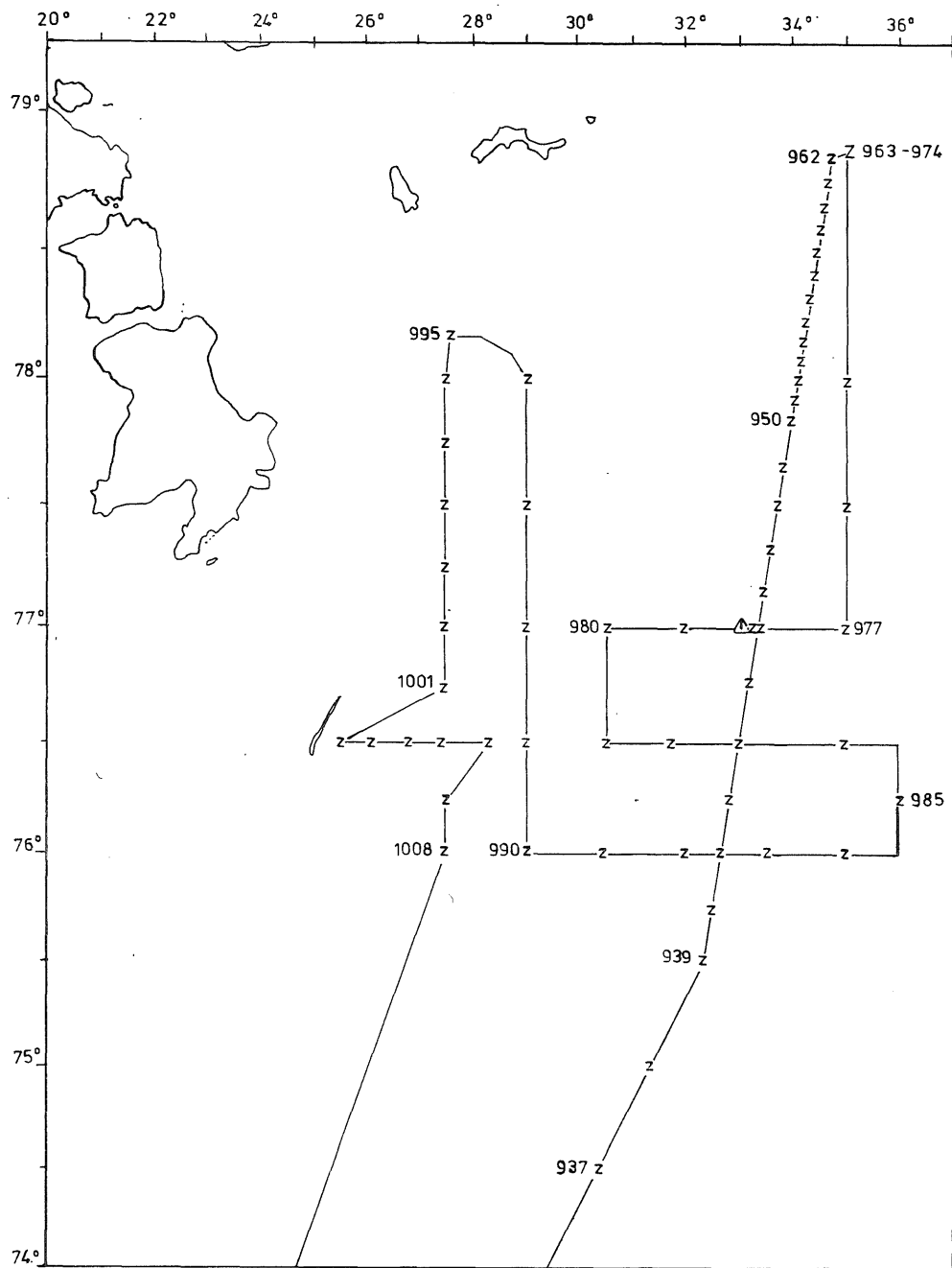
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„JOHAN HJORT“

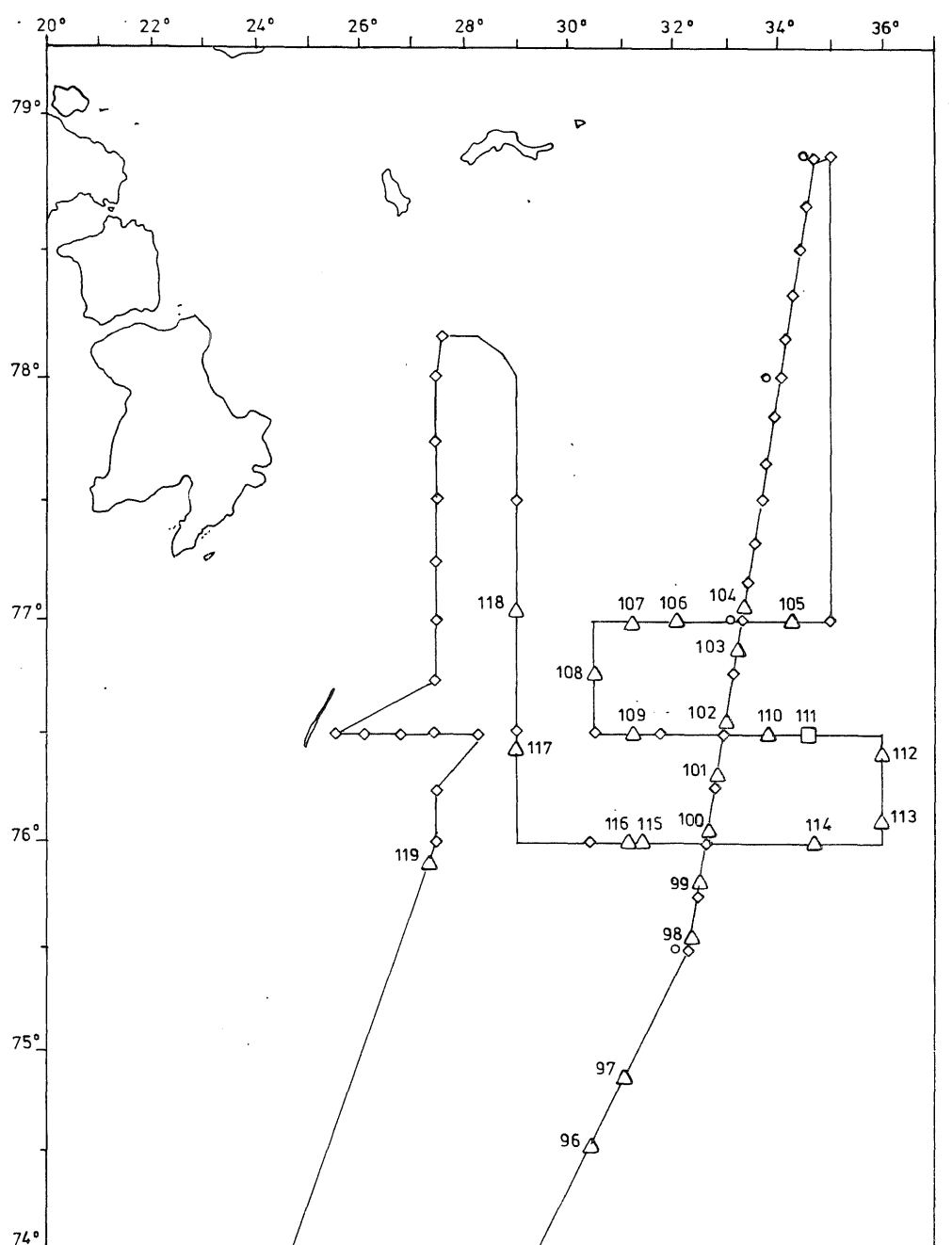






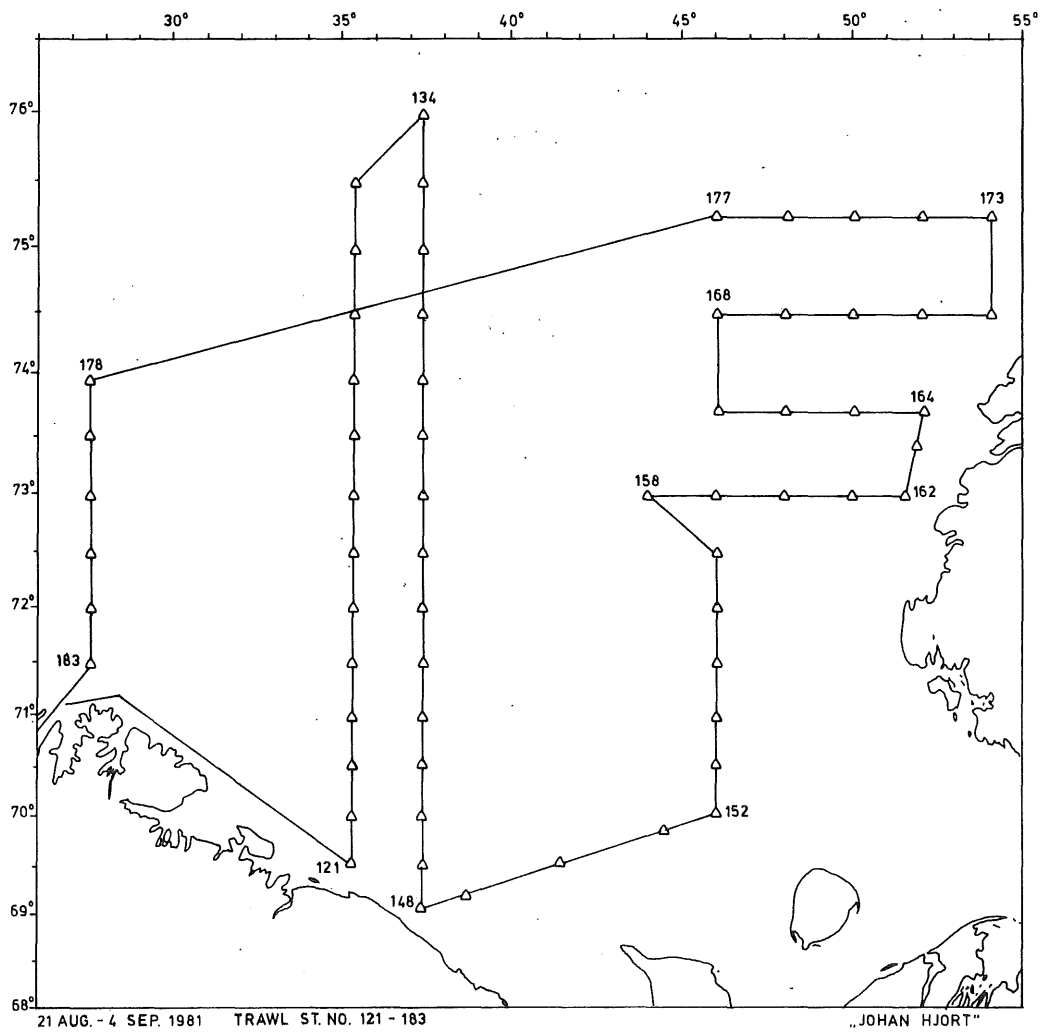
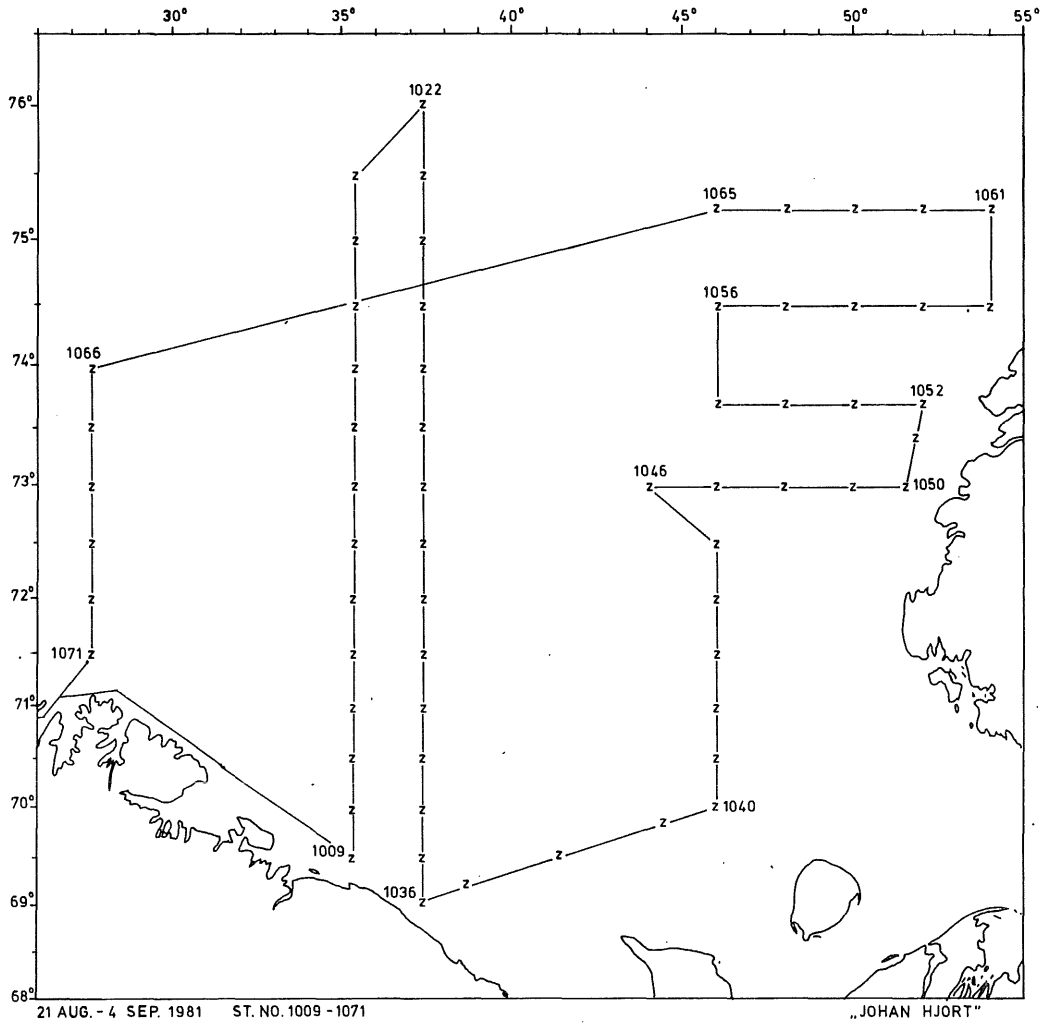


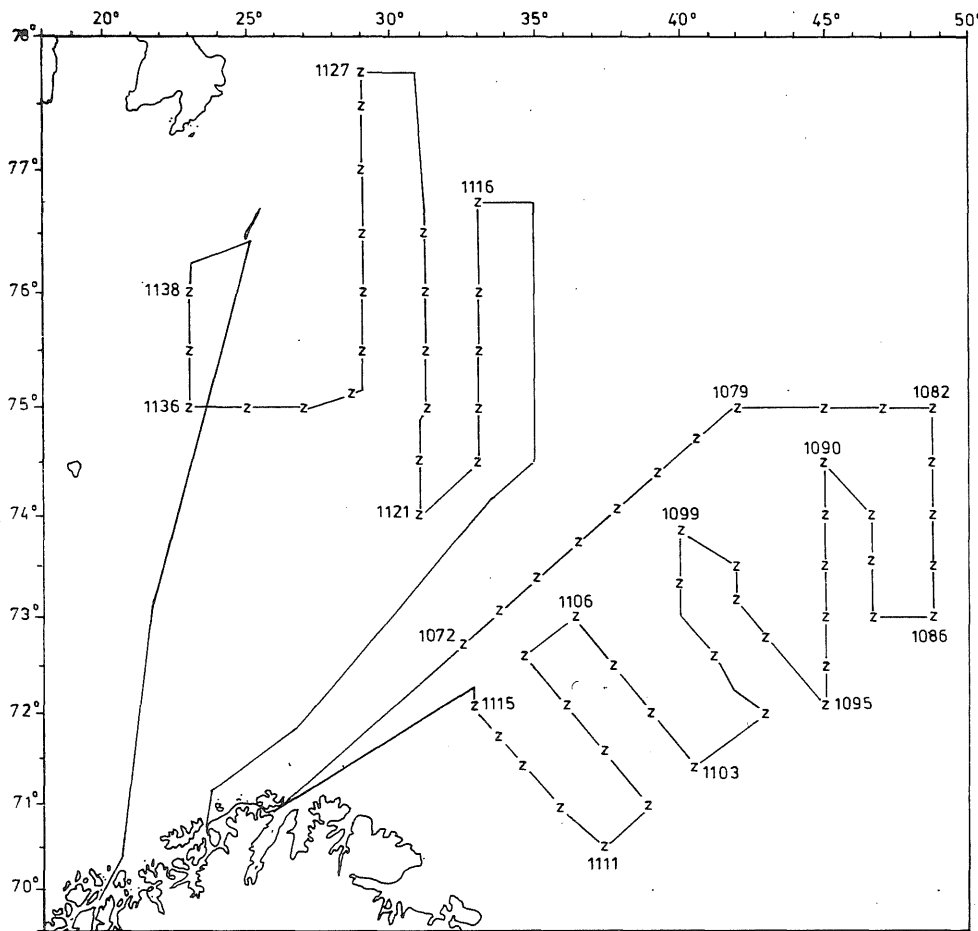
5-19 AUG. 1981 ST. NO. 937-1008  $\Delta$  MOORED BUOY ST.



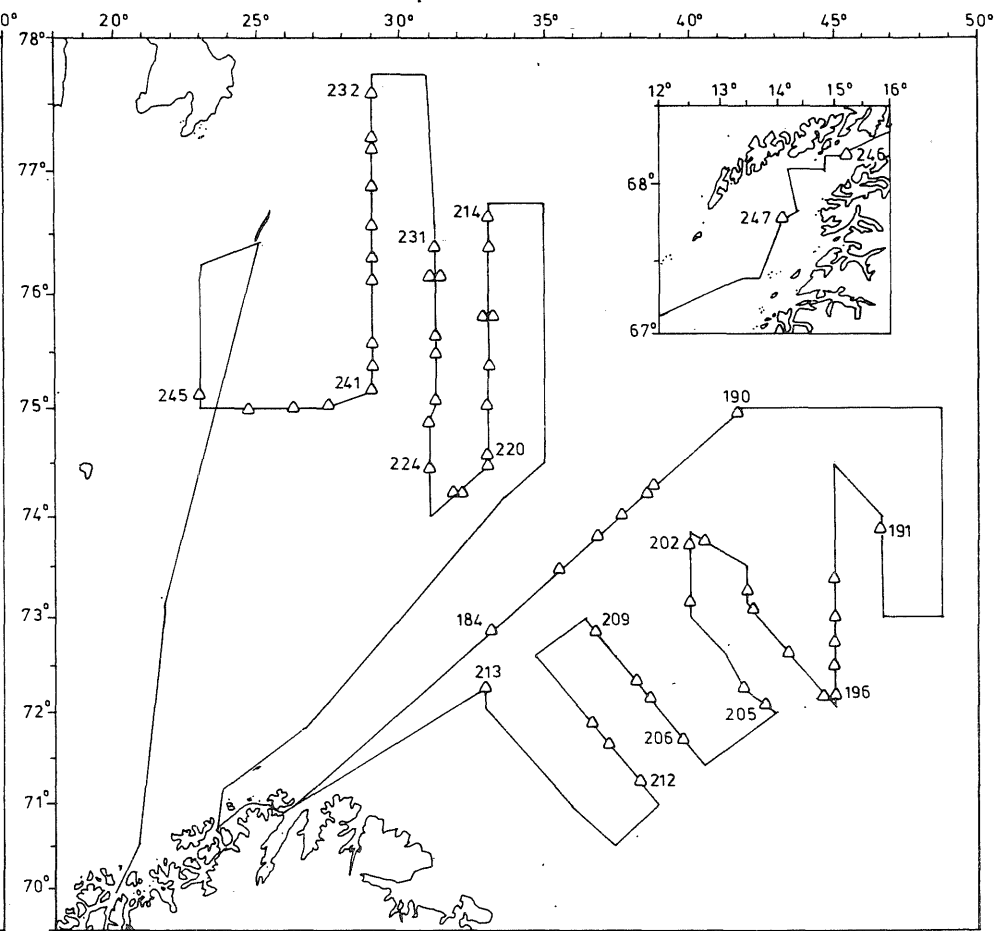
TRAWL ST. NO. 96-119  $\diamond$  41 PLANKTON ST.  $\circ$  ISAAC KID ST.  $\circ$  JOHAN HJORT



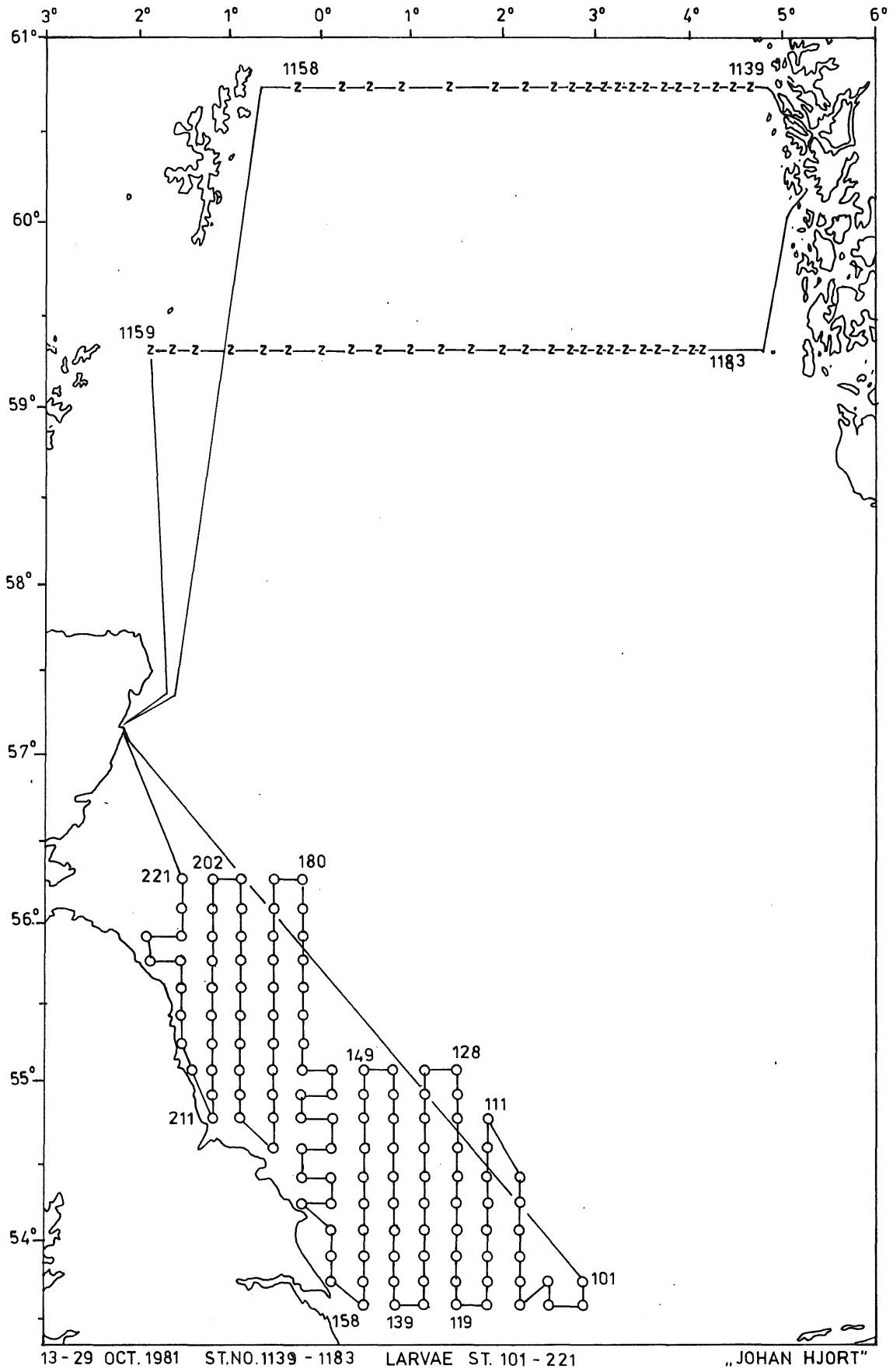


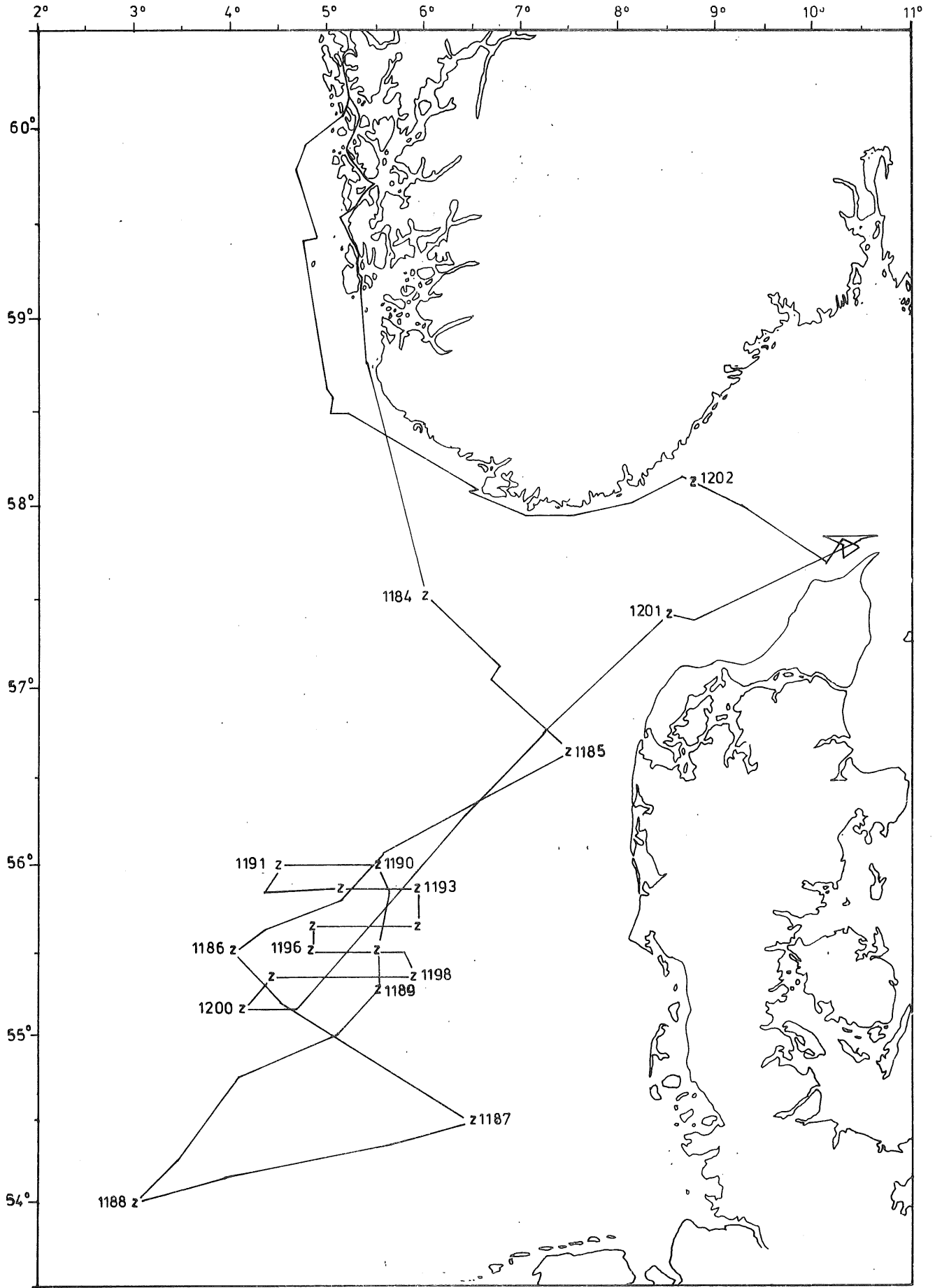


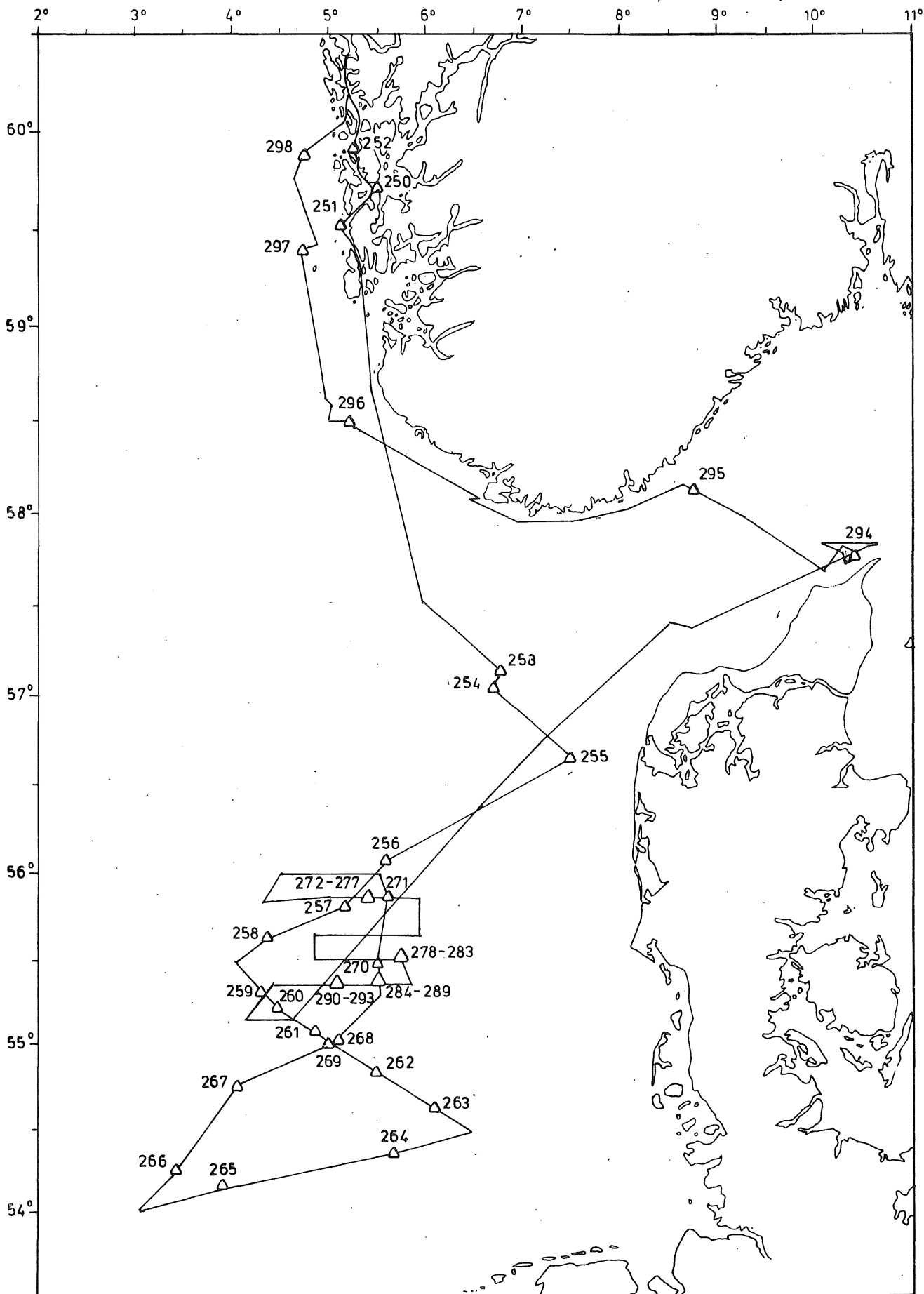
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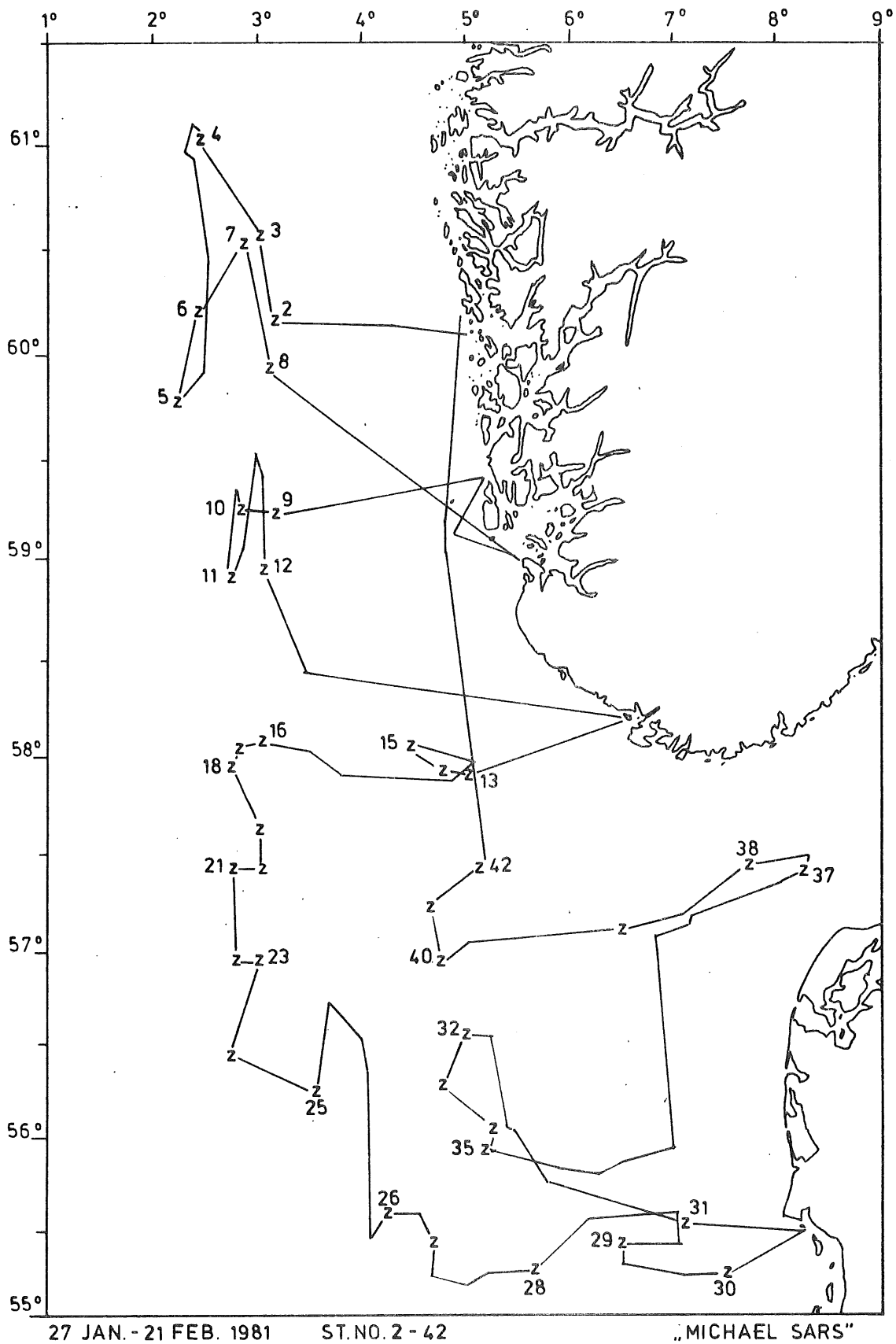


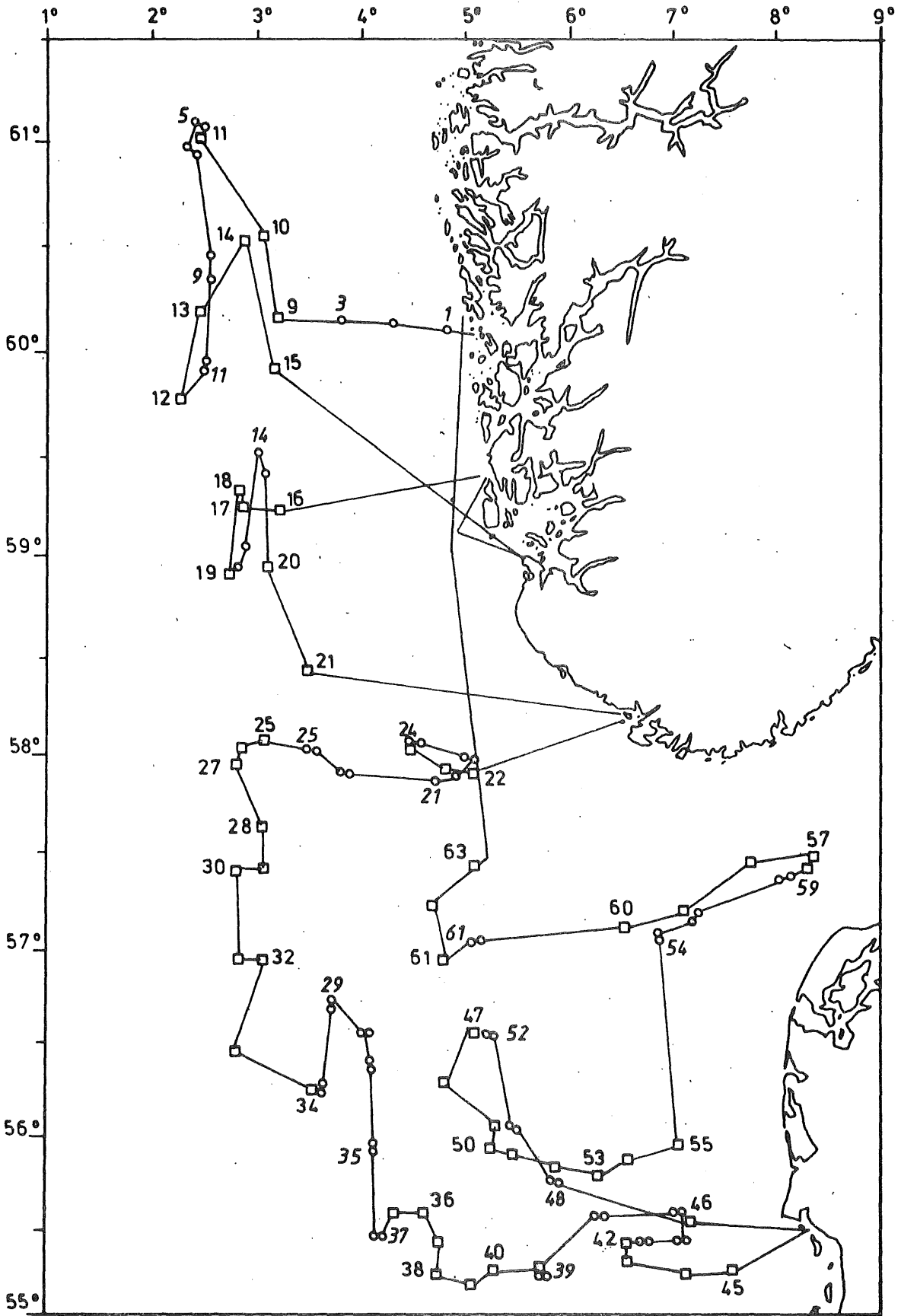




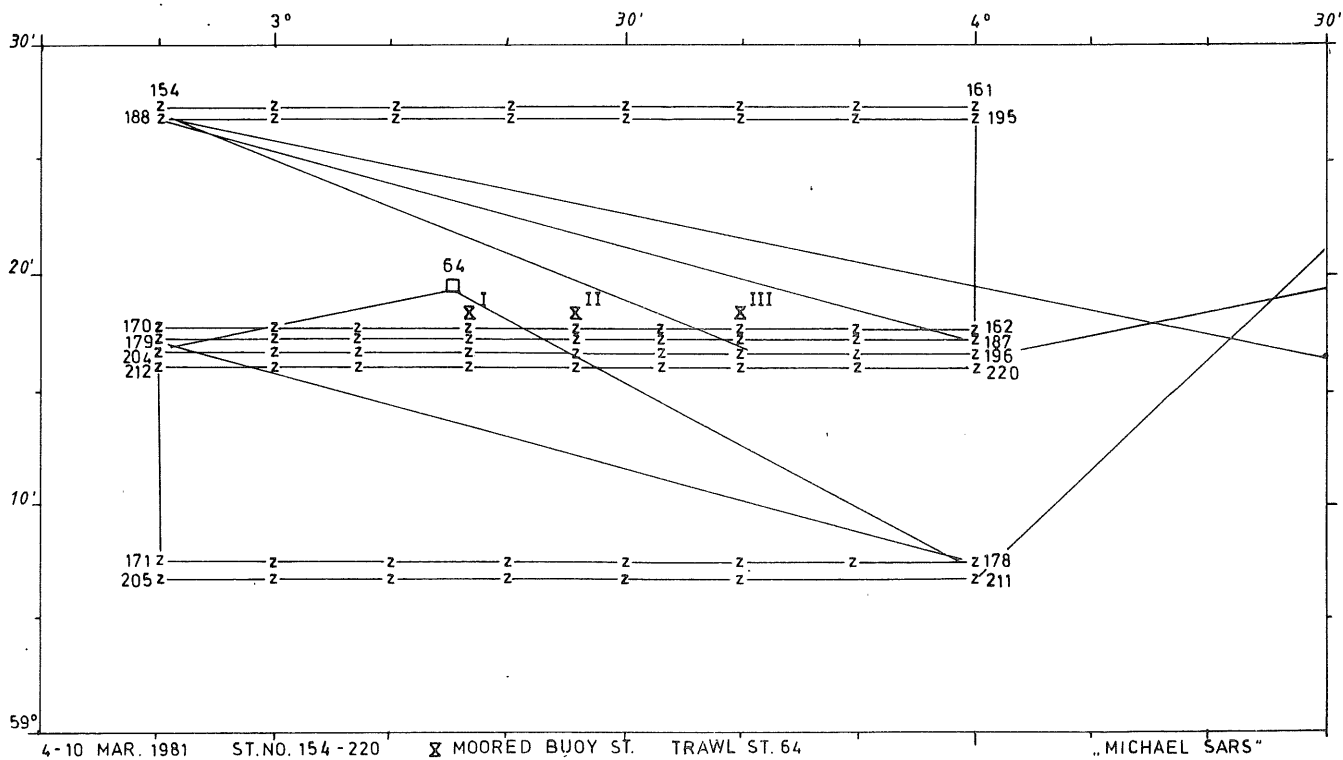
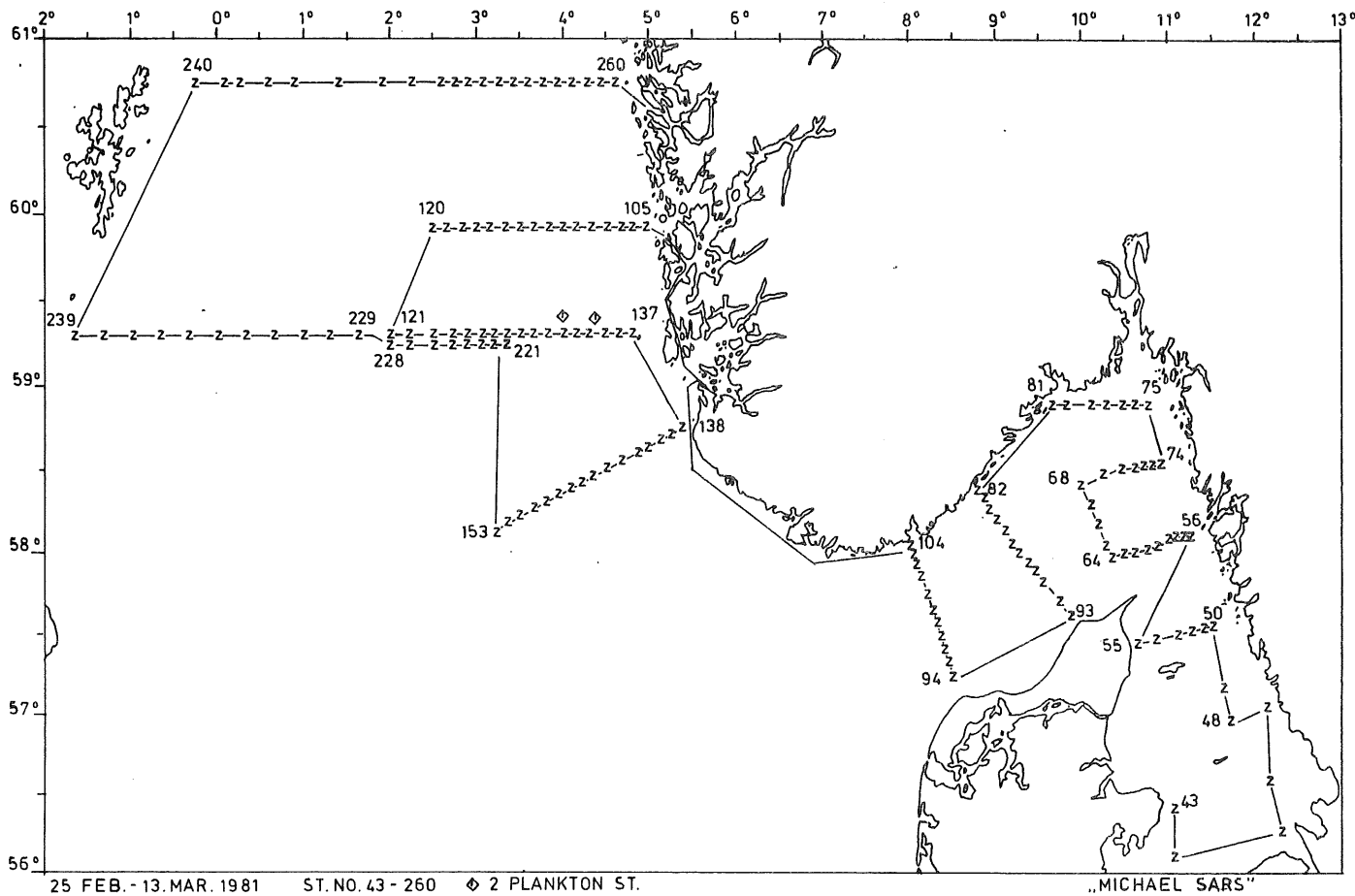
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„JOHAN HJORT“

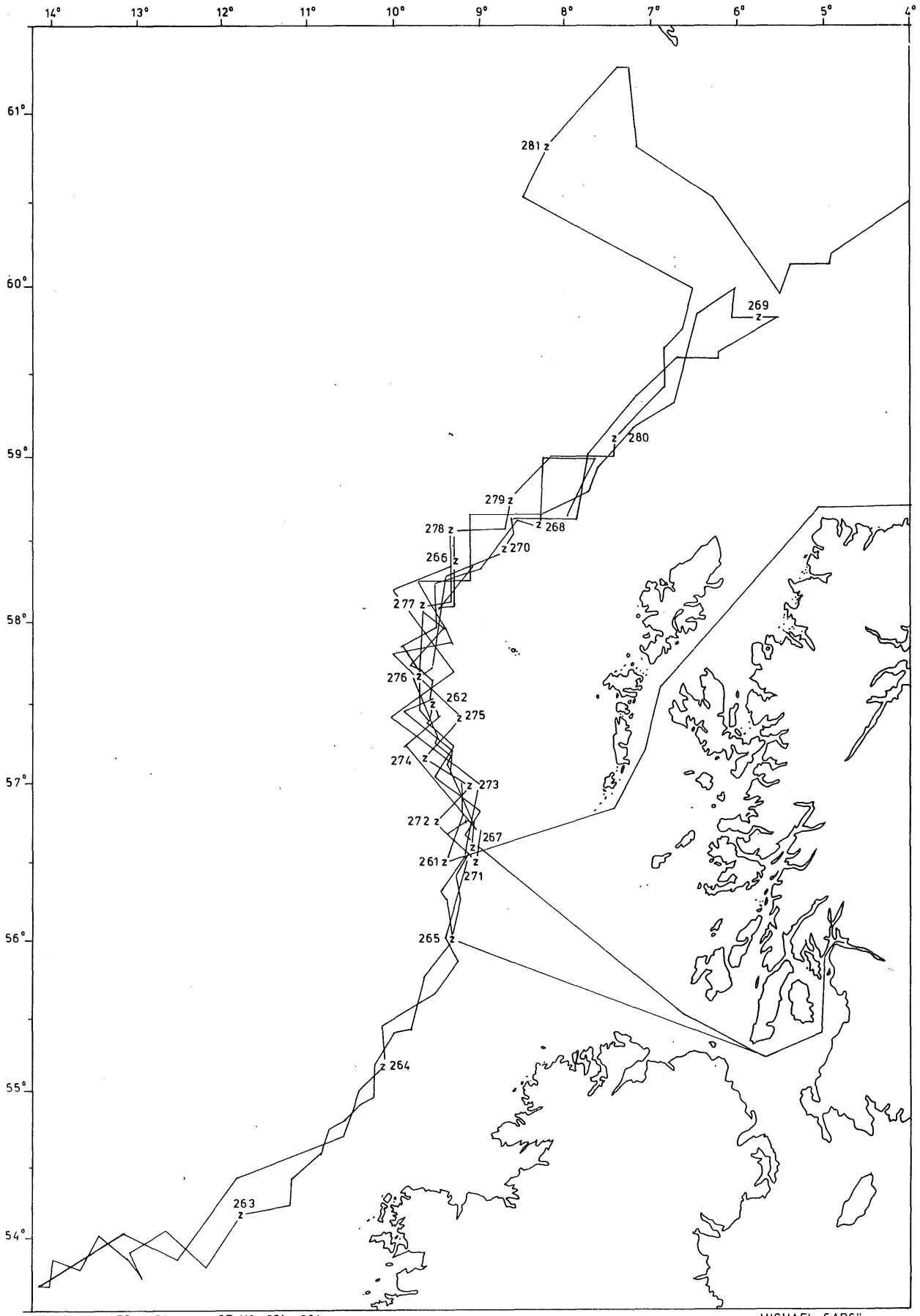




27 JAN. - 21 FEB. 1981 TRAWL ST. 9-63 ○ ISAAC KID 1-61 „MICHAEL SARS“



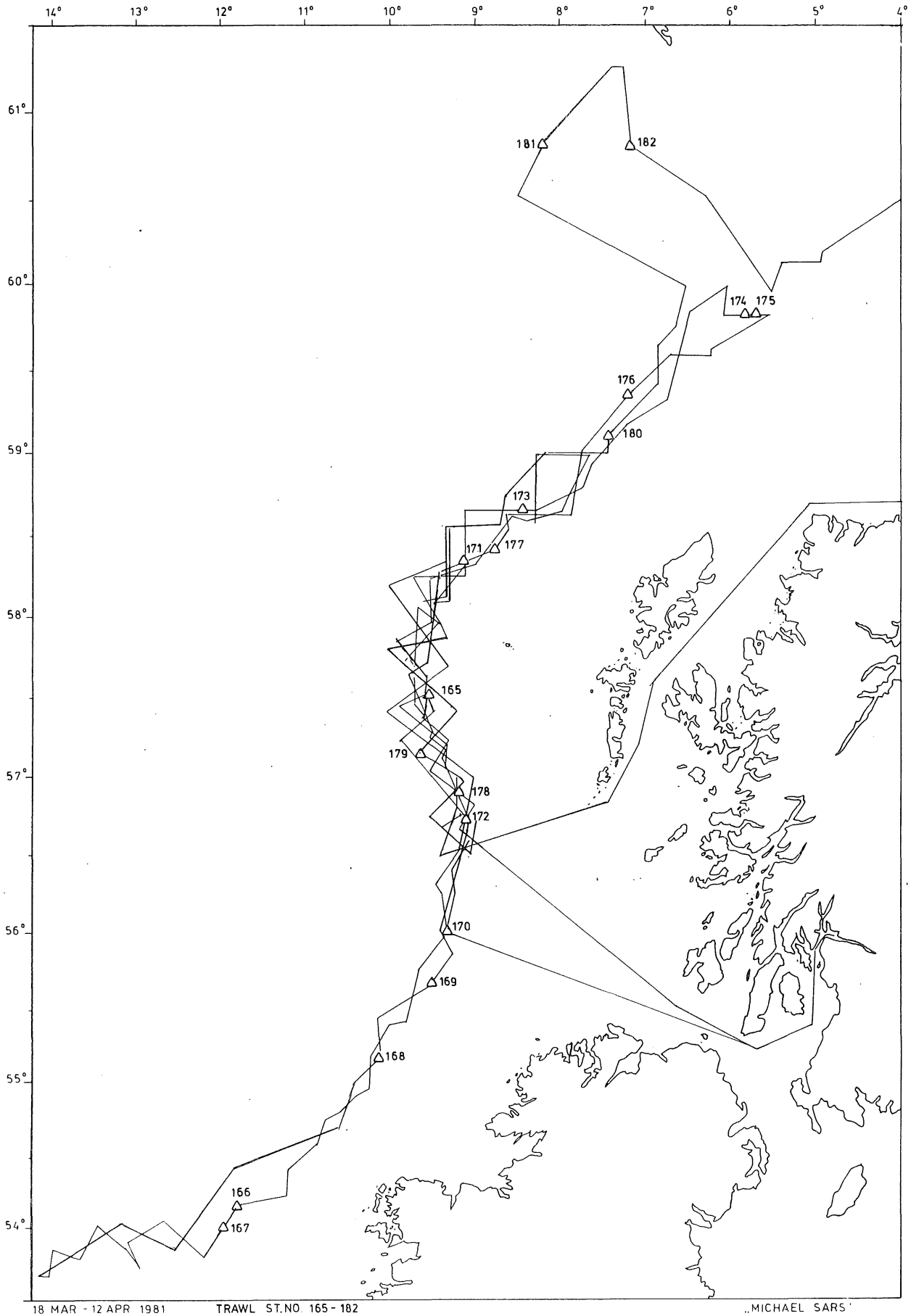




18 MAR. - 12 APR 1981

ST. NO. 261 - 281

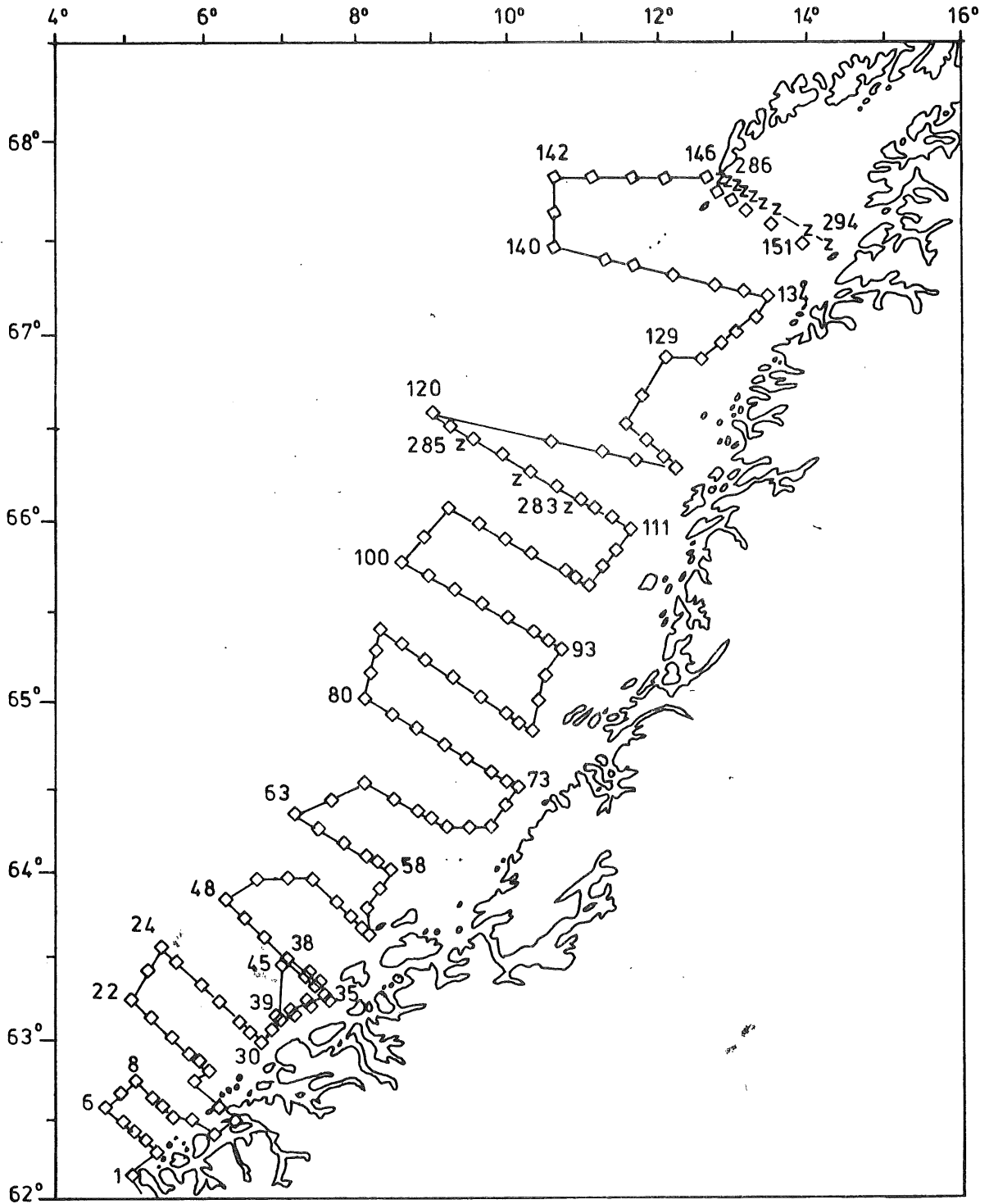
„MICHAEL SARS“



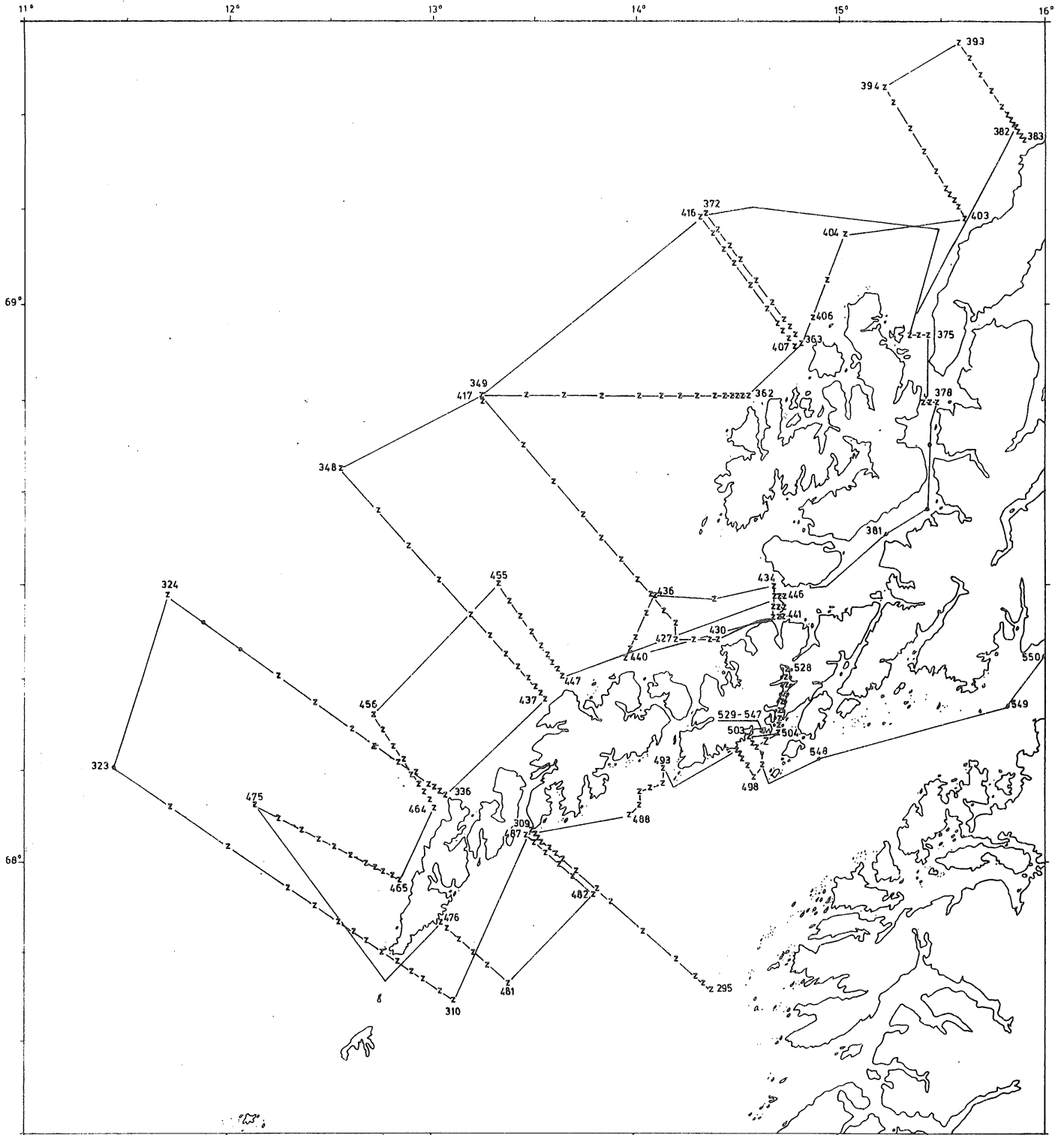
18 MAR - 12 APR 1981

TRAWL ST.NO. 165 - 182

..MICHAEL SARS



23-29 APR. 1981 ST. NO. 283 - 294 ◊ 151 PLANKTON ST. „MICHAEL SARs”

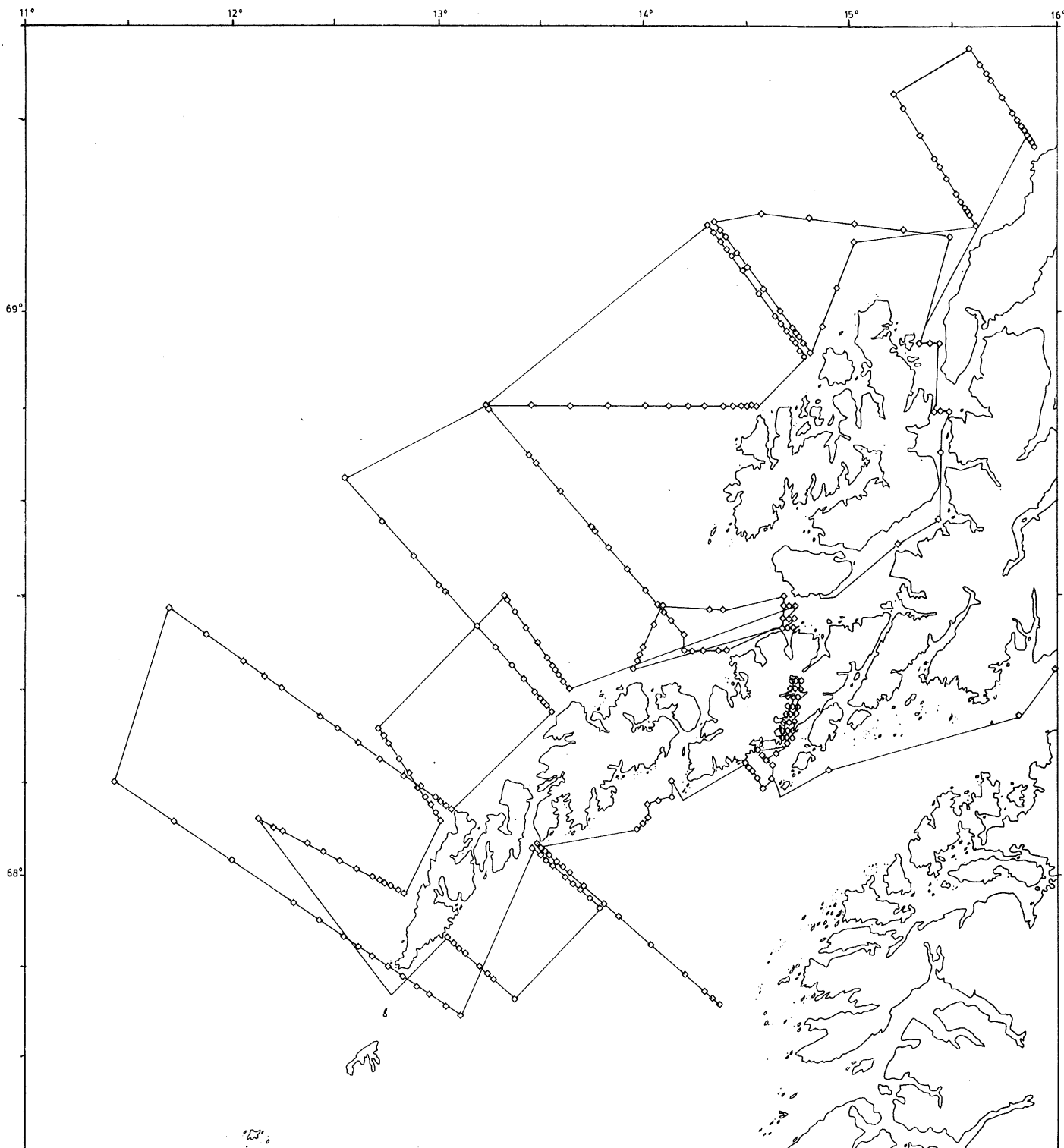


10 APR - 10 MAY 1981

ST. NO. 295-547

• JUDAY HOV

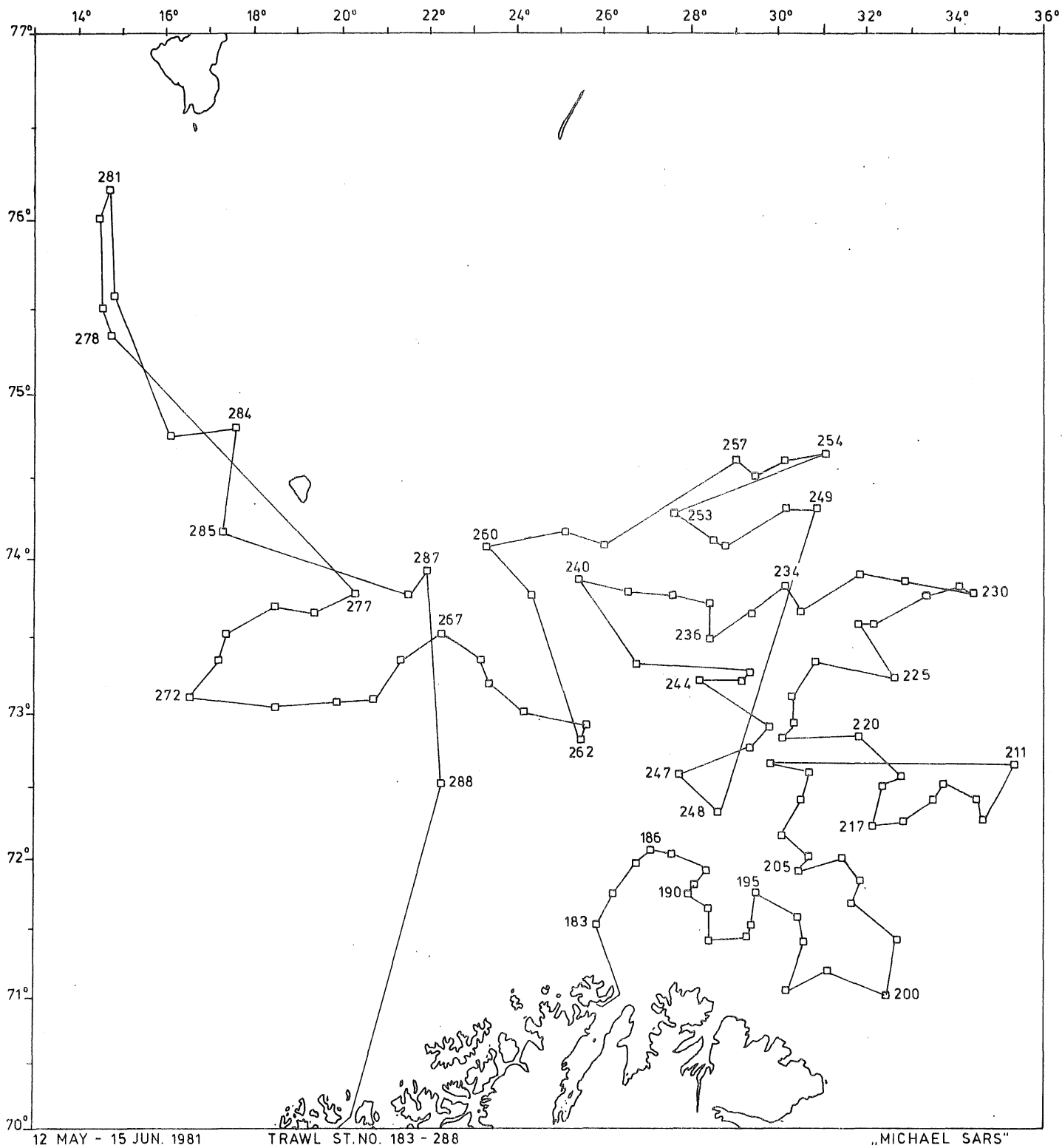
„MICHAEL SARS“

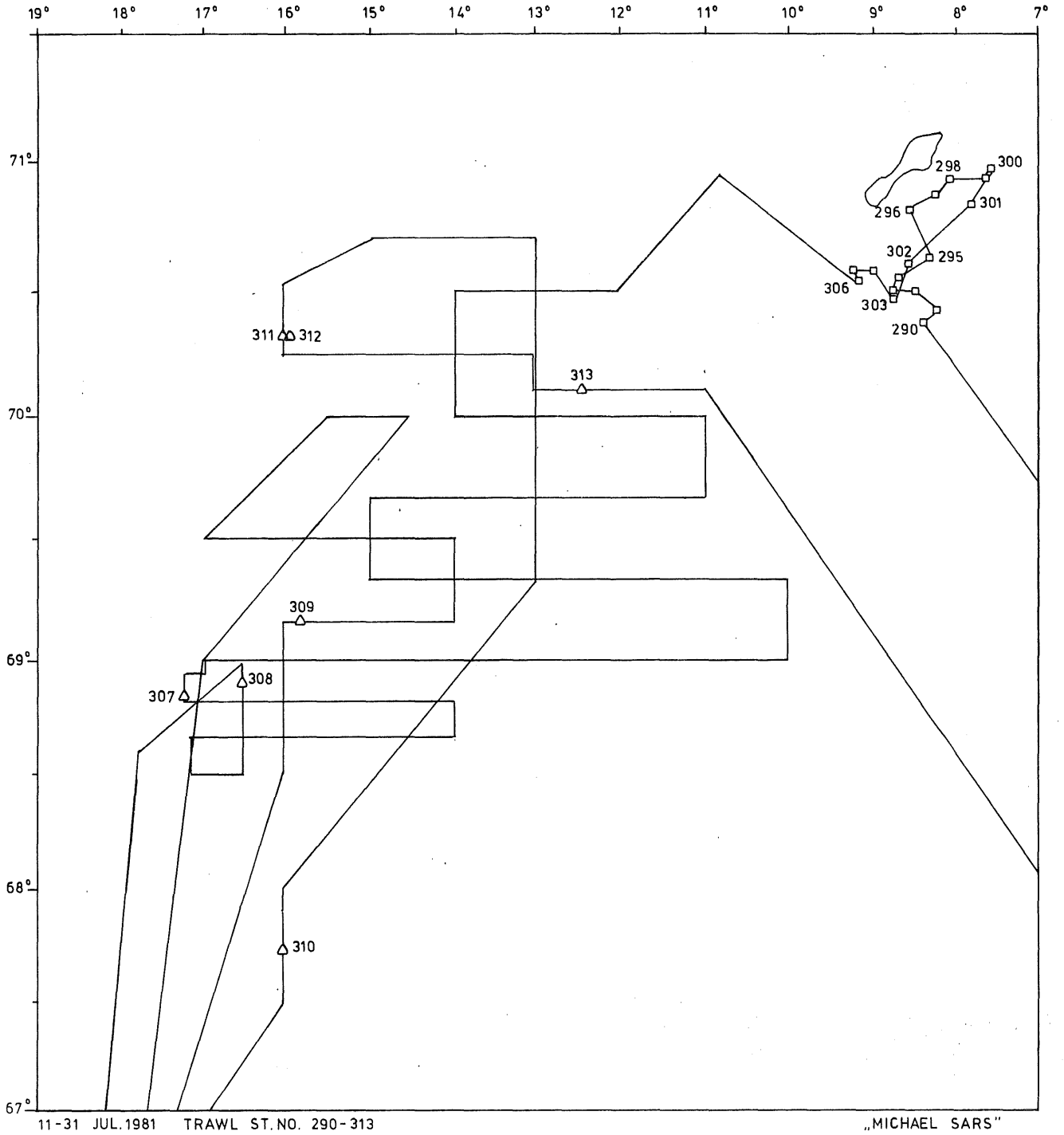


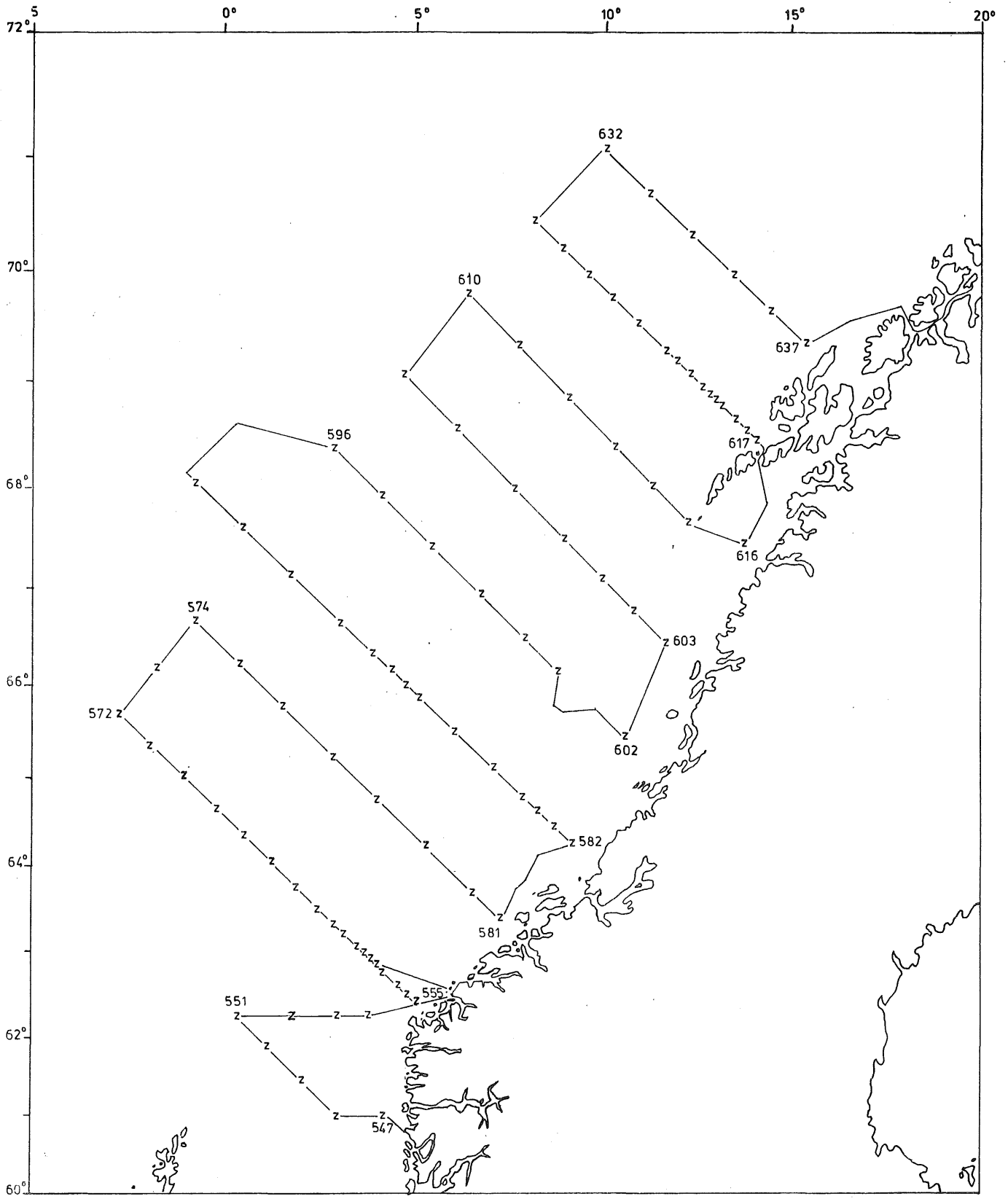
30 APR - 10 MAY 1981

◇ PLANKTON ST. 274

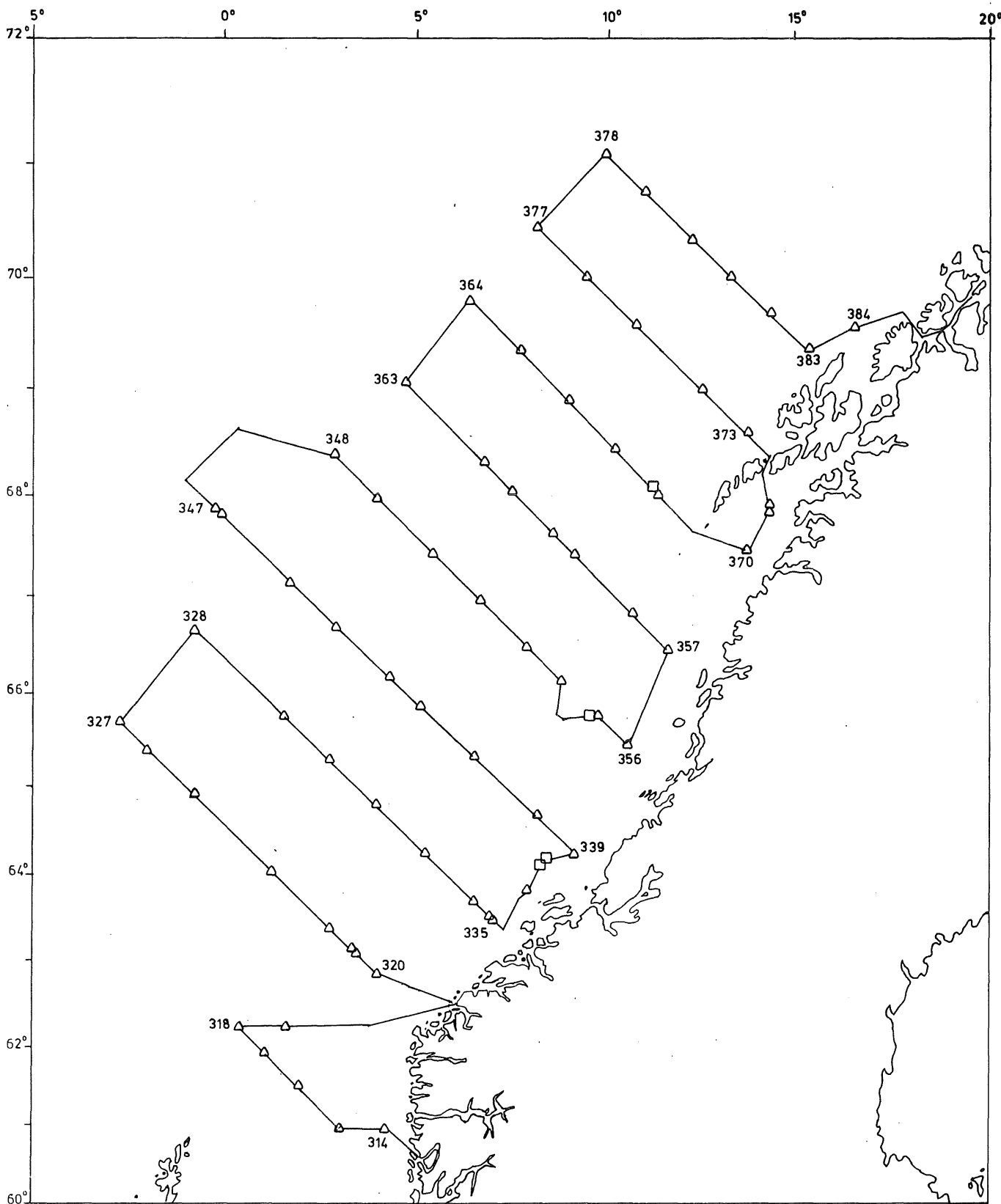
„MICHAEL SARS“







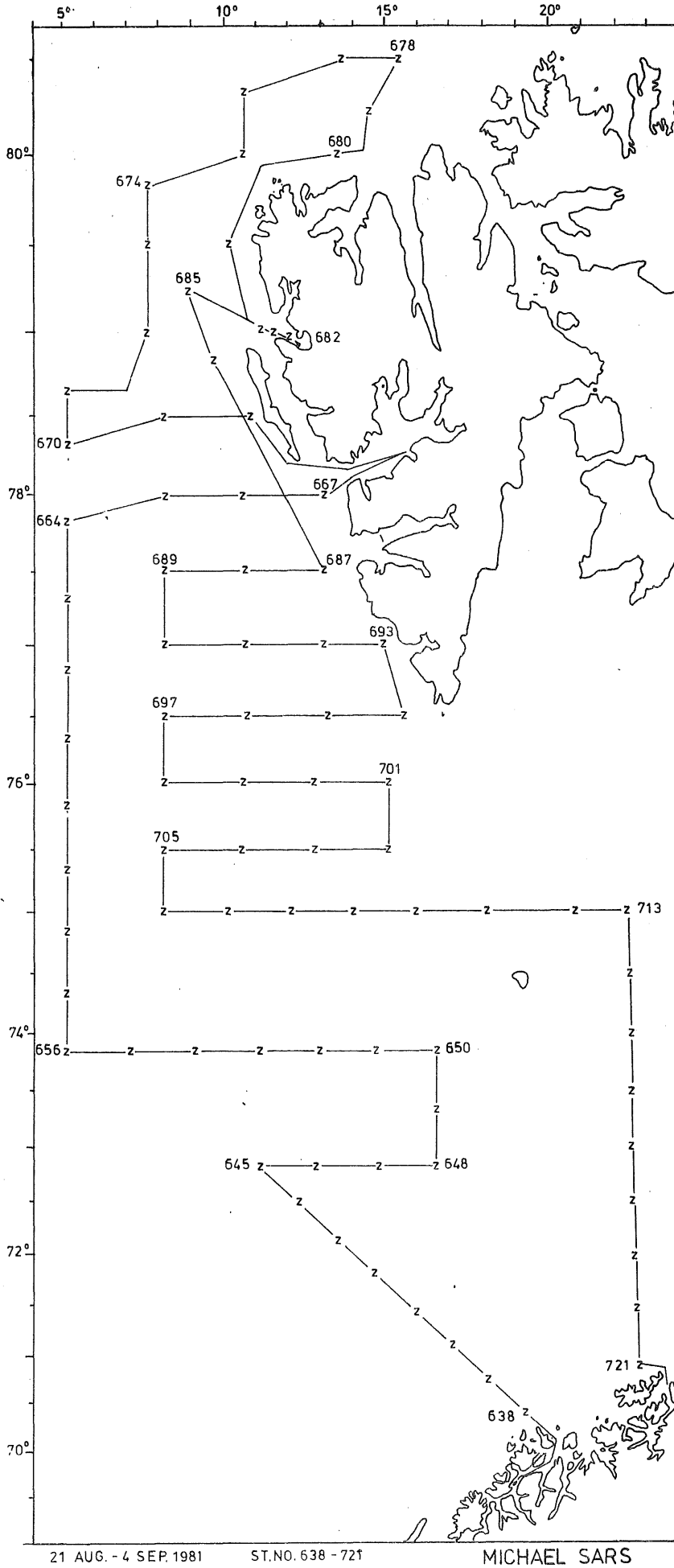


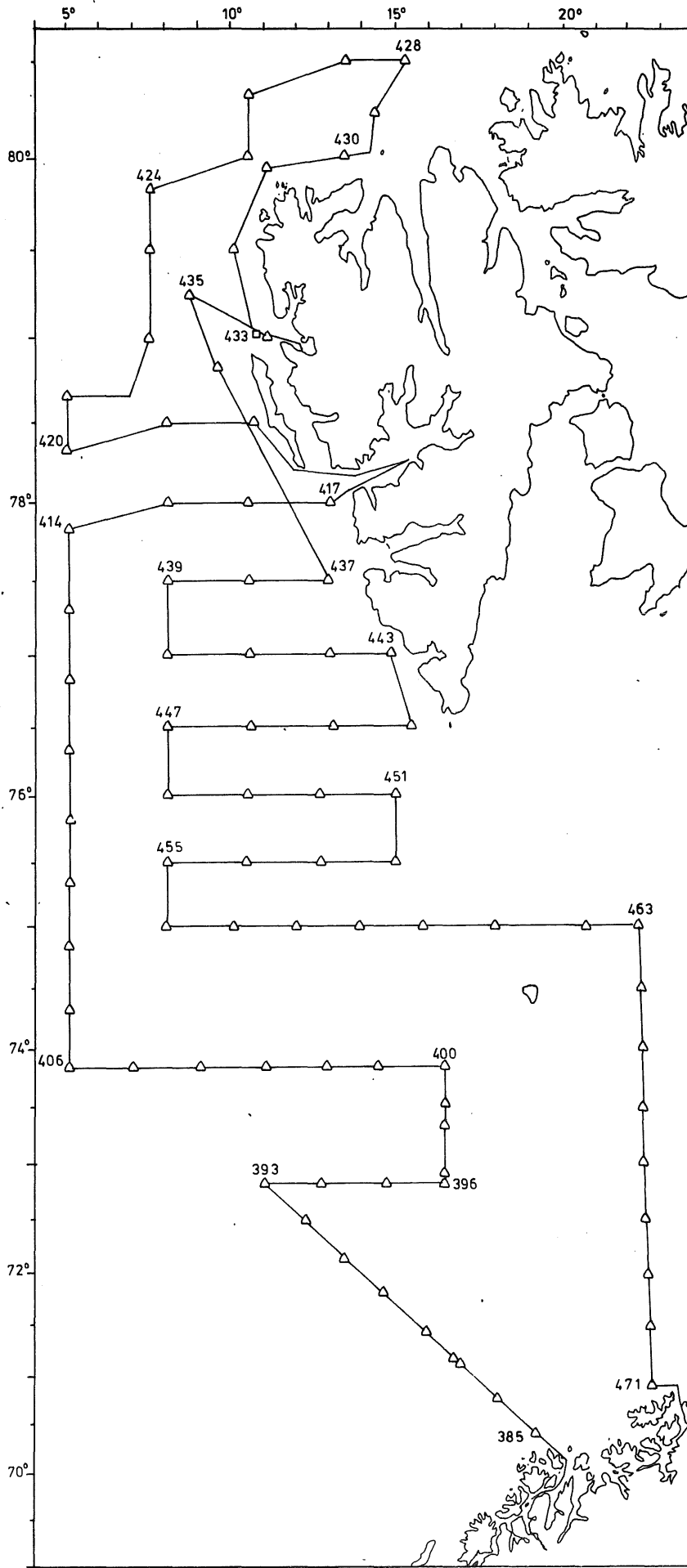


2 - 19 AUG. 1981

TRAWL ST. NO. 314 - 384

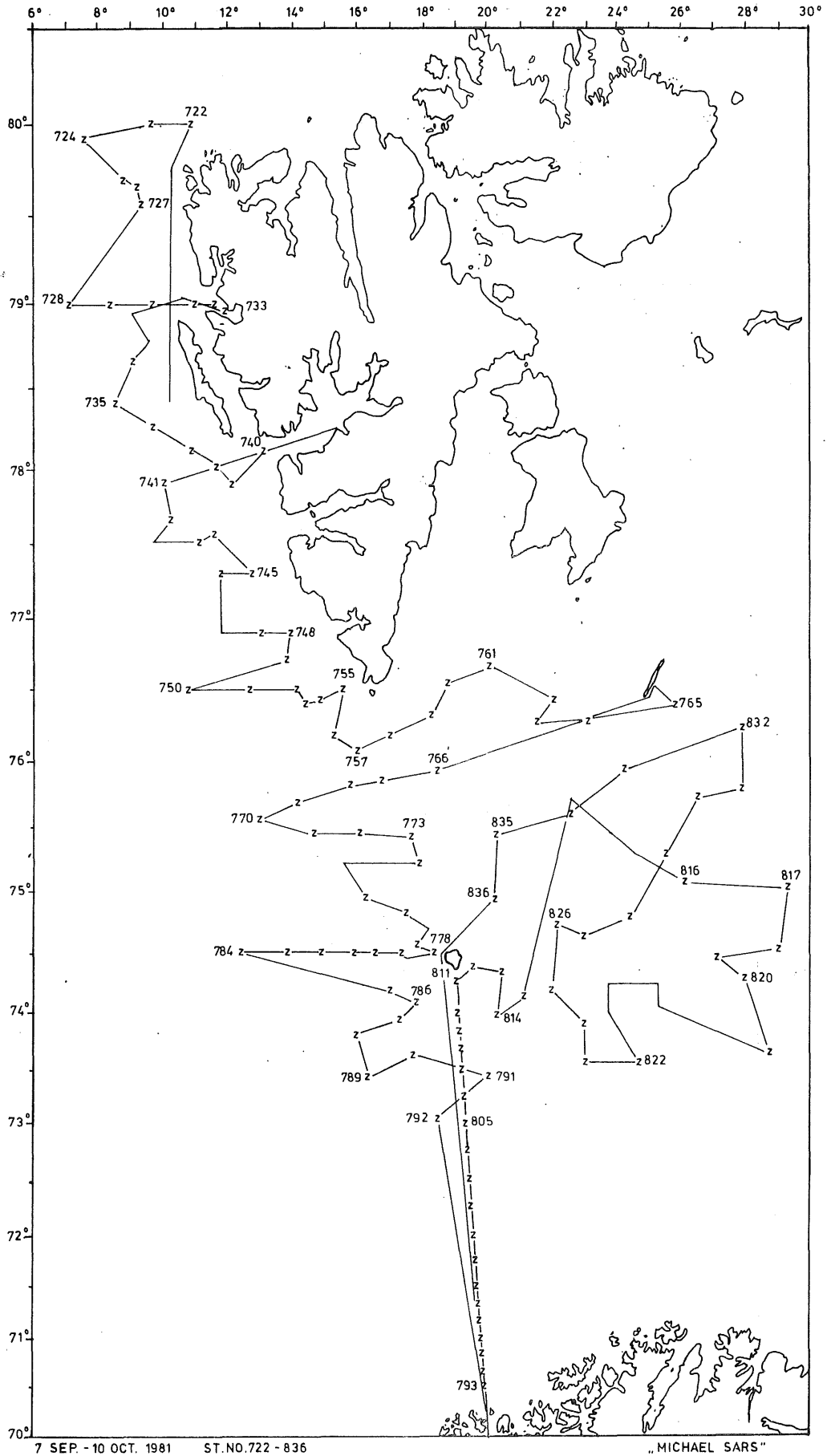
"MICHAEL SARS"

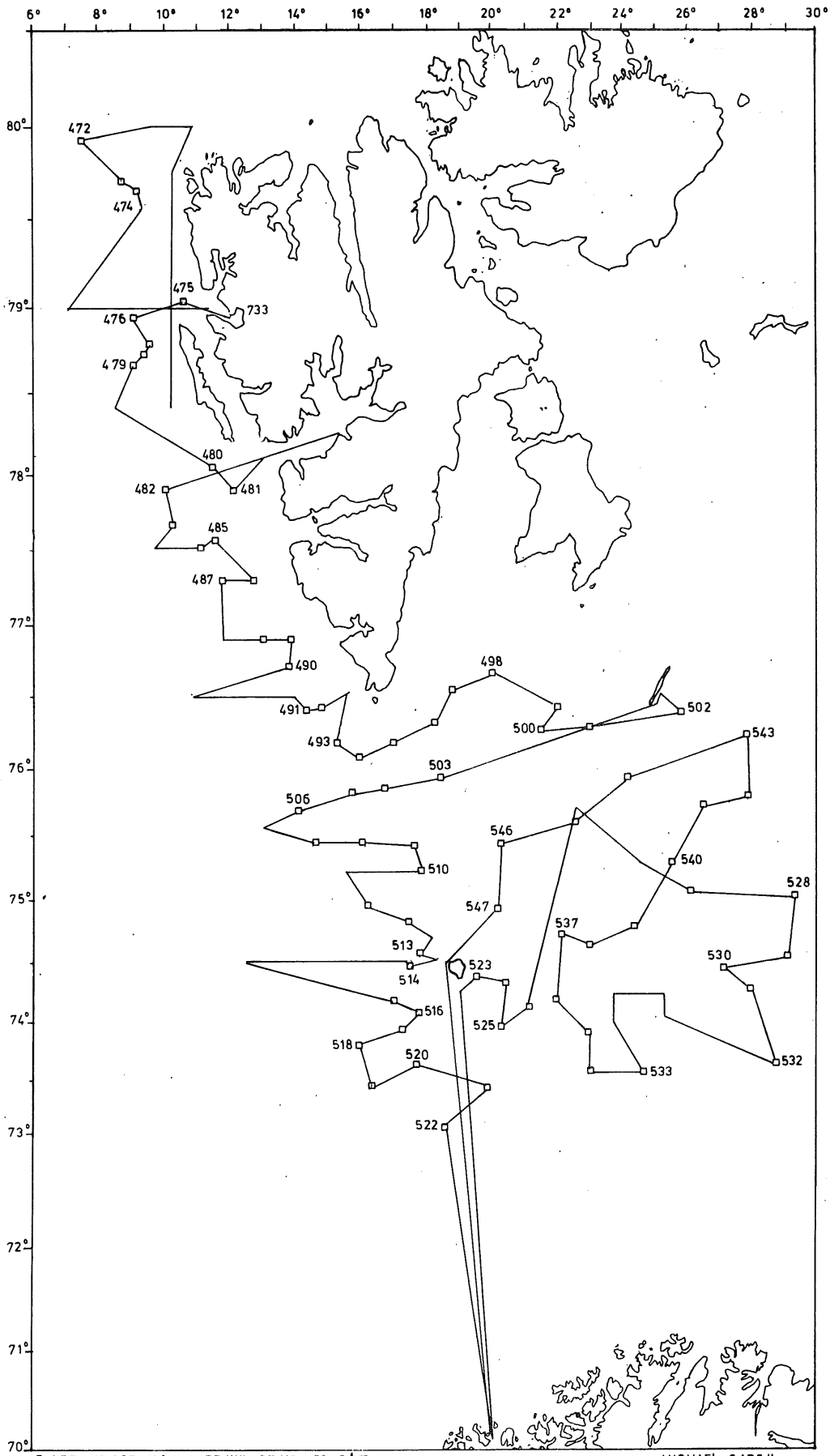




TRAWL ST. NO. 385 - 471

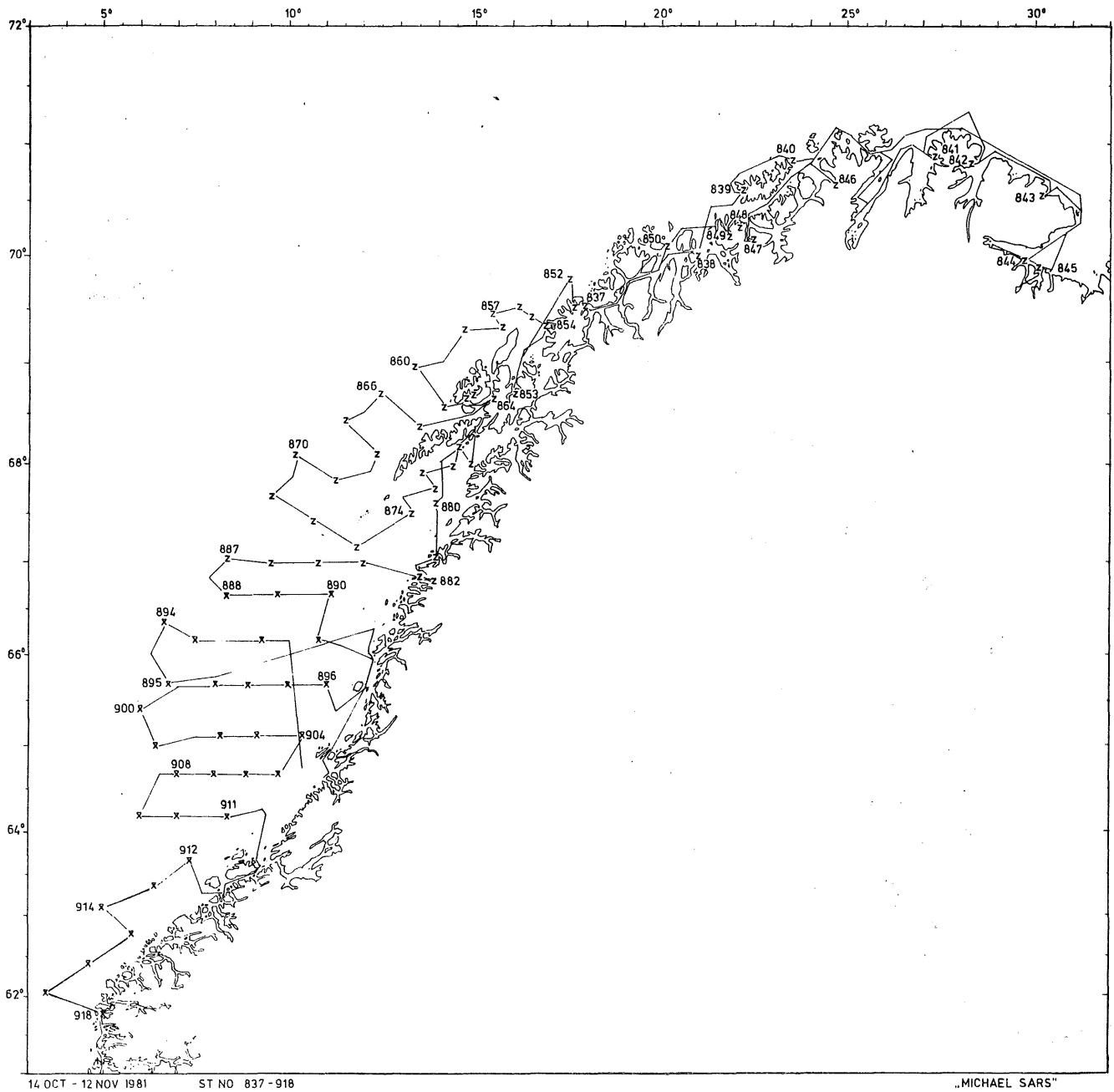
"MICHAEL SARS"





7 SEP. - 10 OCT. 1981 TRAWL ST.NO. 472-547

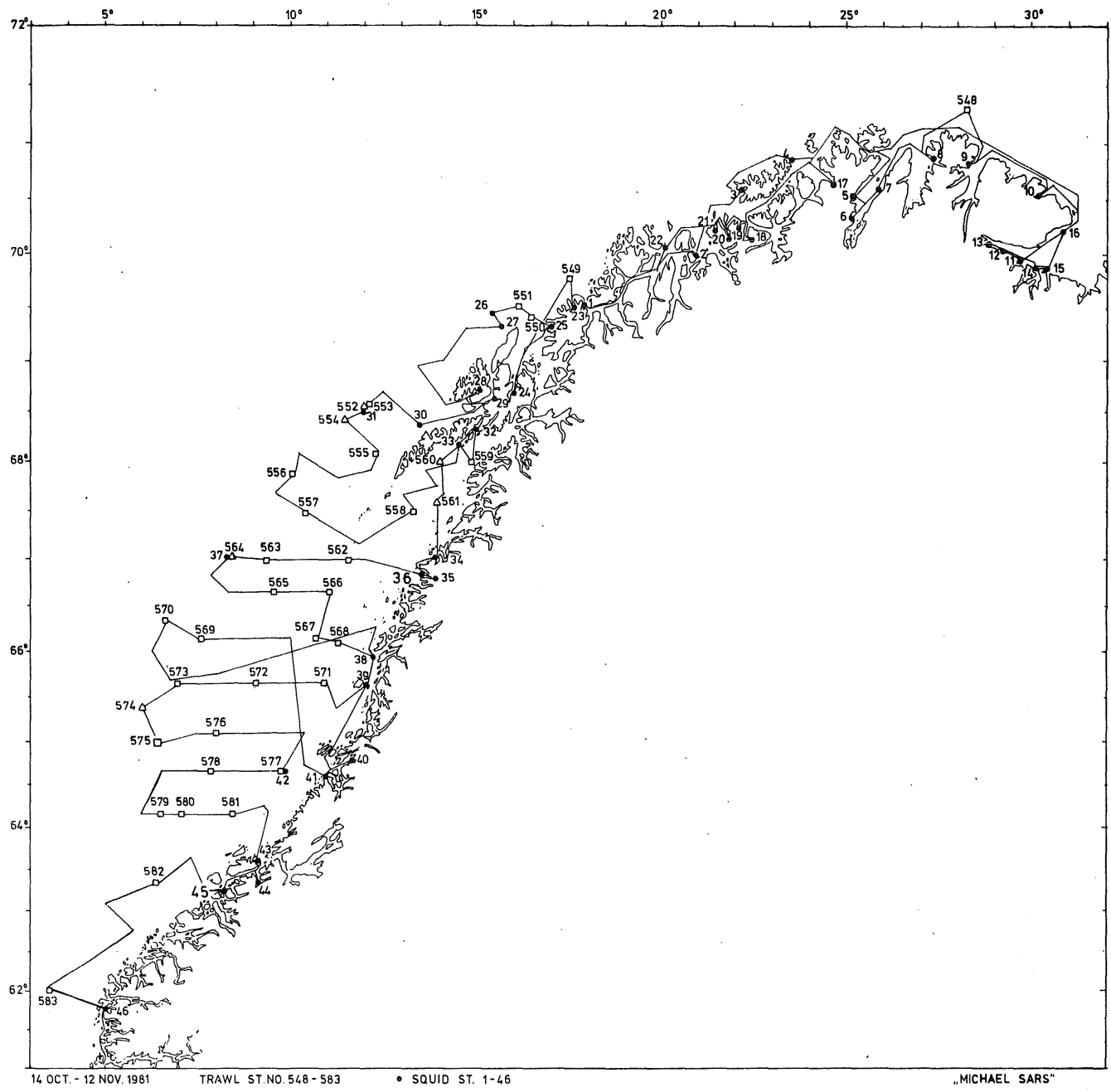
„MICHAEL SARS“

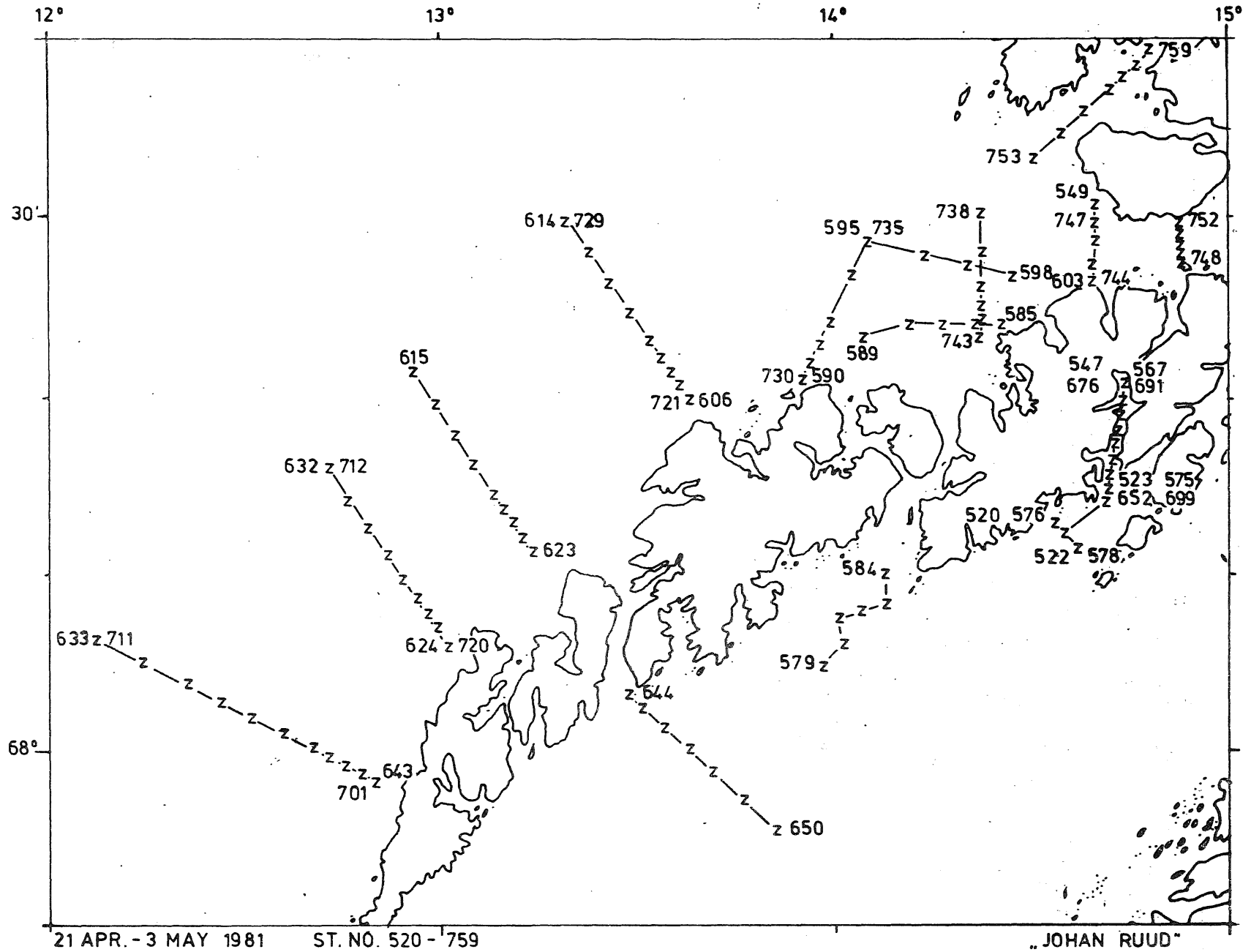


14 OCT - 12 NOV 1981

ST NO 837-918

MICHAEL SARS

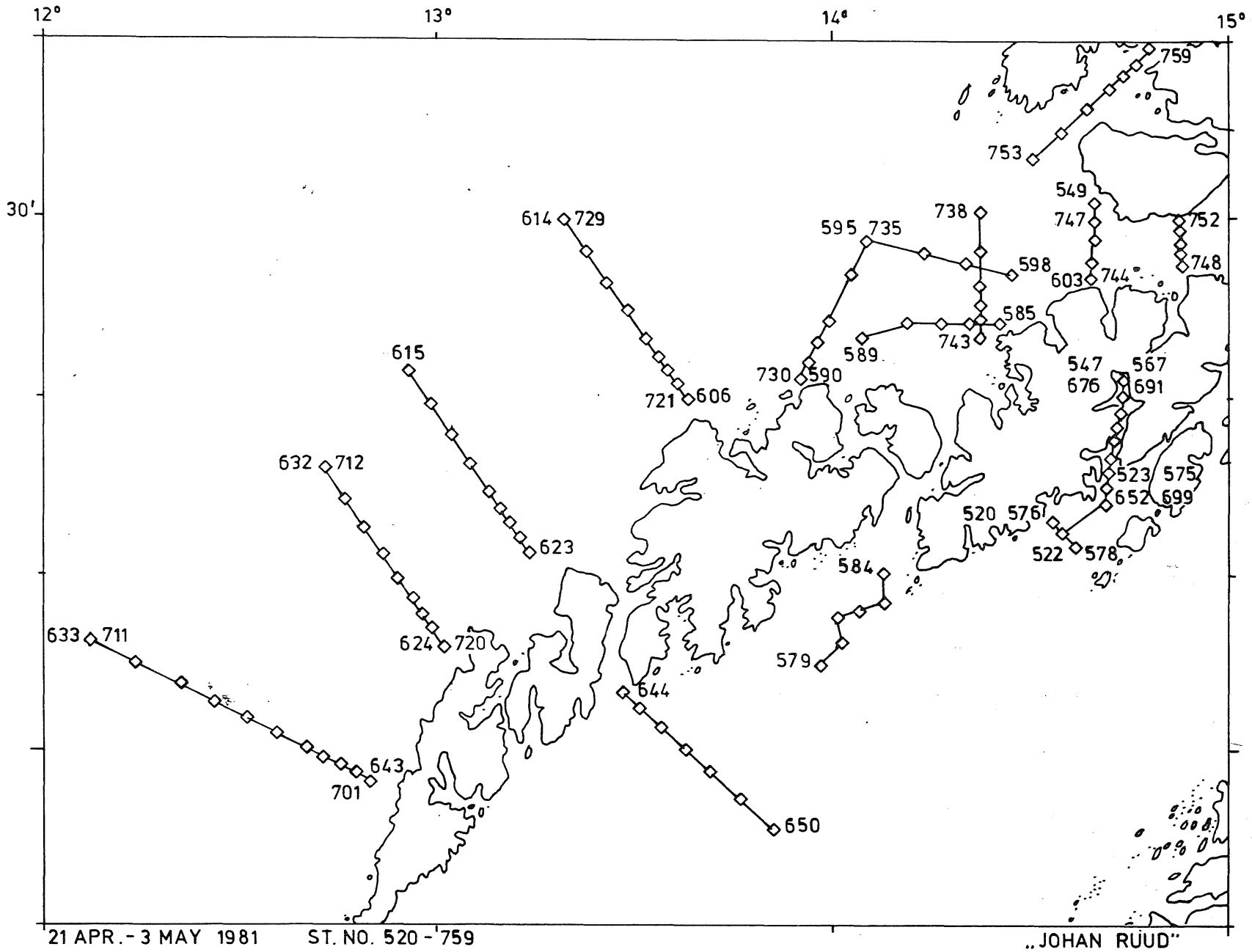


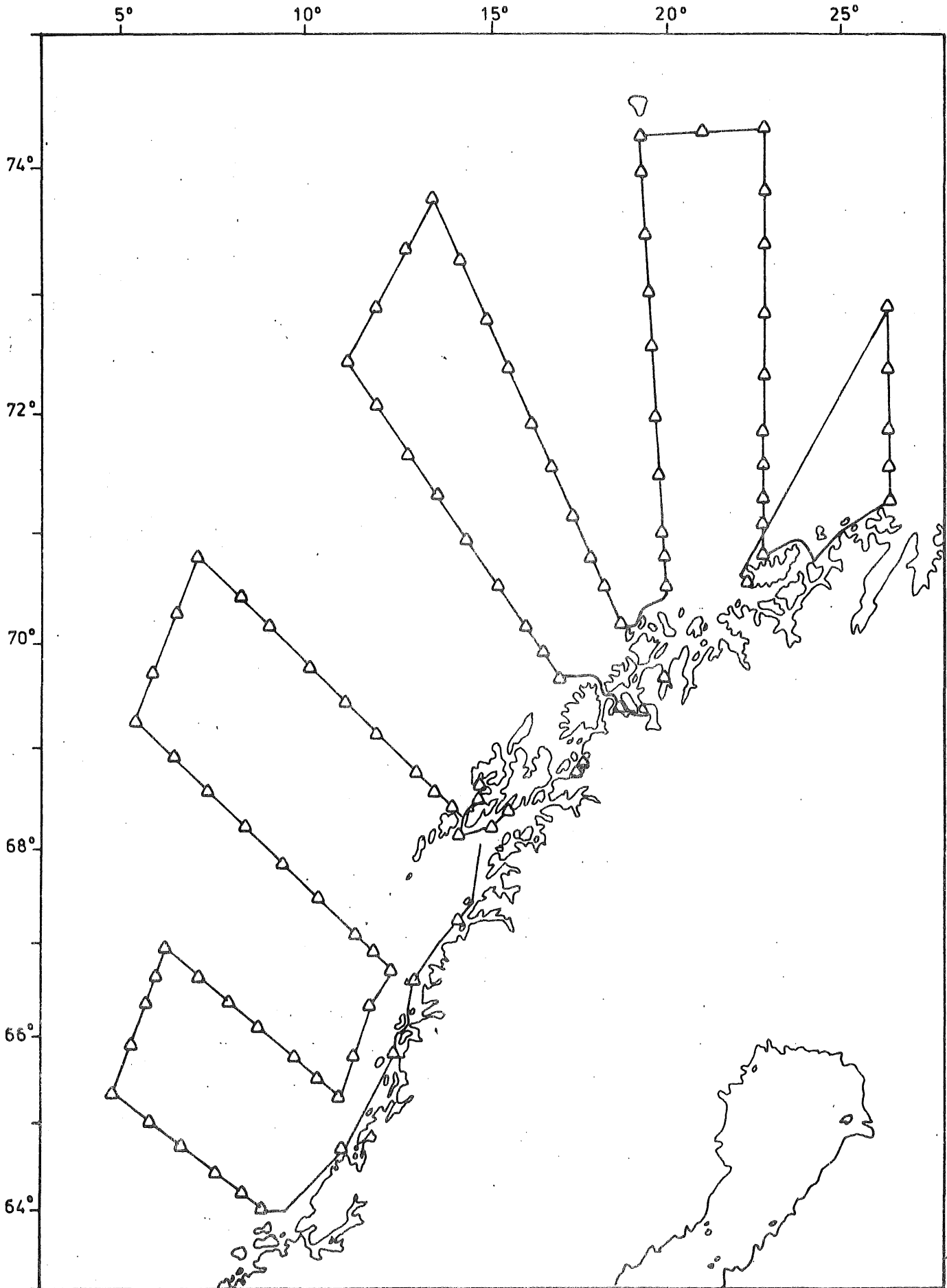


21 APR. - 3 MAY 1981 ST. NO. 520 - 759

„JOHAN RUUD“

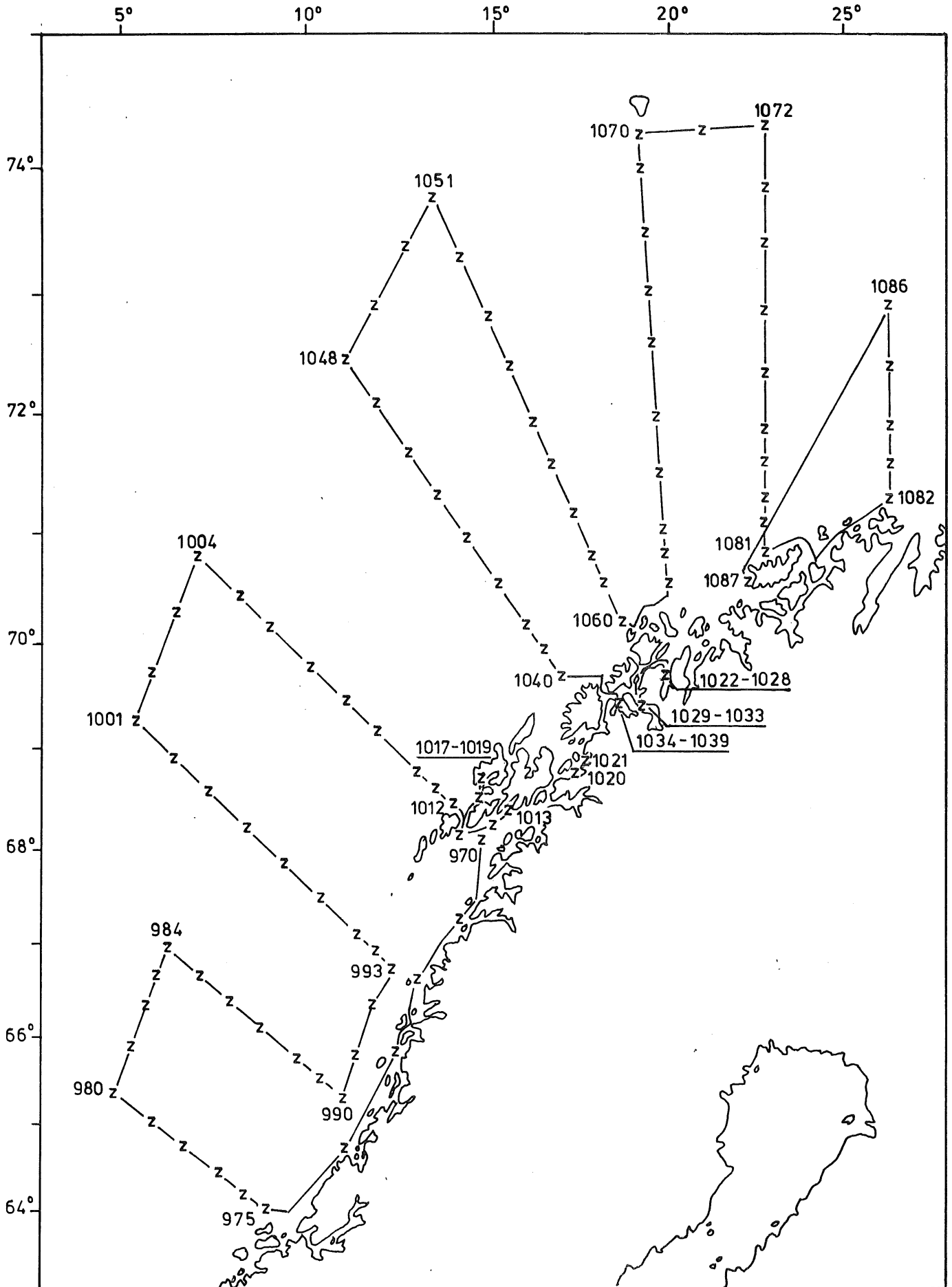






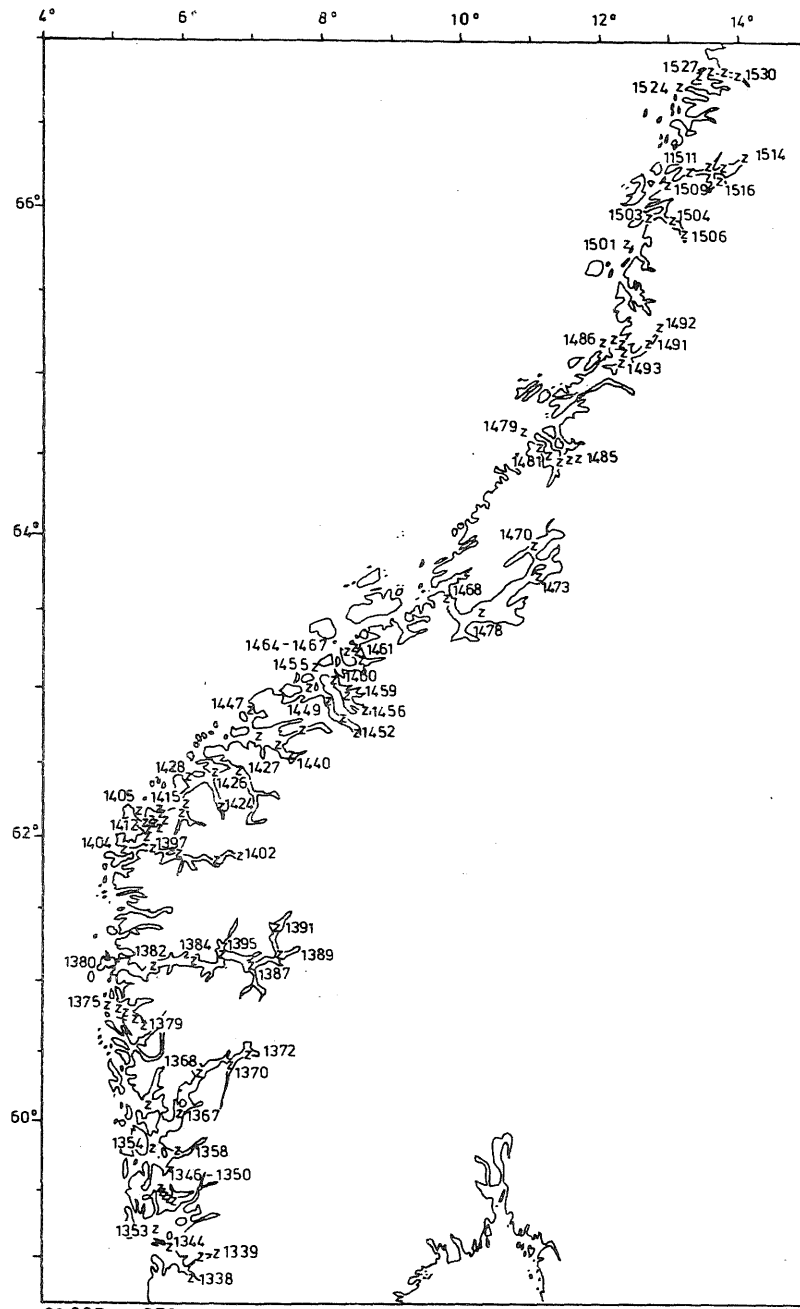
30 JUN. - 24 JUL. 1981    Δ 117 HARSTAD TRAWL AND JUDAYNET

„JOHAN RUUD“

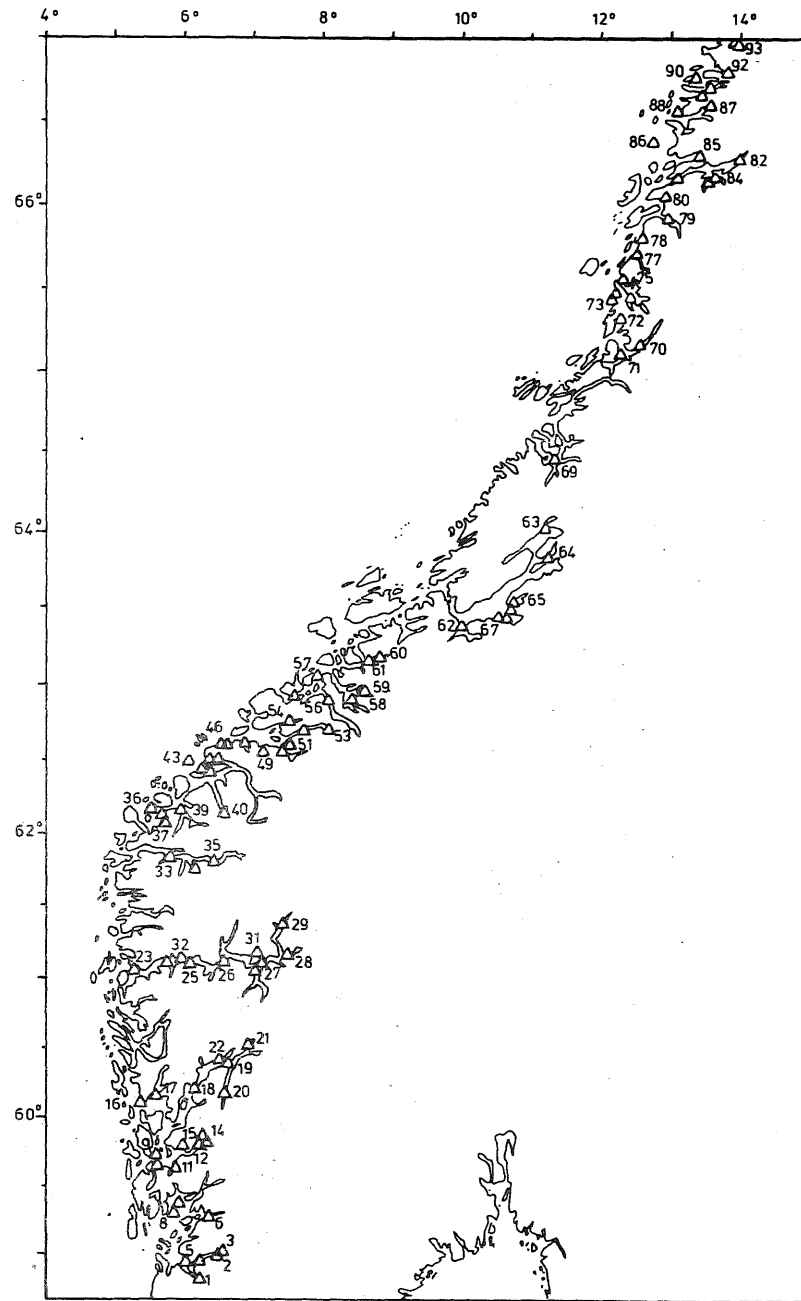


30 JUN. - 24 JUL. 1981 ST.NO. 970 - 1087

„JOHAN RUUD”

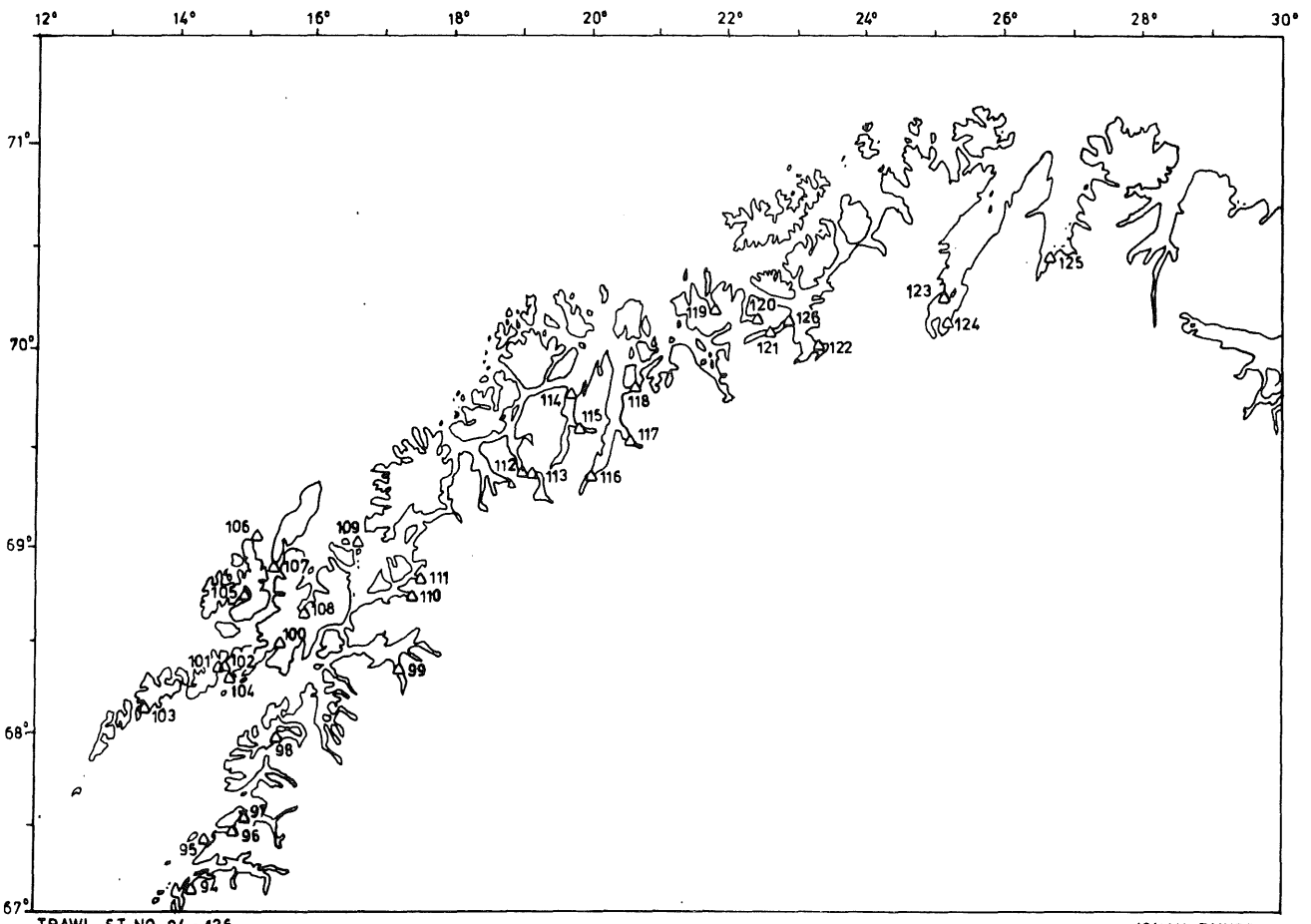
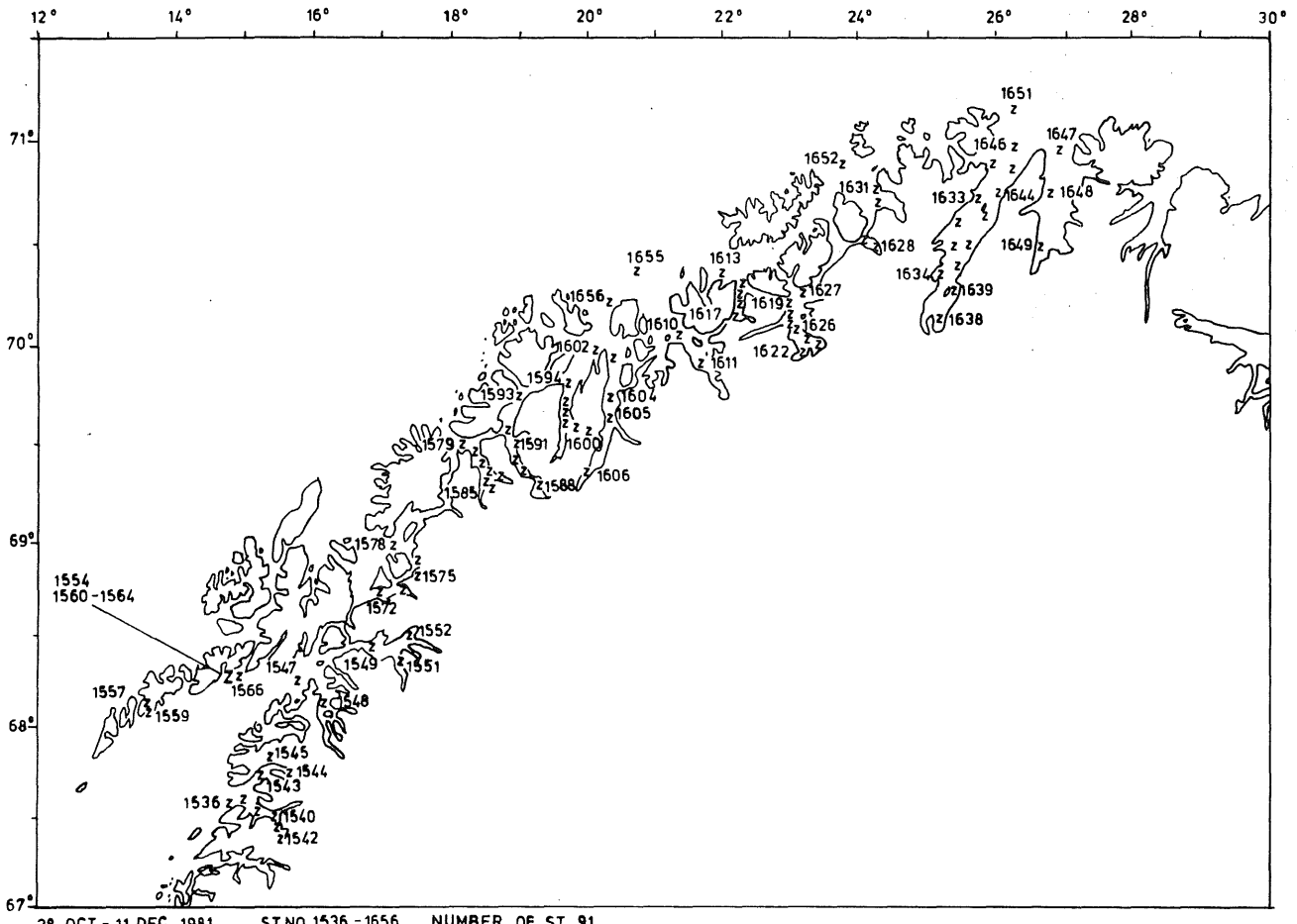


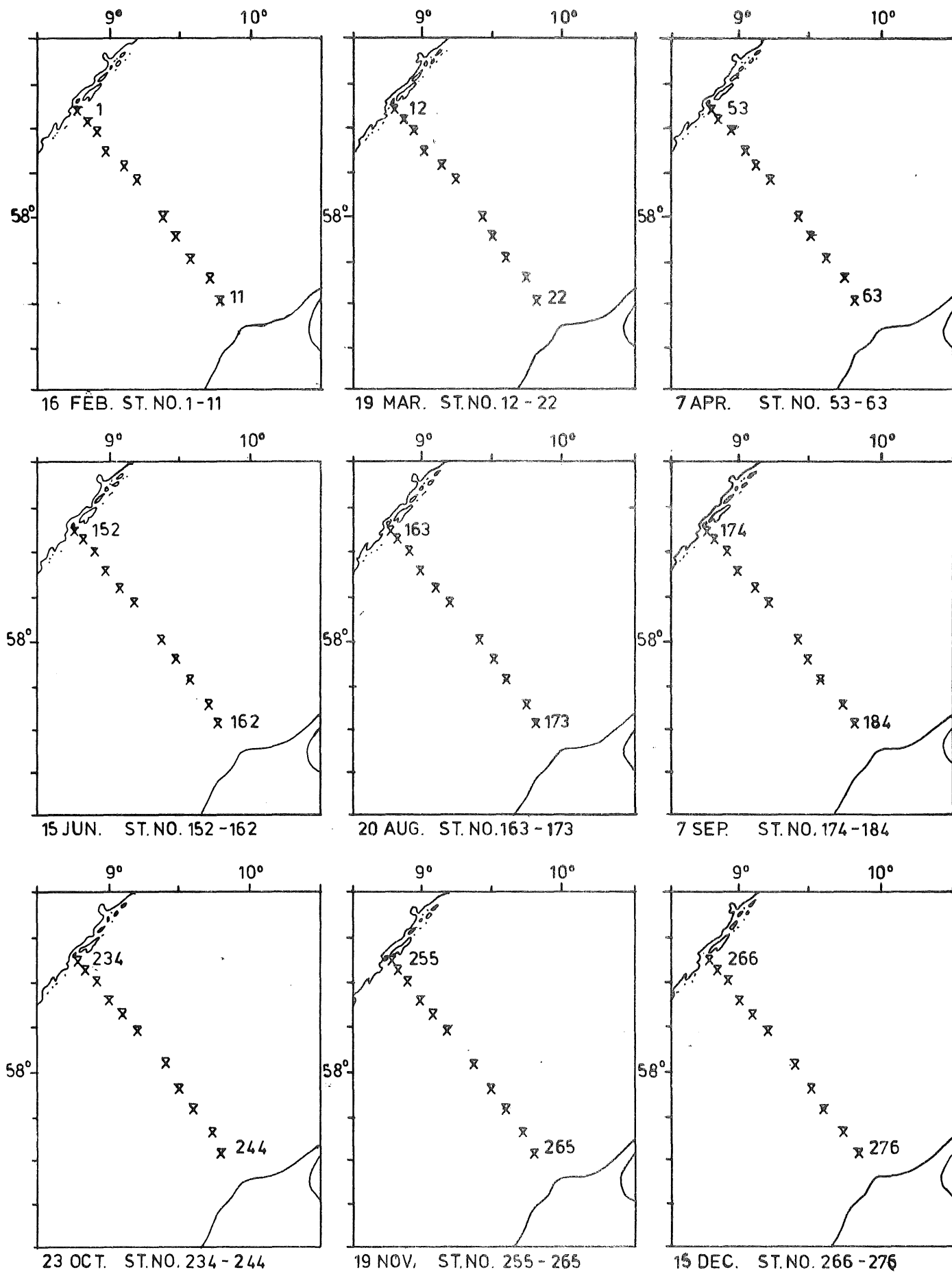
28 OCT.-11 DEC. 1981 ST NO. 1338-1530 NUMBER OF ST. 114

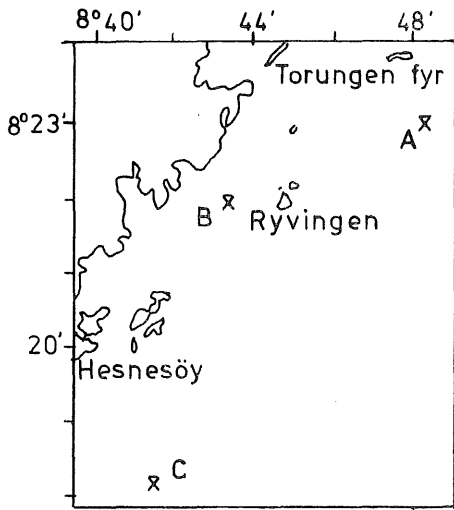


TRAWL ST. NO. 1-93

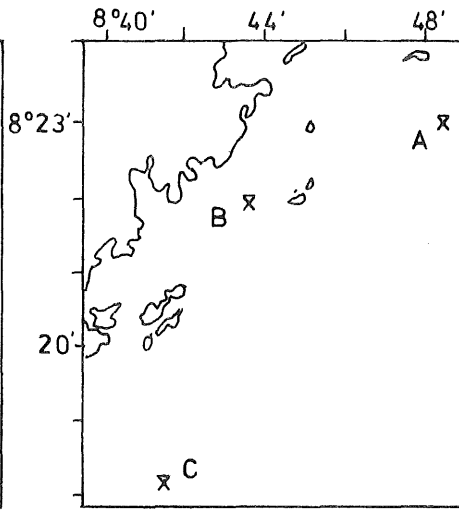
..JOHAN RUUD



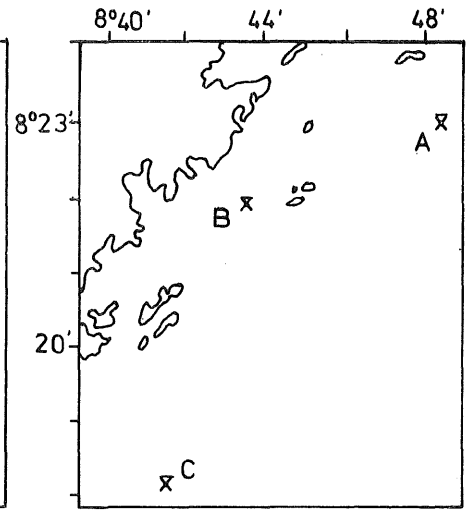




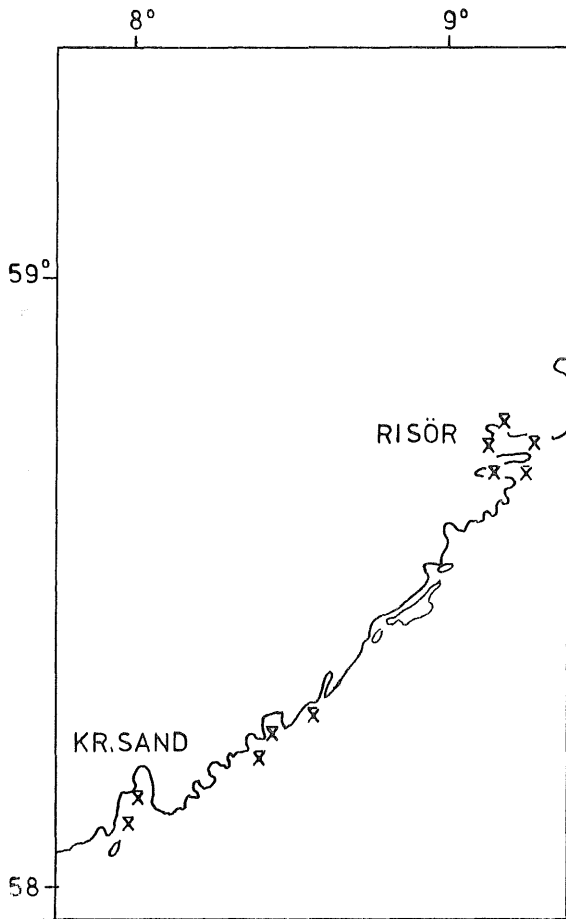
30 MAR.-3 APR. ST.NO. 23-52



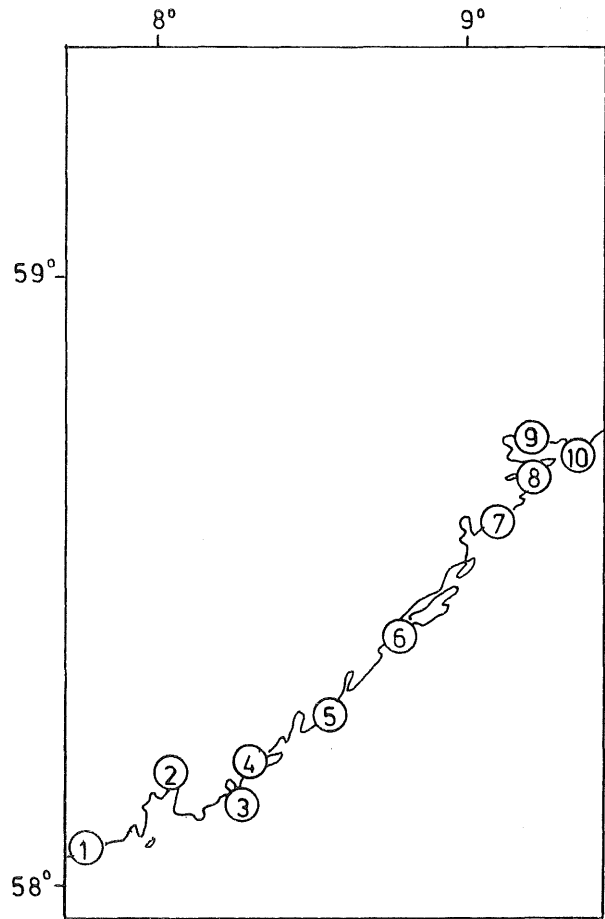
20-25 APR. ST.NO. 64-93



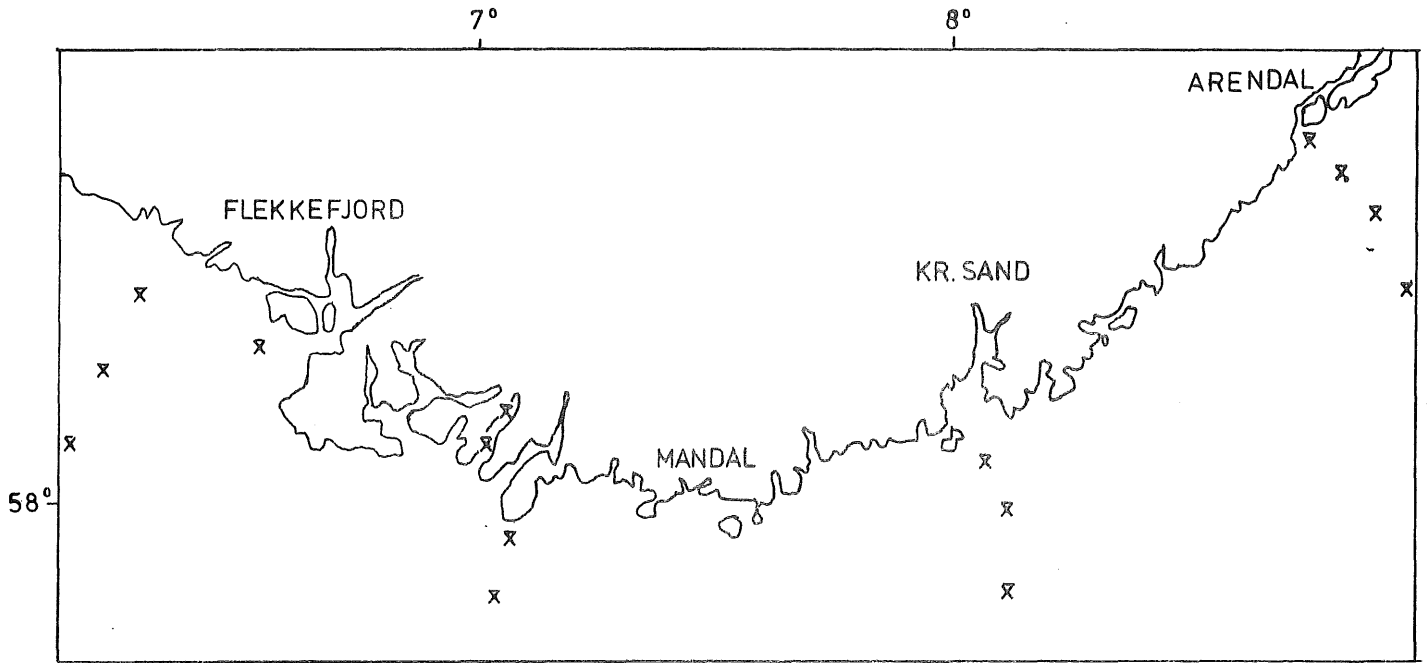
18-23 MAY ST.NO. 94-123



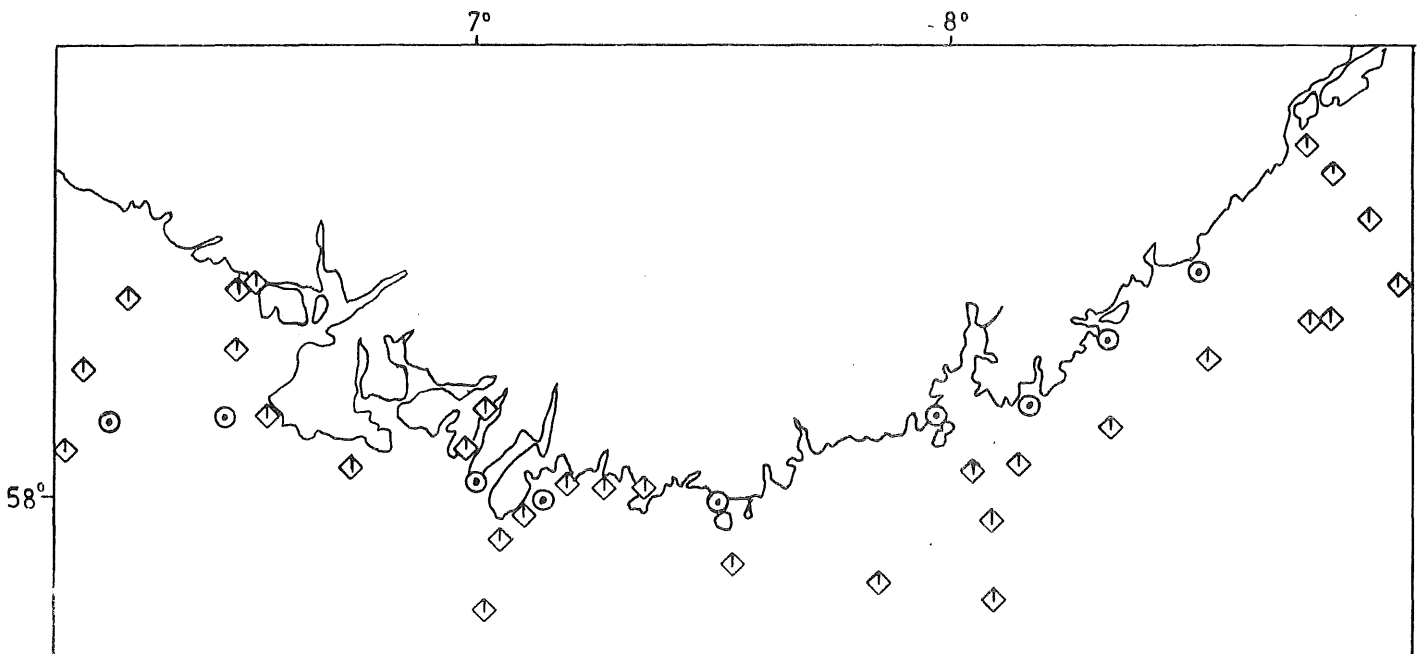
8-14 NOV. ST.NO. 245-254



BEACHSEIN NO. 1-10



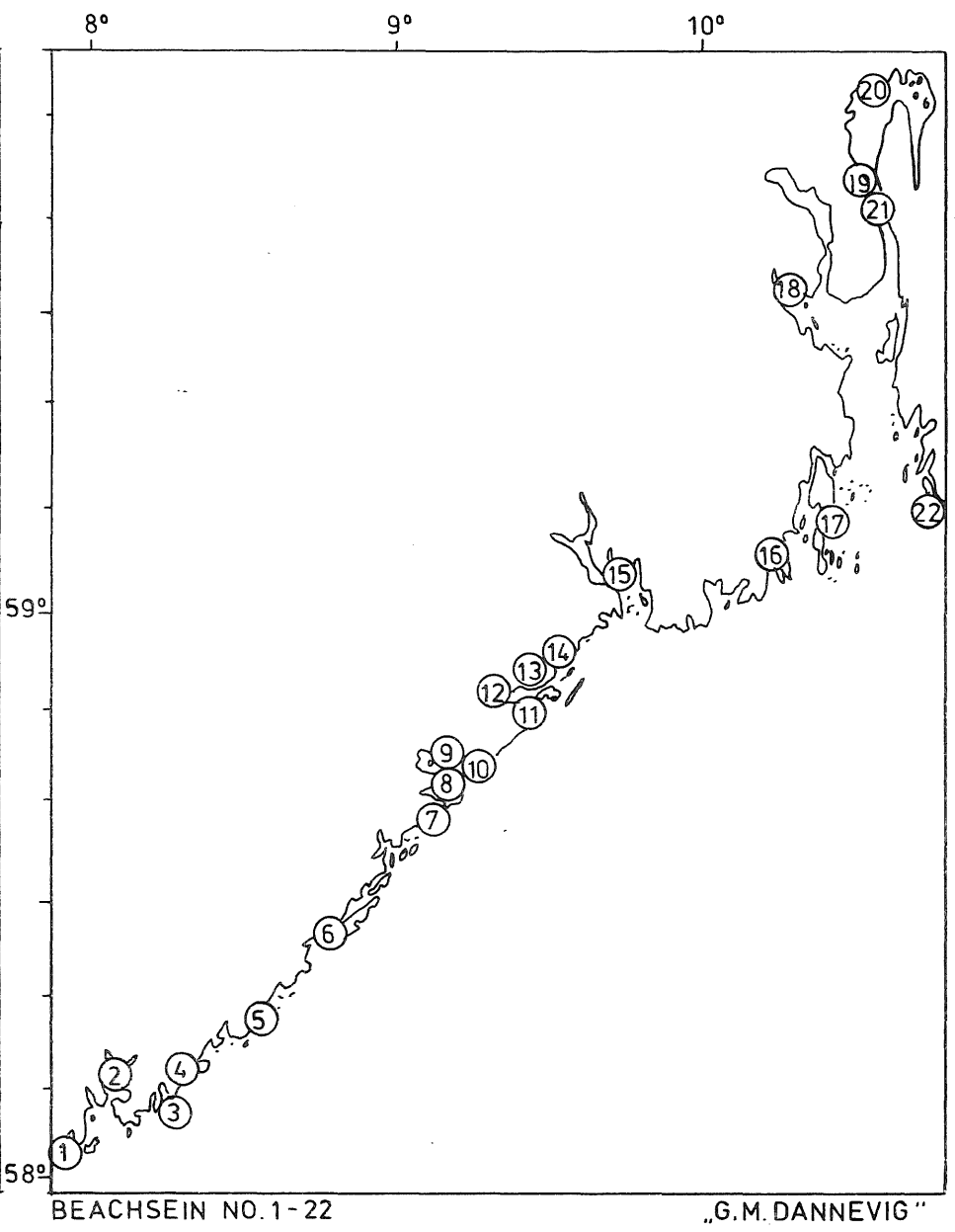
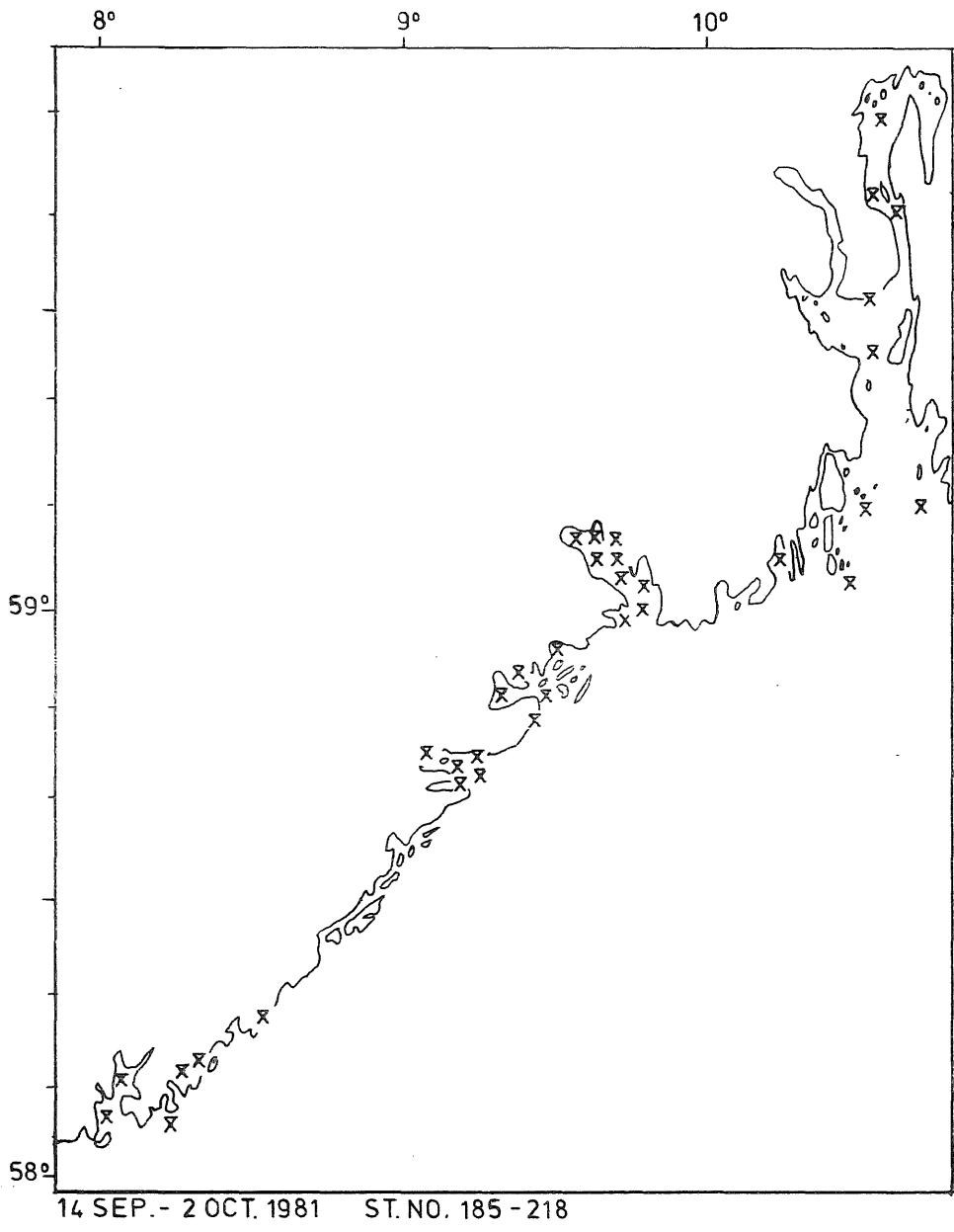
4-7 OCT. 1981 ST. NO. 219-233

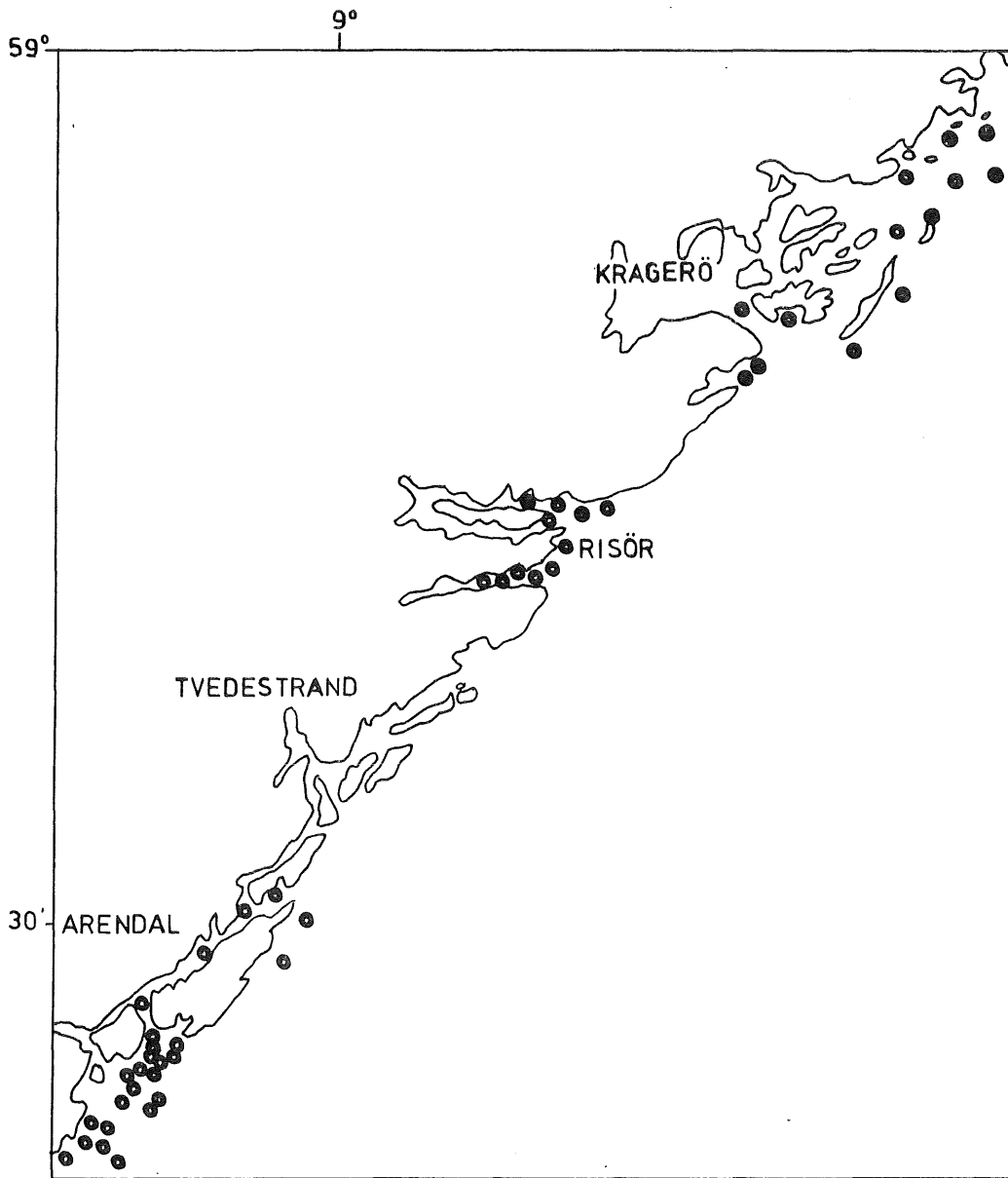


PHYTOPLANKTON ◊ 4-5 OCT. ⊙ 6-7 OCT.

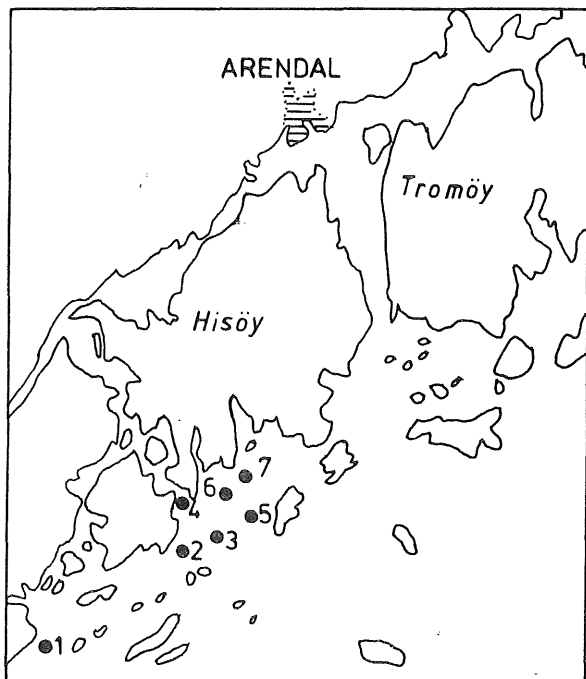
„G.M. DANNEVIG“



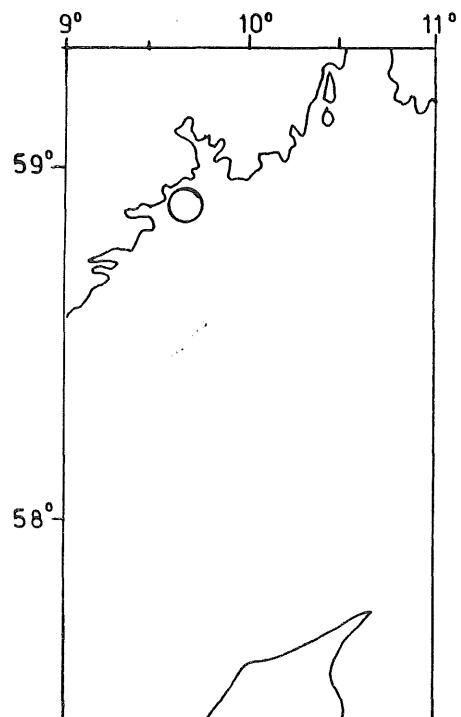




● LOCATION FOR CRAWFISH 1981



10-12 JUN. ST. NO. 124-151 ● 5 HYDRGR. ST. EXPERIMENTAL POWERPLANT OUTLET



□ COD TAGGING DEC. 1981

