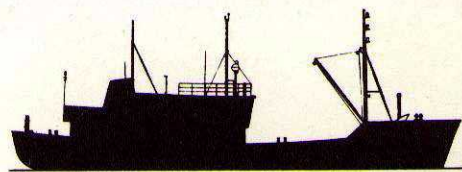


miljøstyrelsen **BÆLT PROJEKTET**

Maj 1976



FYSISKE UNDERSØGELSER **Figurer**

FYSISKE UNDERSØGELSER

Figurer

MILJØSTYRELSEN
BIBLIOTEKET
Strandgade 29
1401 København K

Figurer til kapitel 2
Øresund, Bælthavet og Kattegat
af
Arne Nielsen, Miljøstyrelsen



SK.R. - SKAGENS REV
 L.N. - LÆSØ NORD
 A.N. - ANHOLT NORD
 K.S.W. - KATTEGAT SYDV
 K.S. - KATTEGAT SYD
 H.R. - HALSKOV REV
 F.B. - FEHMERNBELT
 G.R. - GEDSER REV
 D. - DROGDEN

L.G. - LAPPEGRUND

FIG.2.11.

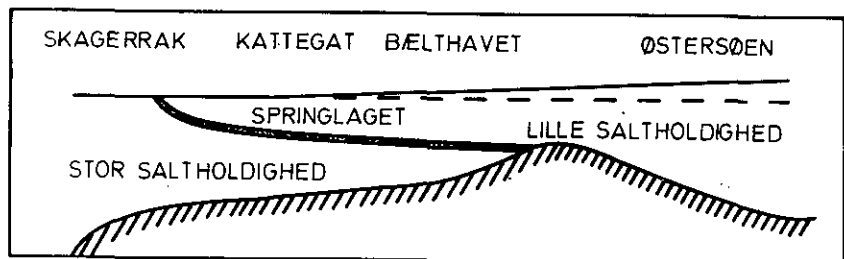
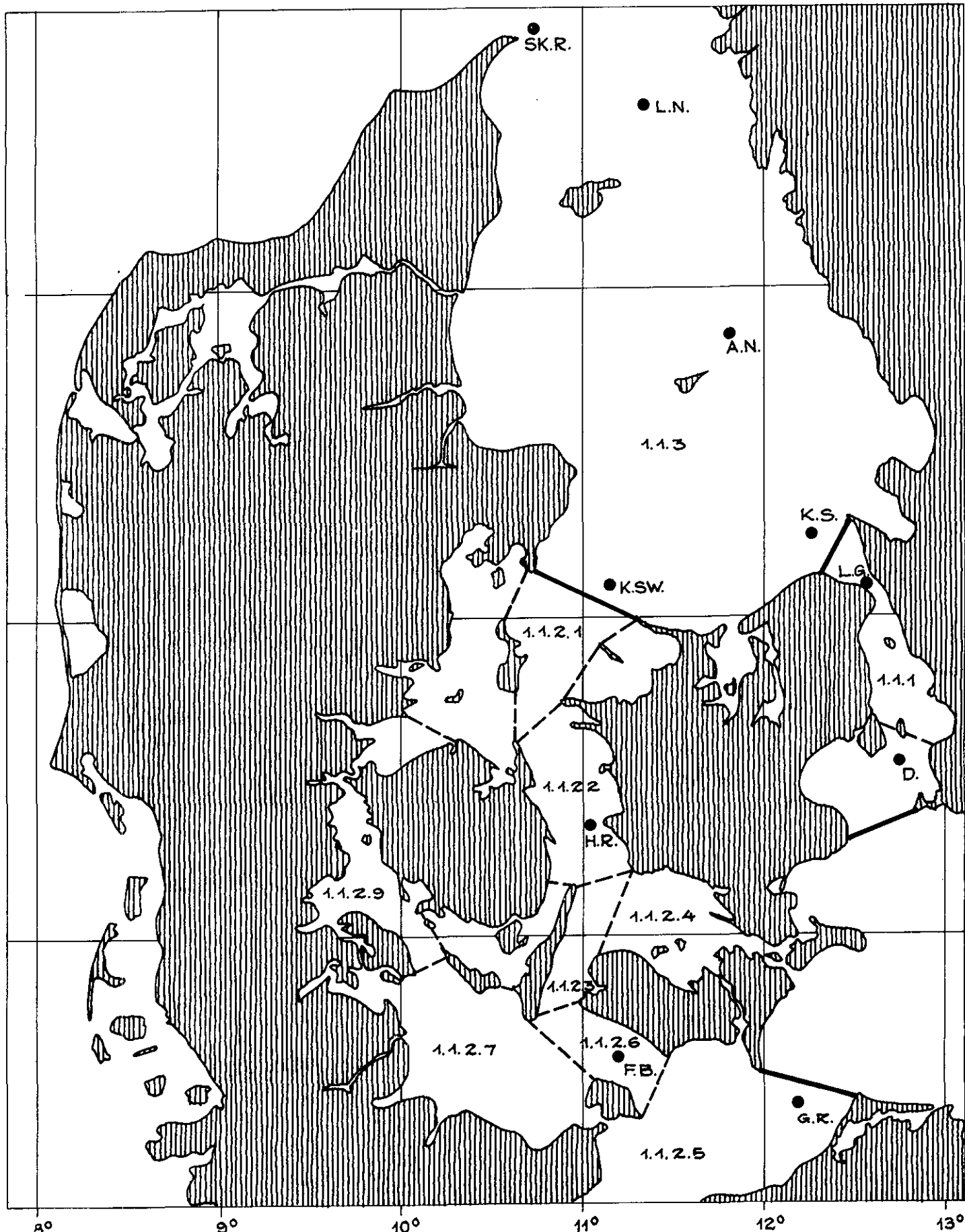


FIG. 2.1.2.

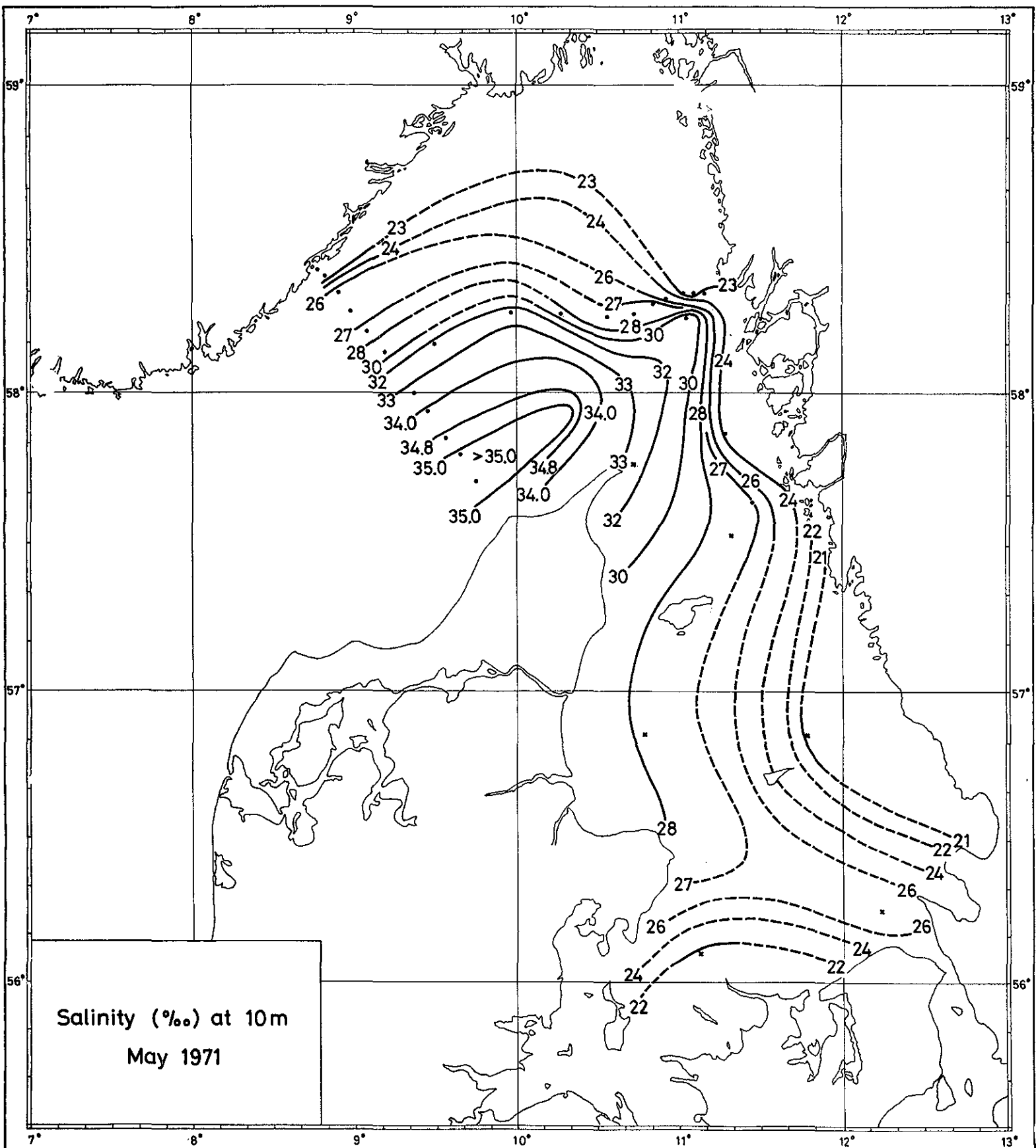


SK.R.- SKAGENS REV
 L.N. - LÆSØ NORD
 A.N. - ANHOLT NORD
 K.S.W.- KATTEGAT SYDV
 K.S. - KATTEGAT SYD
 H.R. - HALSKOV REV
 F.B. - FEHMERNBELT
 G.R. - GEDSER REV
 D. - DROGDEN

1.1.1
 1.1.2.1. SAMSØBELT
 1.1.2.2 STOREBELT
 1.1.2.3. LANGELANDS BELT
 1.1.2.4 SMÅLANDSFARVANDET
 1.1.2.5 MECKLENBURGER BUGT
 1.1.2.6 FEHMARN BELT
 1.1.2.7 KIEL BUGT
 1.1.2.9 LILLE BELT
 1.1.3 KATTEGAT
 L.G. - LAPPEGRUND

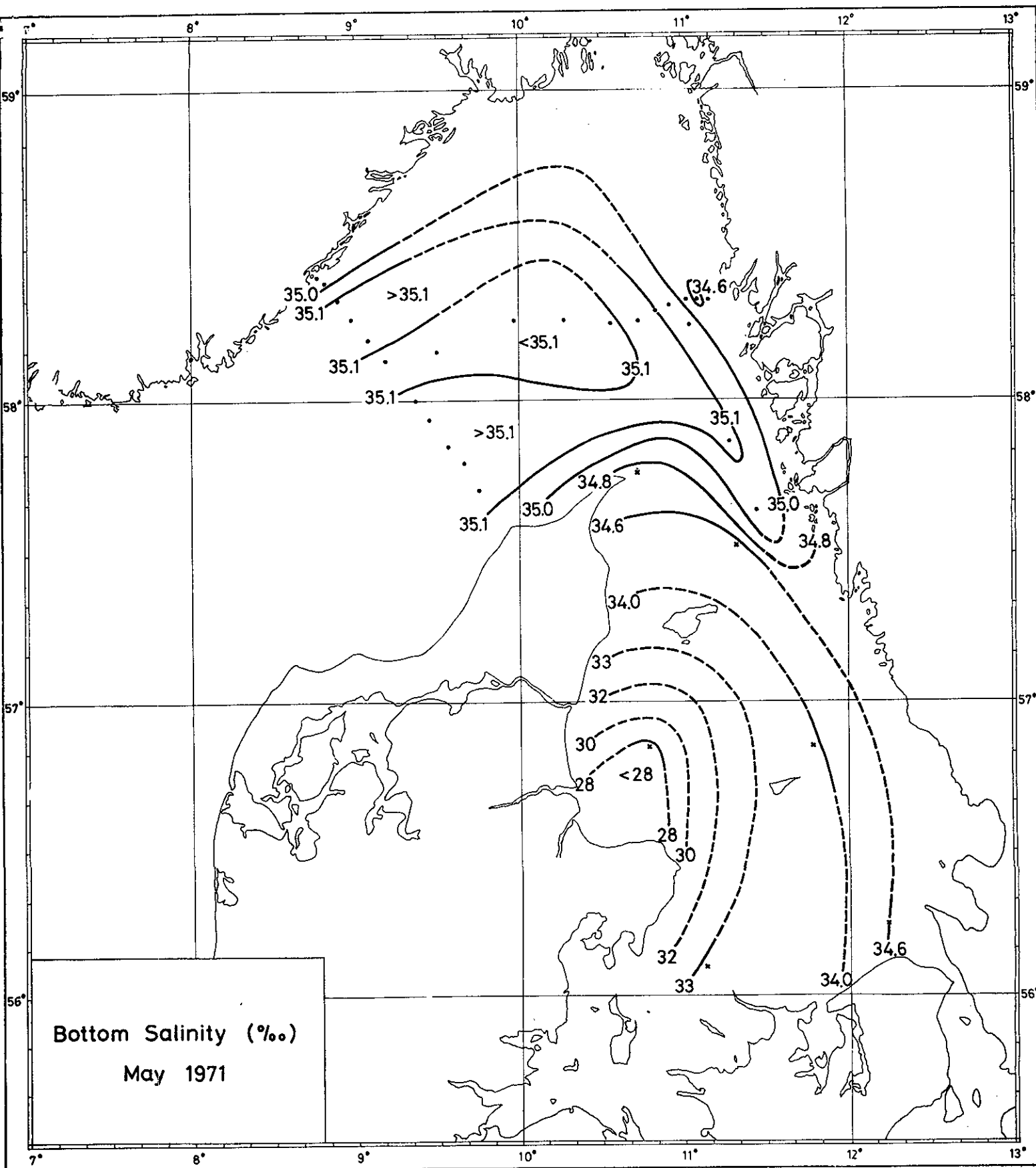
1.1.2.6 FEHMARN BELT
 1.1.2.7 KIEL BUGT
 1.1.2.9 LILLE BELT
 1.1.3 KATTEGAT

FIG. 2.1.11.



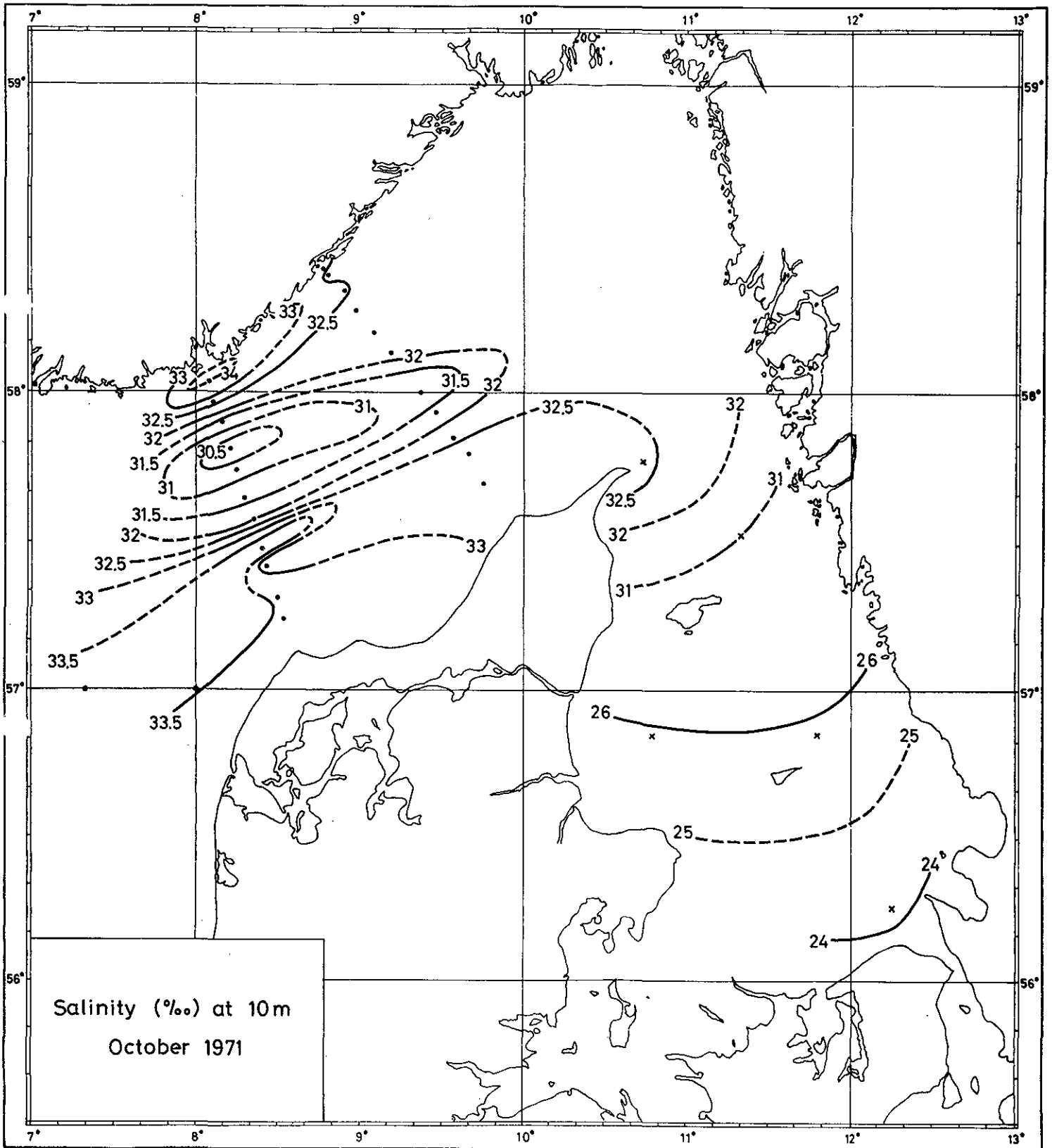
I. C. E. S., SERVICE HYDROGRAPHIQUE, CHARLOTTENLUND, DANMARK.

FIG. 2.2.1a



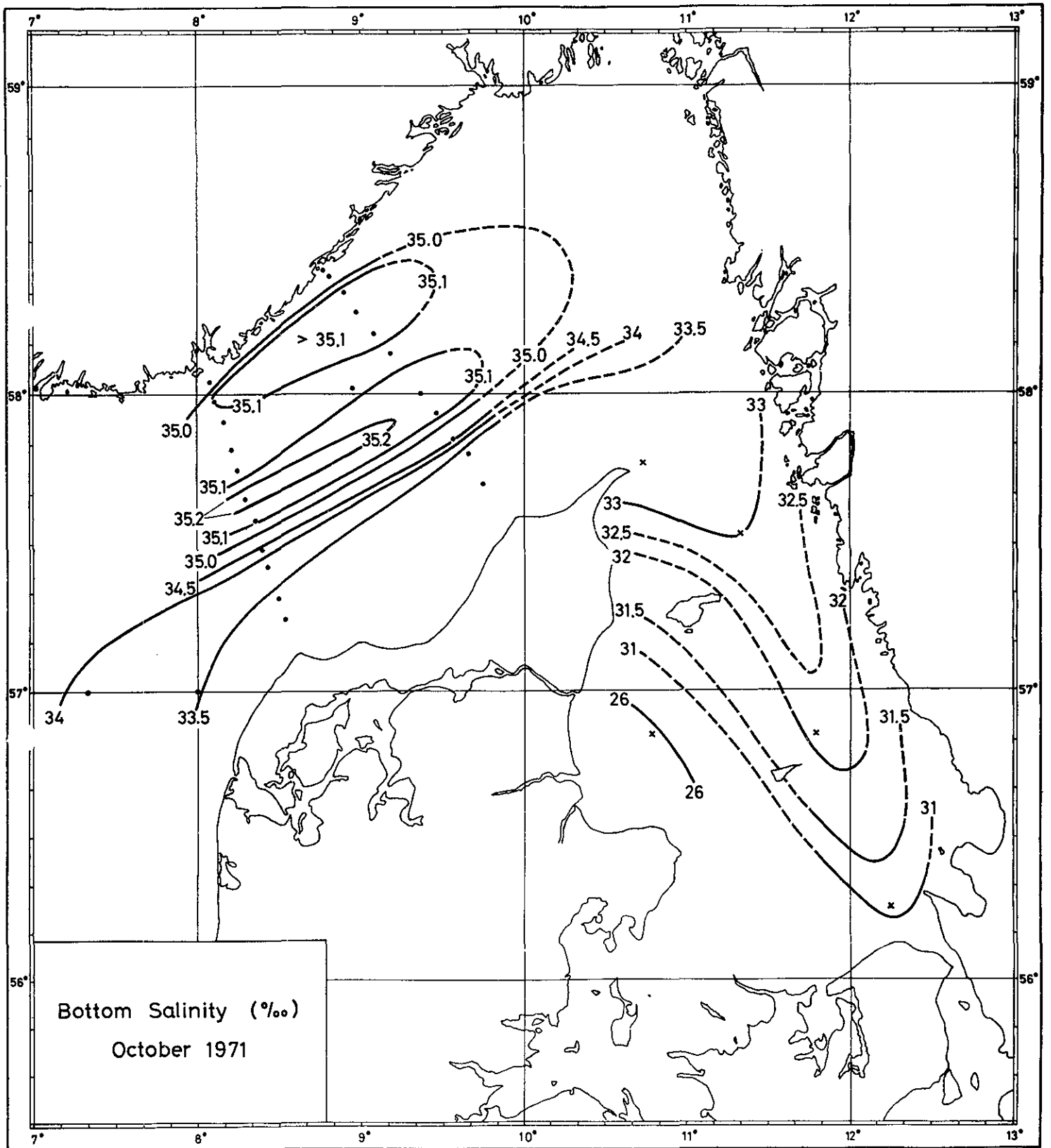
I. C. E. S., SERVICE HYDROGRAPHIQUE, CHARLOTTENLUND, DANMARK.

FIG. 2.2.1b



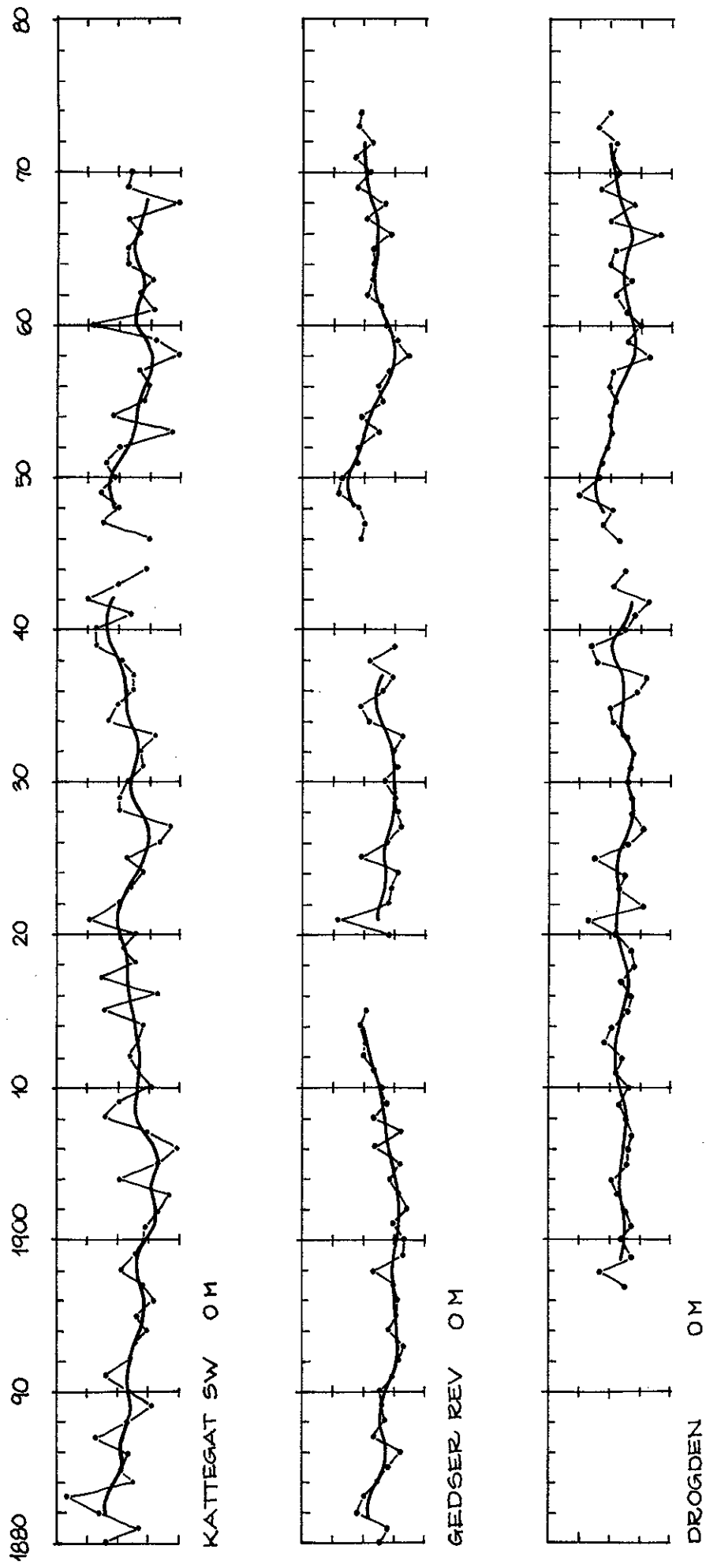
I. C. E. S., SERVICE HYDROGRAPHIQUE, CHARLOTTENLUND, DANMARK.

FIG. 2.2.1c



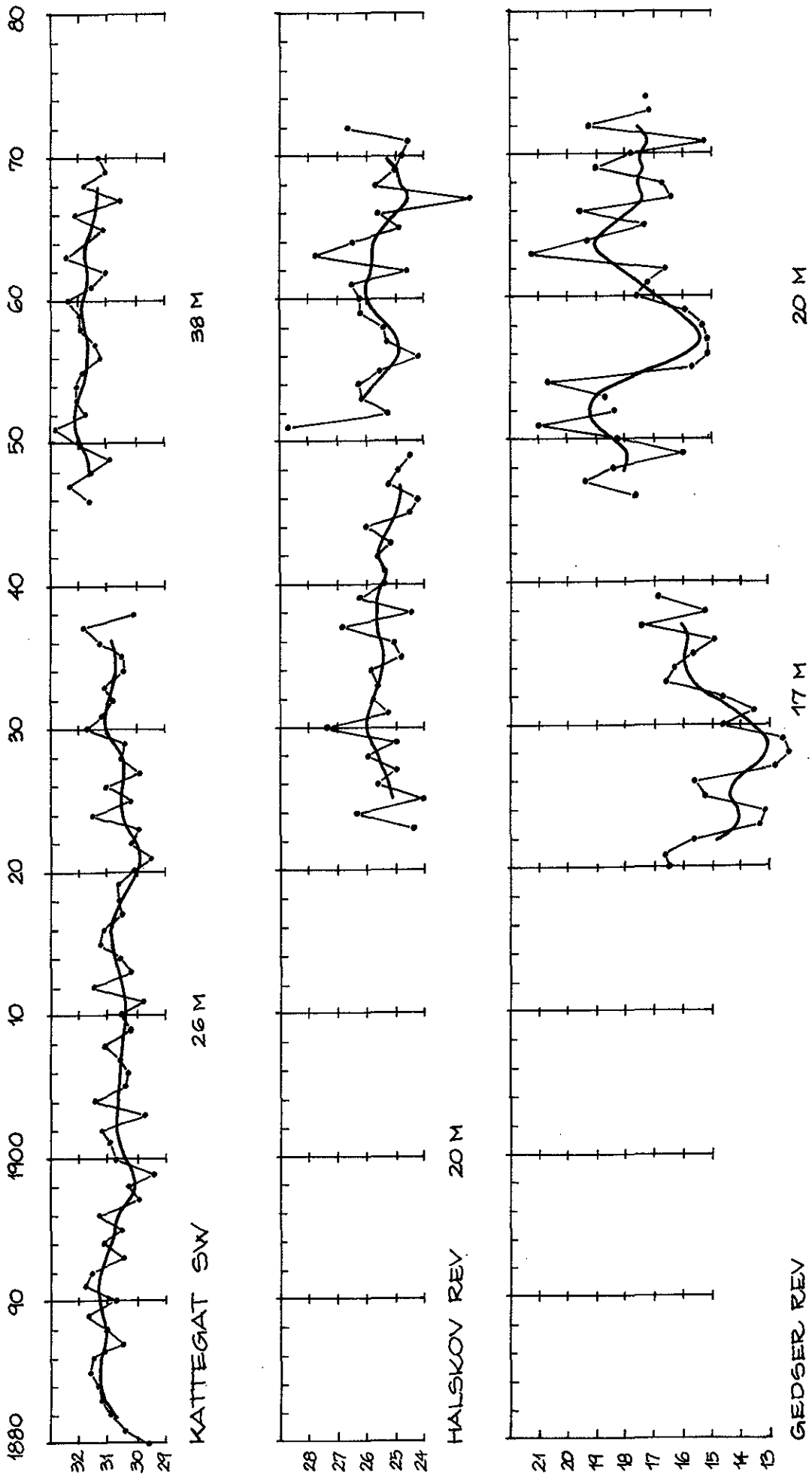
I. C. E. S., SERVICE HYDROGRAPHIQUE, CHARLOTTENLUND, DANMARK.

FIG. 2.2.1d



DEN ÅRLIGE MIDDELVÆRDI FOR OVERFLADESALTHOLDIGHEDEN VED FYRSKIBENE KATTEGAT SW, GEDSER REV OG DROGDEN

FIG. 2. 2. 1. 1. 1.



DEN ÅRLIGE MIDDELVERDI FOR SALTHOLDIGHEDEN VED BUNDEN VED FYRSKIBENE KATTEGAT SW, HALSKOV REV OG GEDSER REV

FIG. 2.2.1.12.

GEDSER REV 20 M $\Delta S \text{ ‰} = (S - \bar{S}_{51-70}) \text{ ‰}$

‰

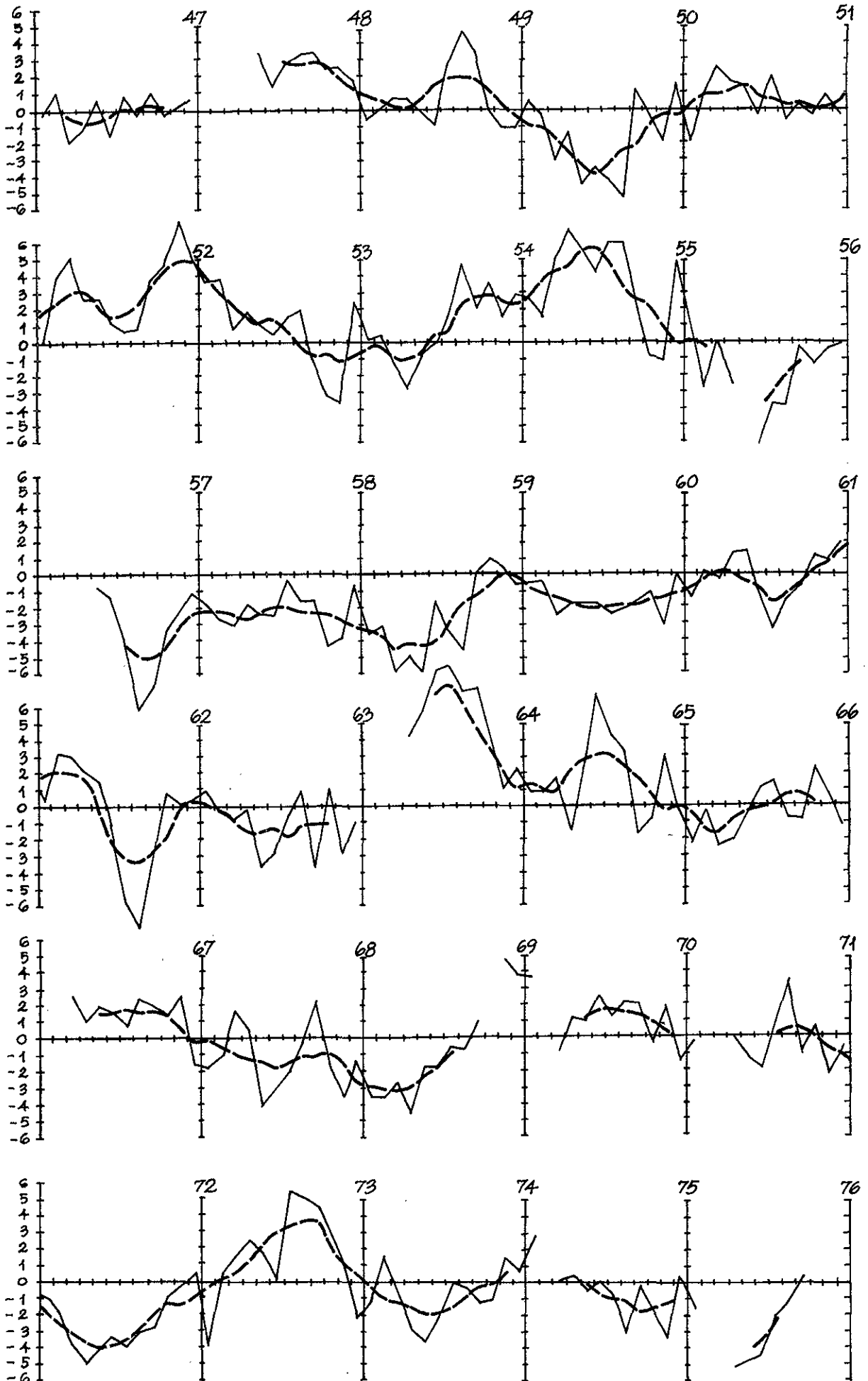


FIG. 2.2.1.1.3.

DEN ÅRLIGE VARIATION AF SALTHOLDIGHEDEN

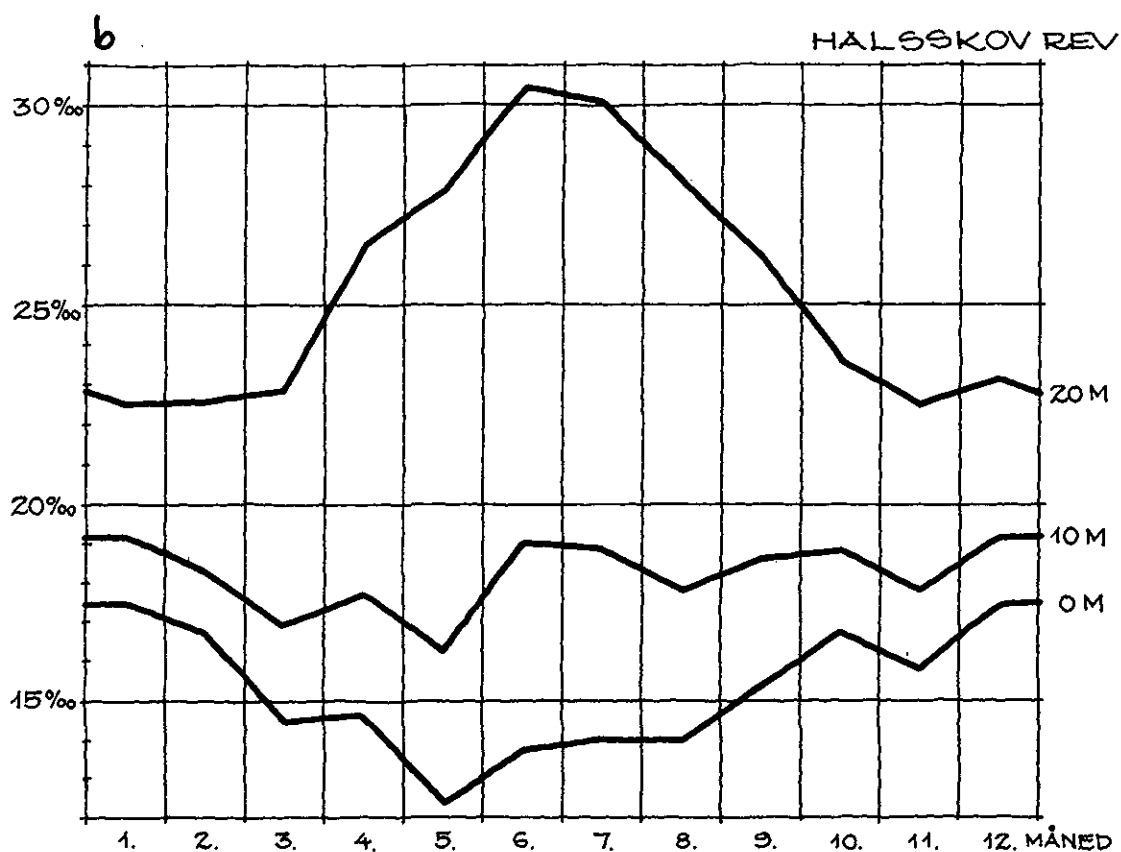
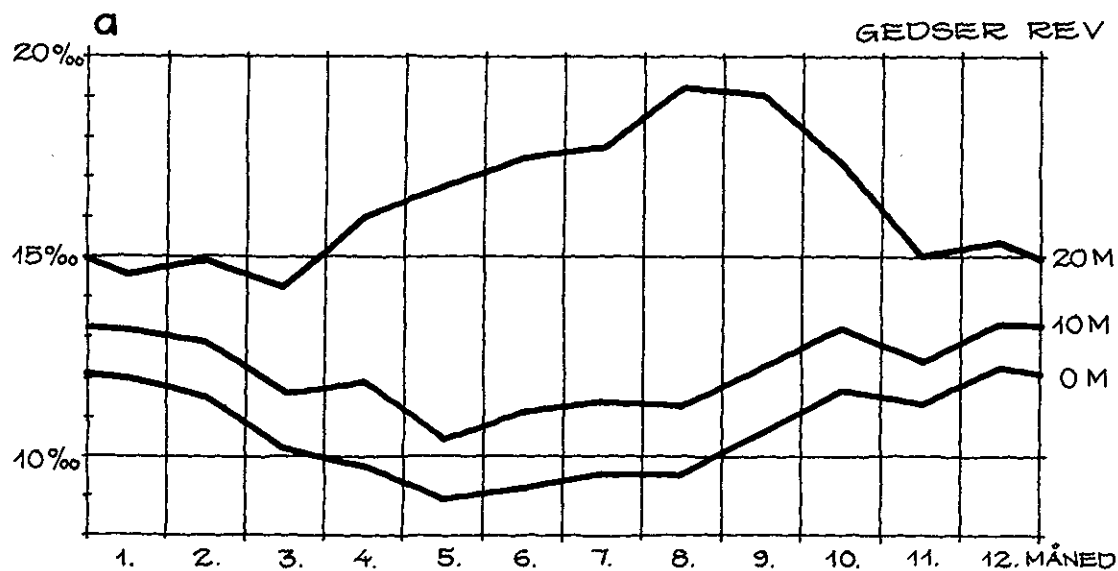


FIG. 2.2.1.2.1a-b

DEN ÅRLIGE VARIATION AF SALTHOLDIGHEDEN

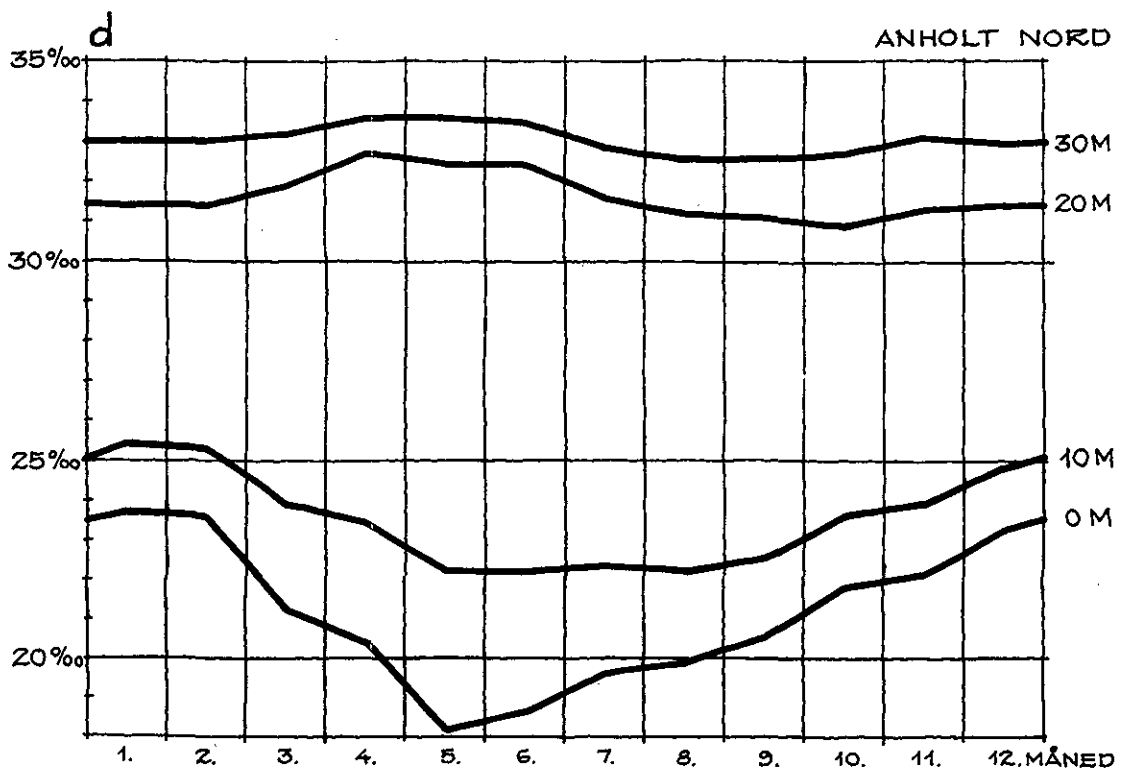
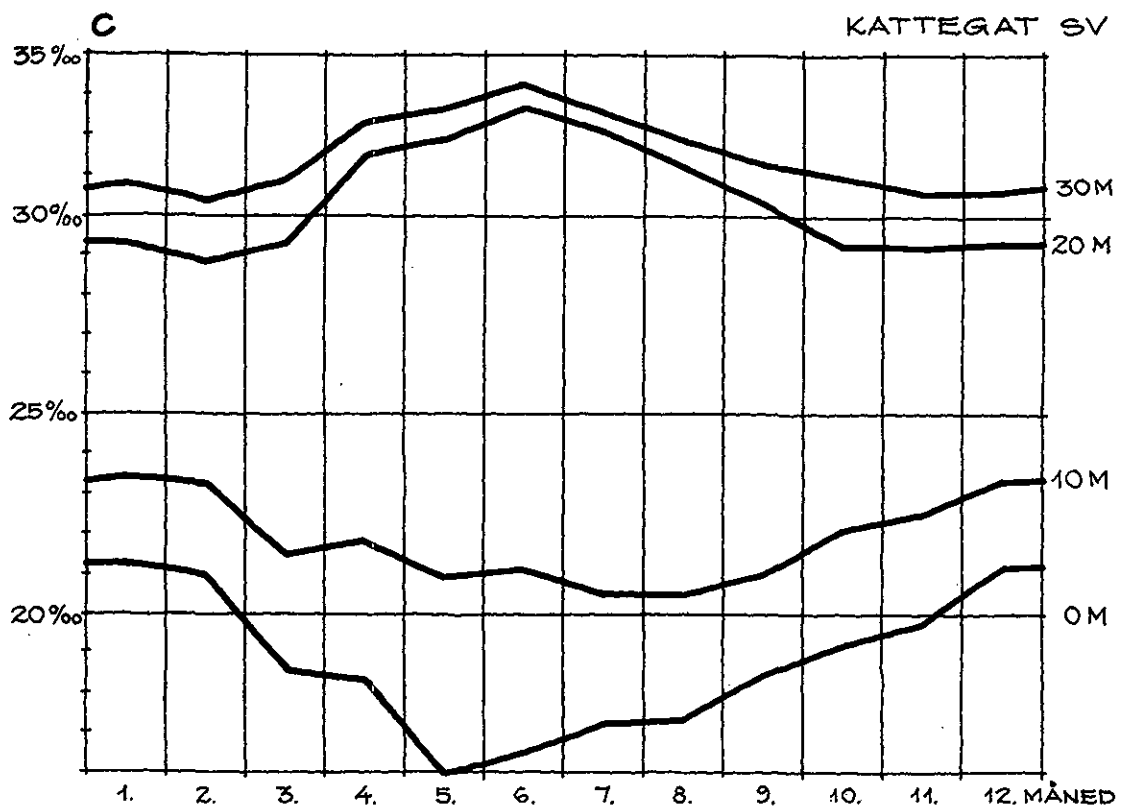


FIG. 2.2.1.2.1c-d

DEN ÅRLIGE VARIATION AF SALTHOLDIGHEDEN

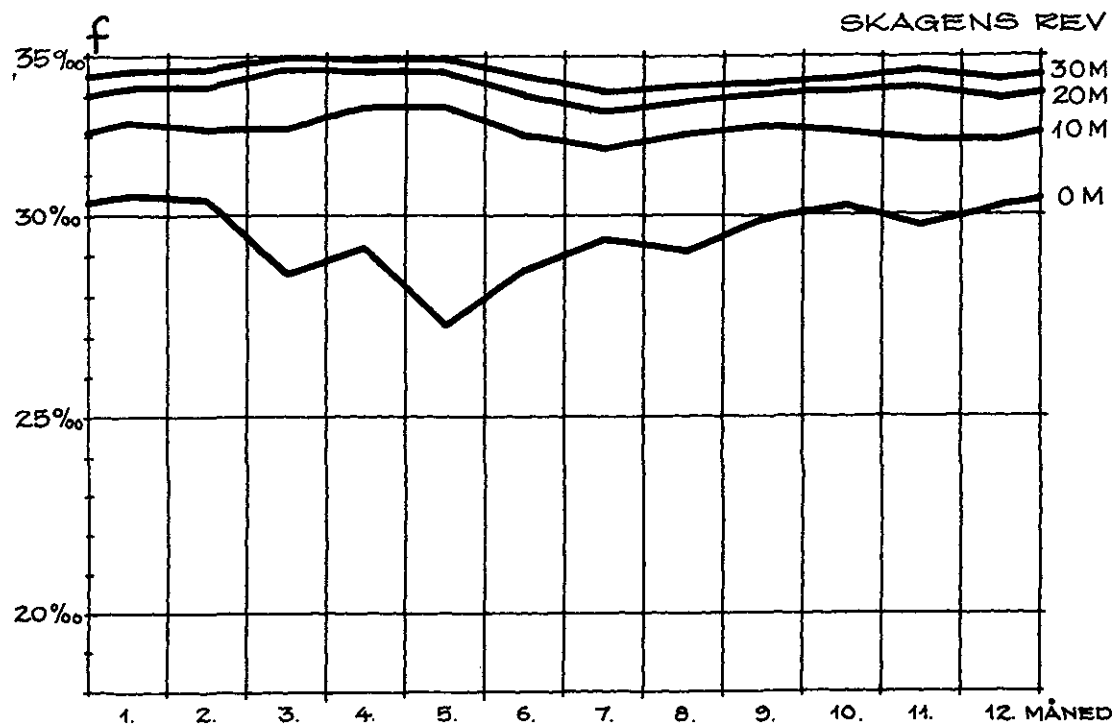
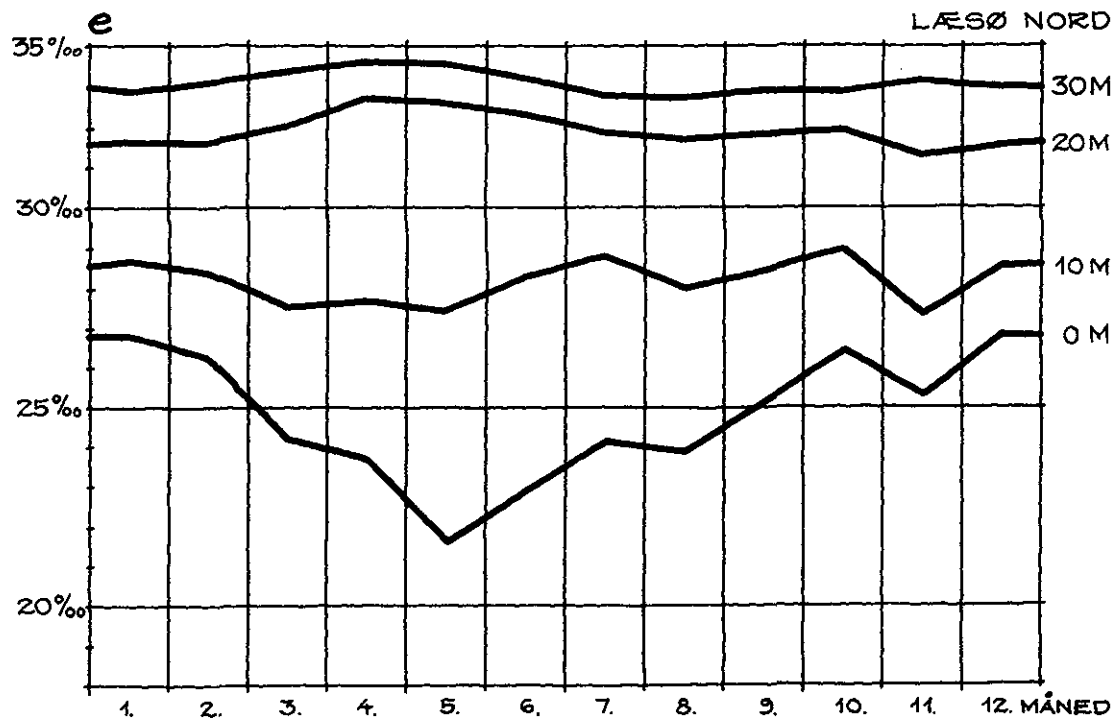


FIG.22.1.2.1ef

SALTHOLDIGHEDEN I OVERFLADEN I ET SNIT
 FRA SKAGERAK TIL ØSTERSØEN
 ‰ MIDDLEVÆRDIER 1931-1960 FOR FEBR., MAJ, AUG. OG NOV.

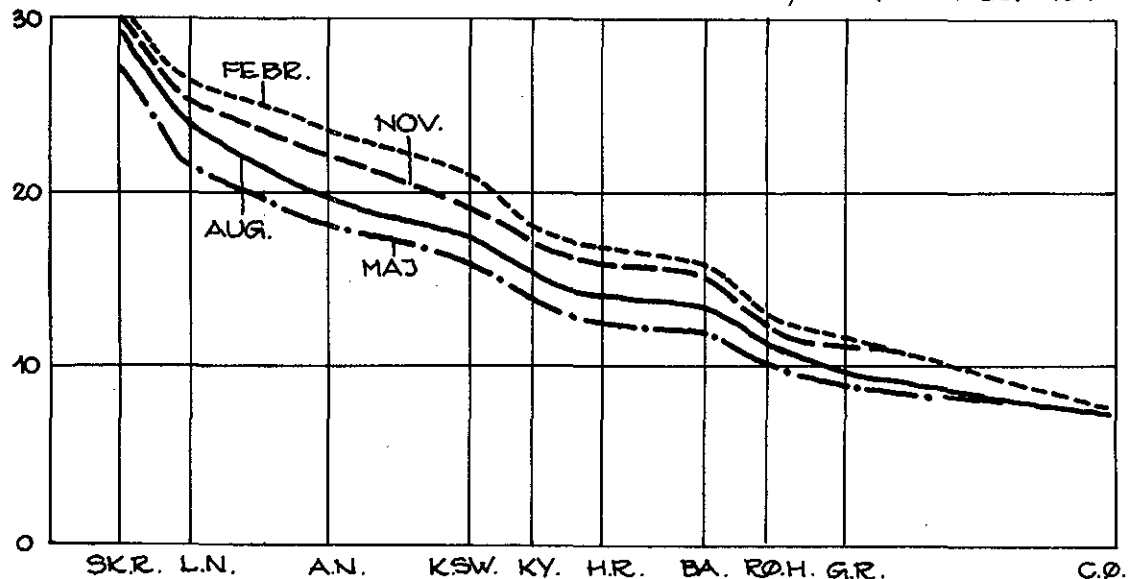
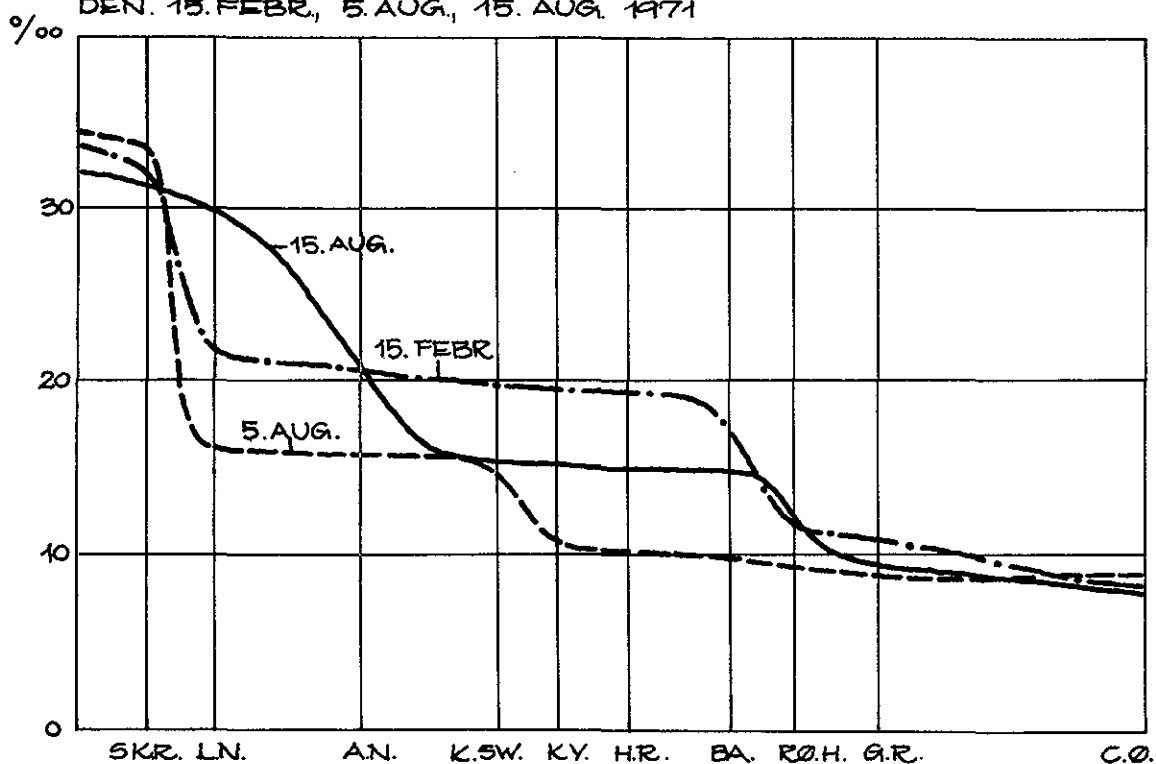


FIG. 2.2.2.1.

SALTHOLDIGHEDEN I OVERFLADEN I ET SNIT
 FRA SKAGERAK TIL ØSTERSØEN
 DEN. 15. FEBR., 5. AUG., 15. AUG. 1971



SK.R. - SKAGENS REV	H.R. - HALSKOV REV
L.N. - LÆSØ NORD	BA. - BAGENKOP
A.N. - ANHOLT NORD	RØ.H. - RØDBYHAVN
K.S.W. - KATTEGAT SYDV.	G.R. - GEDSER REV
KY. - KYSTHOSPITALET	C.Ø. - CHRISTIANSØ

FIG. 2.2.2.2.

HYPPIGHEDSFORDELING FOR
IND- OG UDSTRØMNINGSITUATIONER
AF FORSKELLIG VARIGHED.

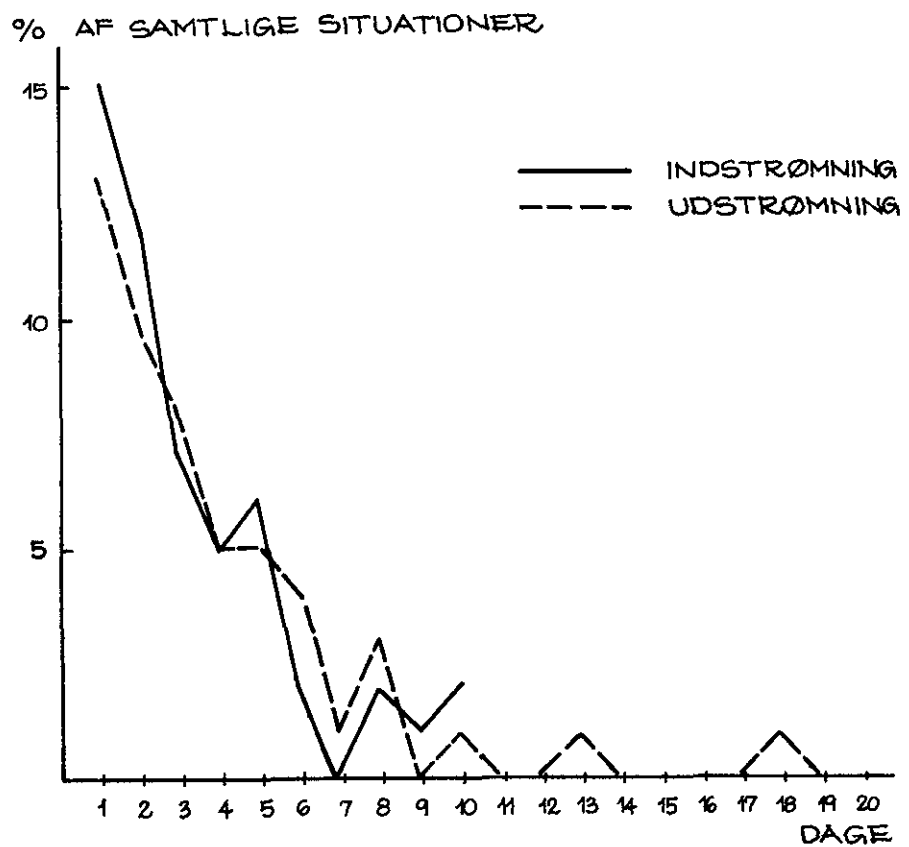


FIG.2.2.2.1.1.

STRØMDIAGRAM HALSKOV REV 1971 (OVERFLADEN)

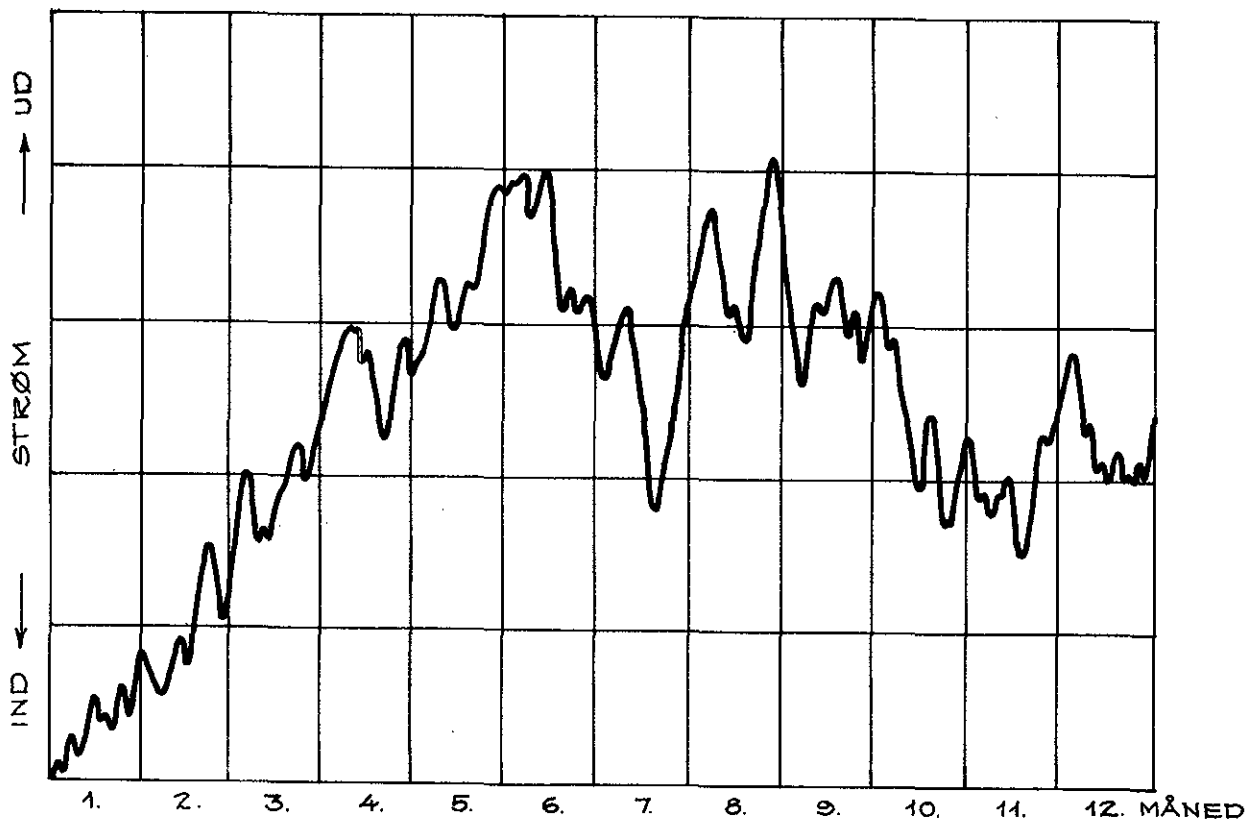


FIG. 2.2.2.12.

SALTINDHOLD HALSKOVREV 1971 (OVERFLADEN)

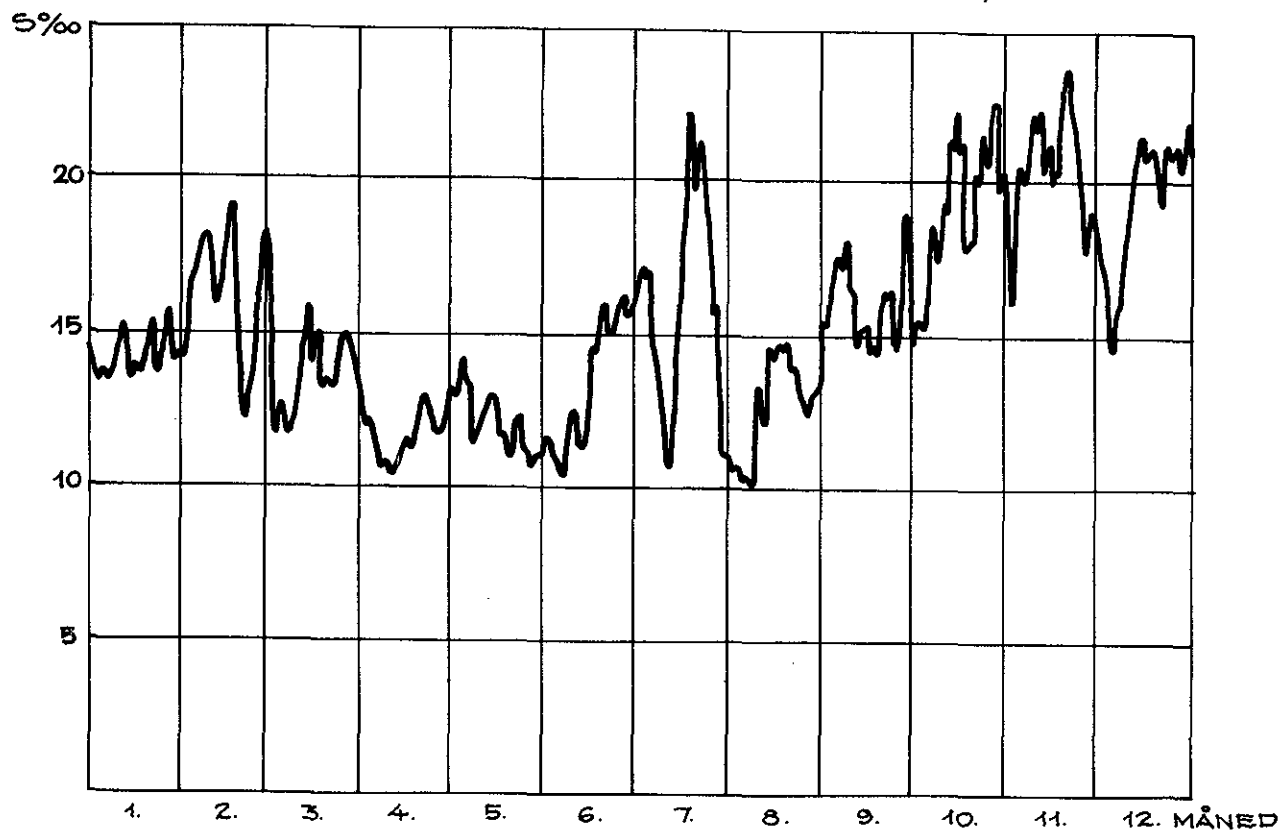
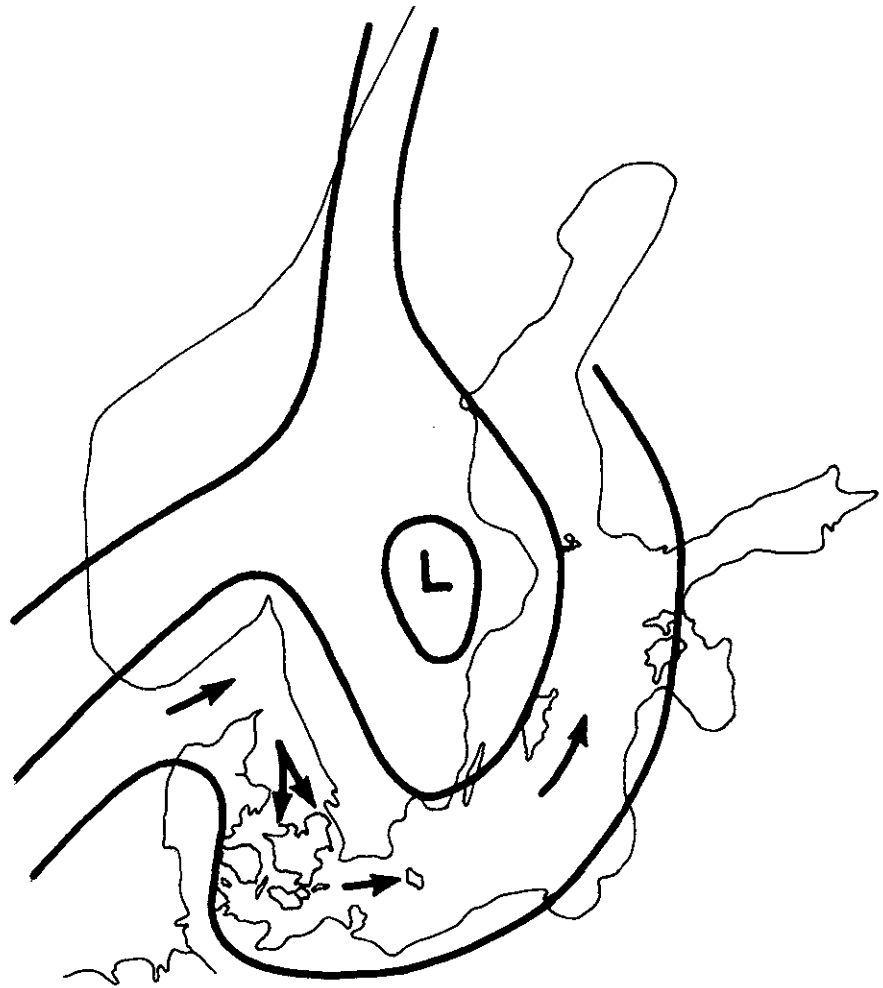
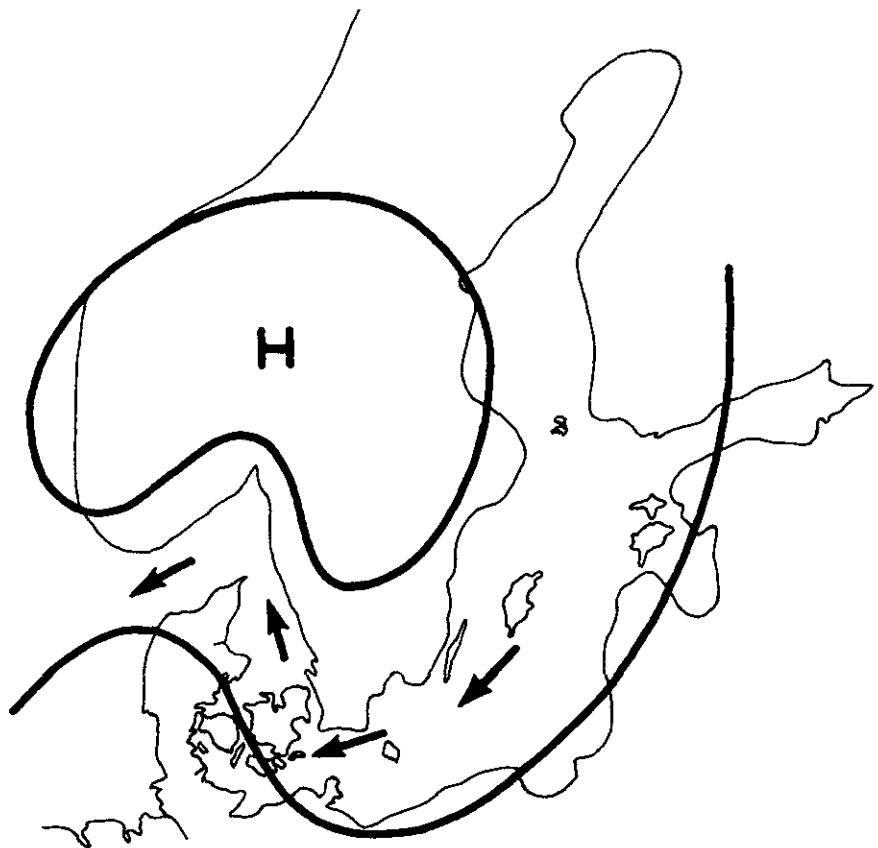


FIG. 2.2.2.13.



INDSTROMNING

FIG. 2.2.2.1.



UDSTROMNING

FIG. 2.2.2.2.

FRONTERNES BELIGGENHED
EFTER EN LANGVARIG
PERIODE MED NORDGÅENDE
STRØM

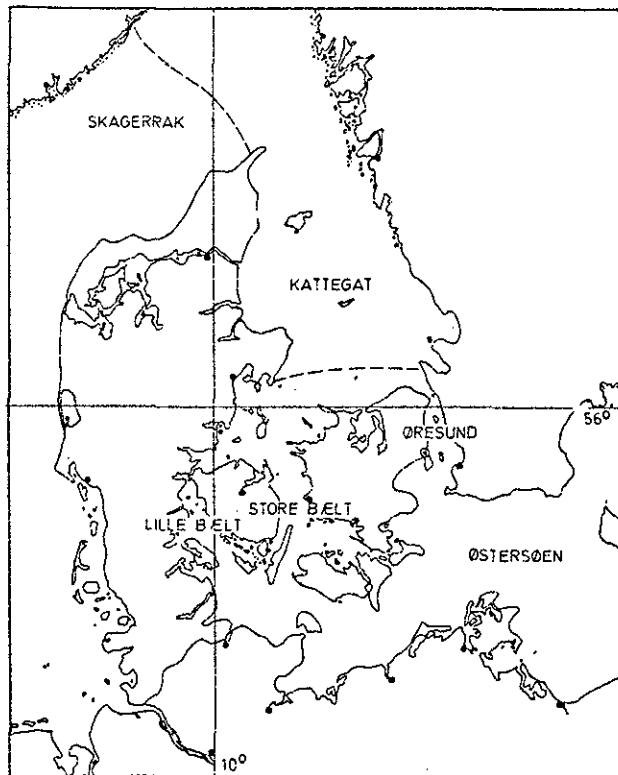


FIG. 2.2.2.2.3.

FRONTERNES BELIGGENHED
EFTER LANGVARIG
PERIODE MED SYDGÅENDE
STRØM

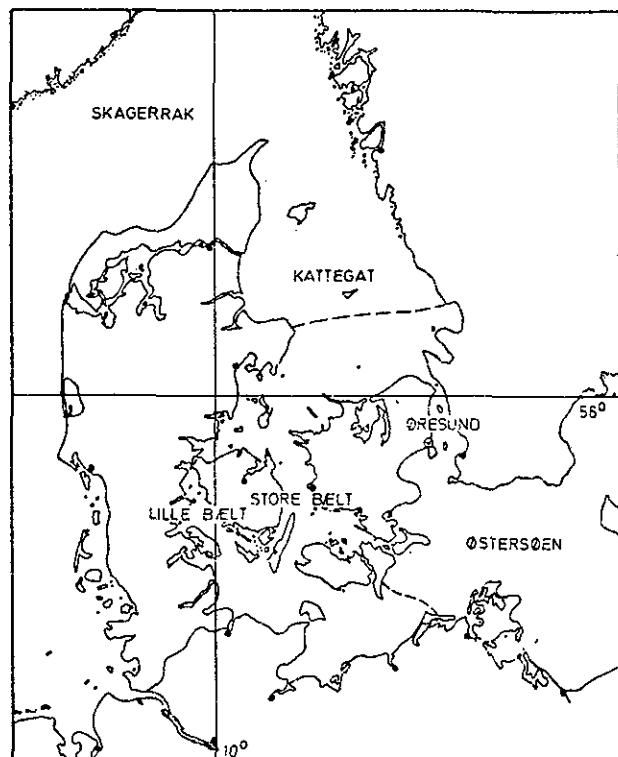
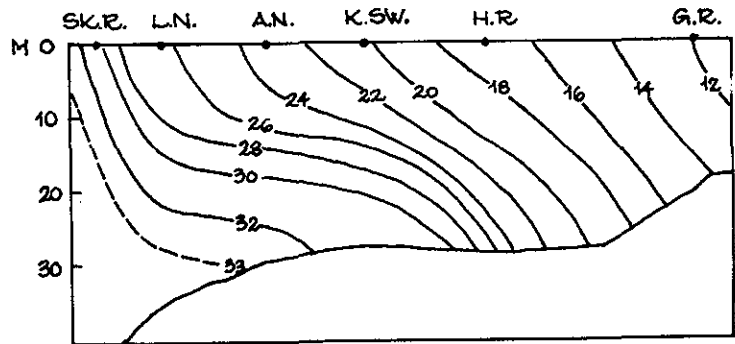
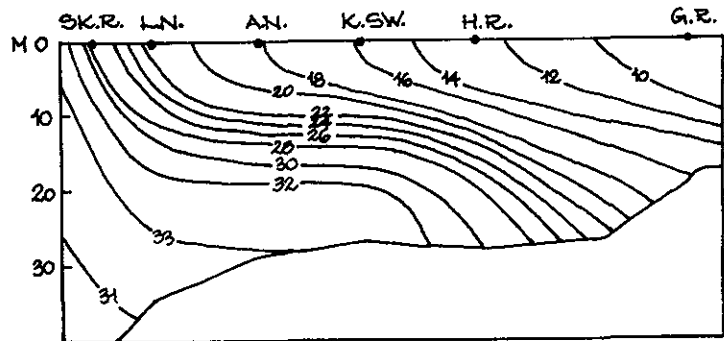


FIG. 2.2.2.2.4.



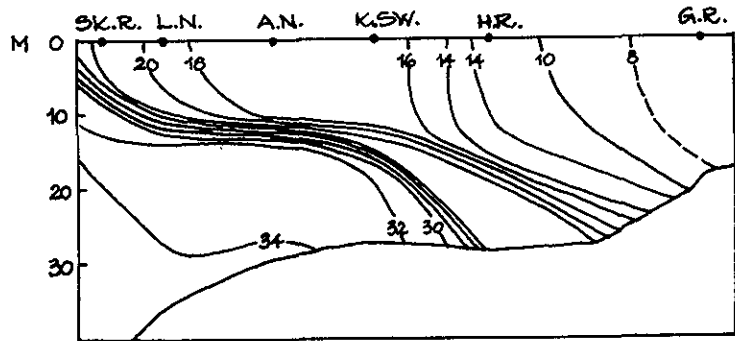
MIDDEL SALTHOLDIGHEDSFORDELINGEN
‰ - JANUAR -

FIG.2.2.3.1a



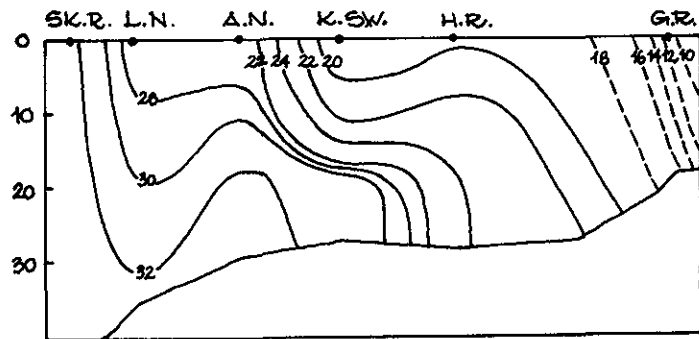
MIDDEL SALTHOLDIGHEDSFORDELINGEN
‰ - MAJ -

FIG.2.2.3.1b



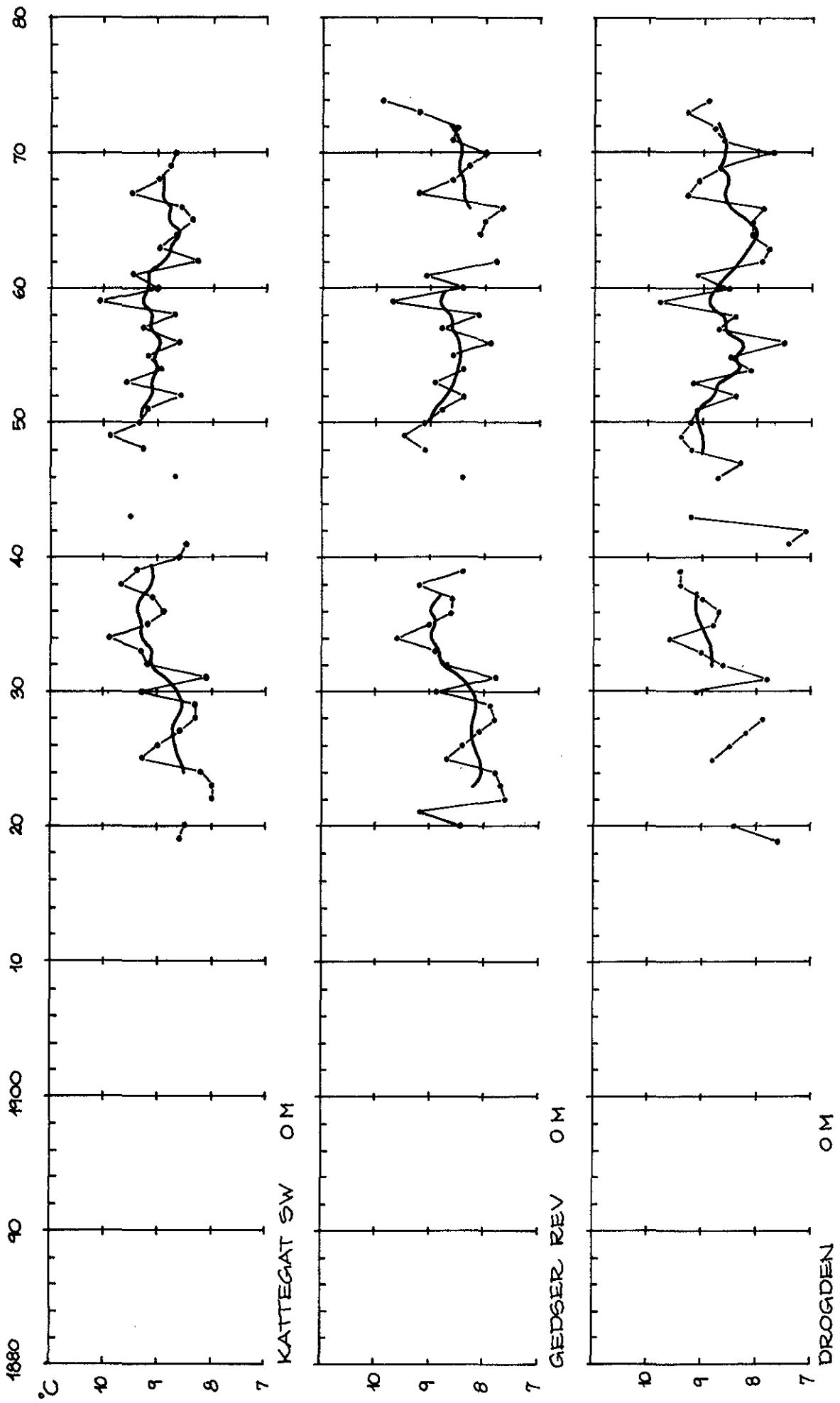
SALTHOLDIGHEDSFORDELINGEN EFTER
EN LÆNGERE UDSTRØMNINGS-SITUATION
25 MAJ 1971

FIG.2.2.3.2a



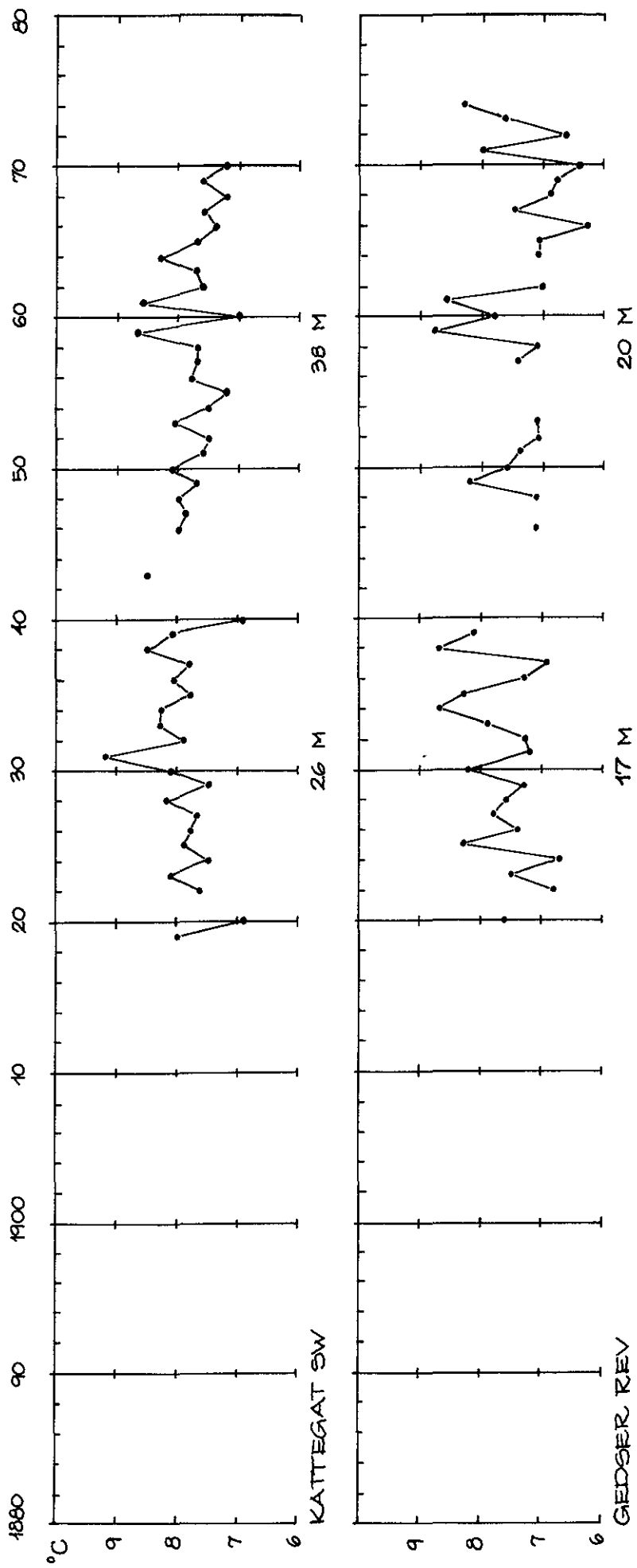
SALTHOLDIGHEDSFORDELINGEN EFTER
EN LÆNGERE INDSTRØMNINGS-SITUATION
21 JULI 1971

FIG.2.2.3.2b



DEN ÅRLIGE MIDDELVERDI FOR OVERFLADETEMPERATUREN VED
FYRSKIBENE KATTEGAT SW, GEDSER REV OG DROGDEN

FIG.2.3.1.1.



DEN ÅRLIGE MIDDLEVÆRDI FOR BUNDTEMPERATUREN VED
FYRSKIBENE KATTEGAT SW OG GEDSER REV

FIG. 2.3.1.2.

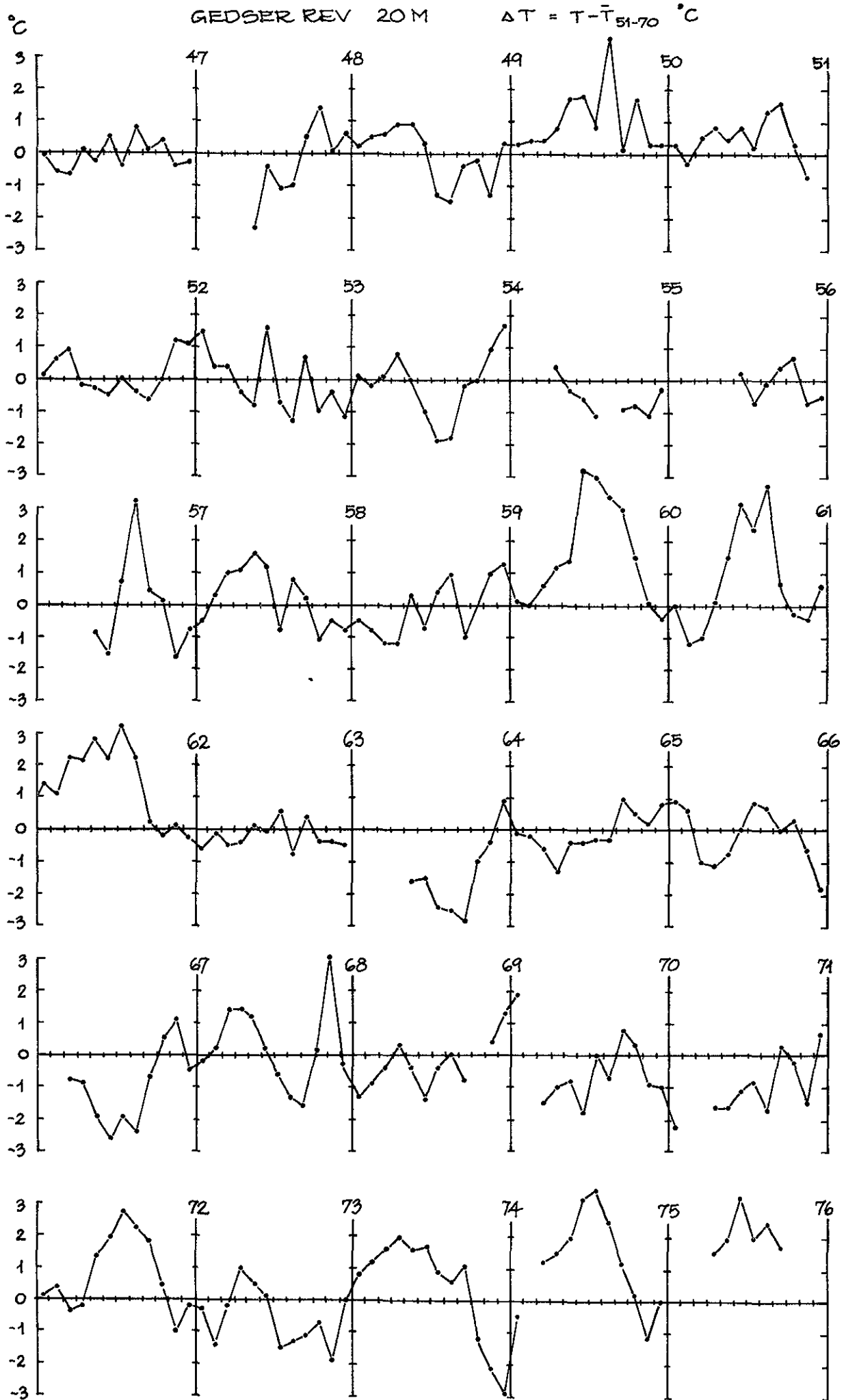


FIG. 2.3. 1.3.

DEN ÅRLIGE VARIATION AF TEMPERATUREN

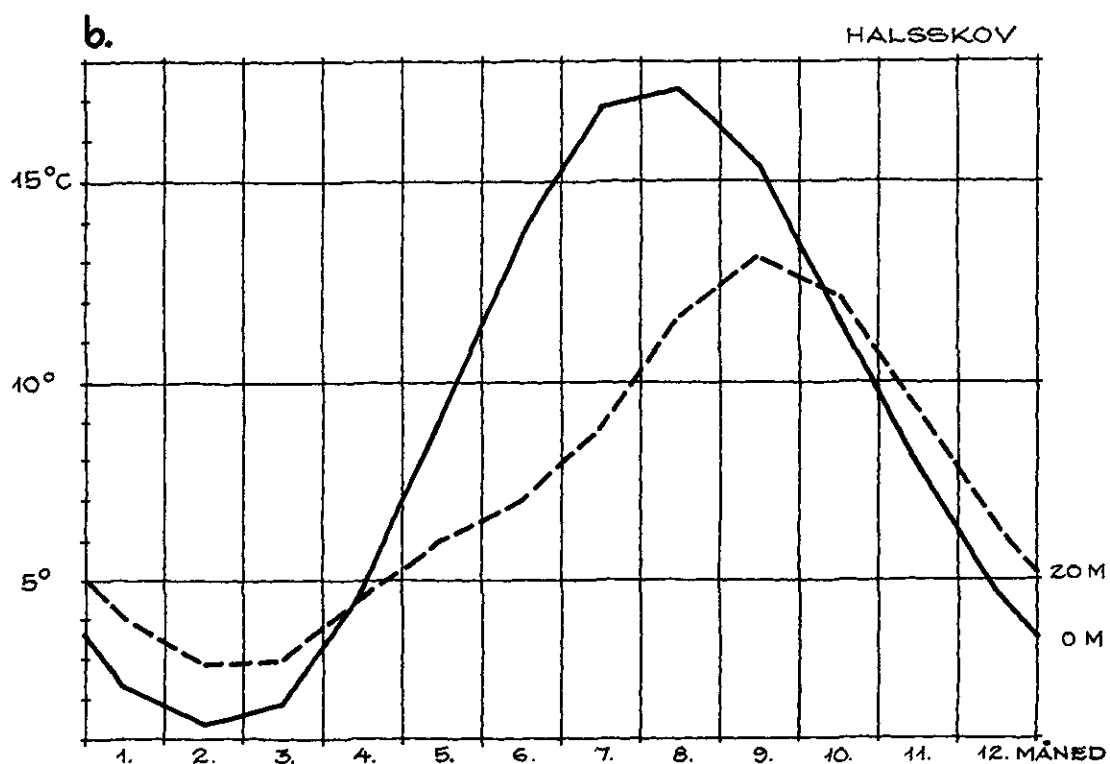
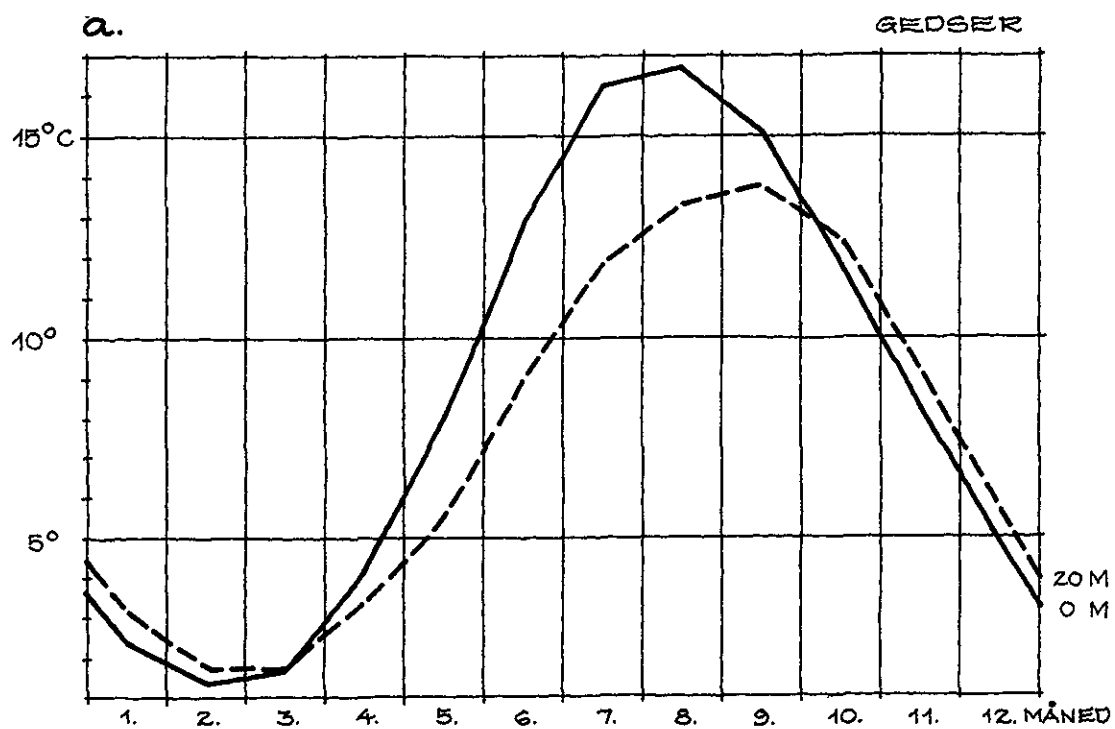


FIG. 2.3.2.1ab

DEN ÅRLIGE VARIATION AF TEMPERATUREN.

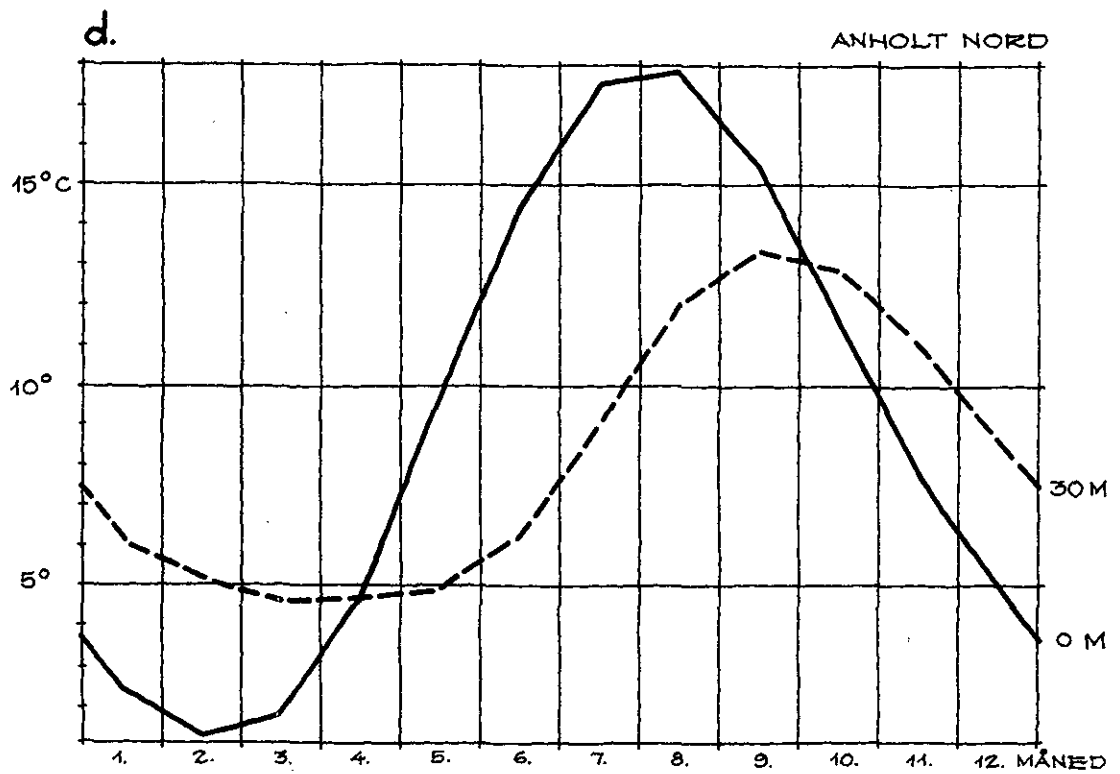
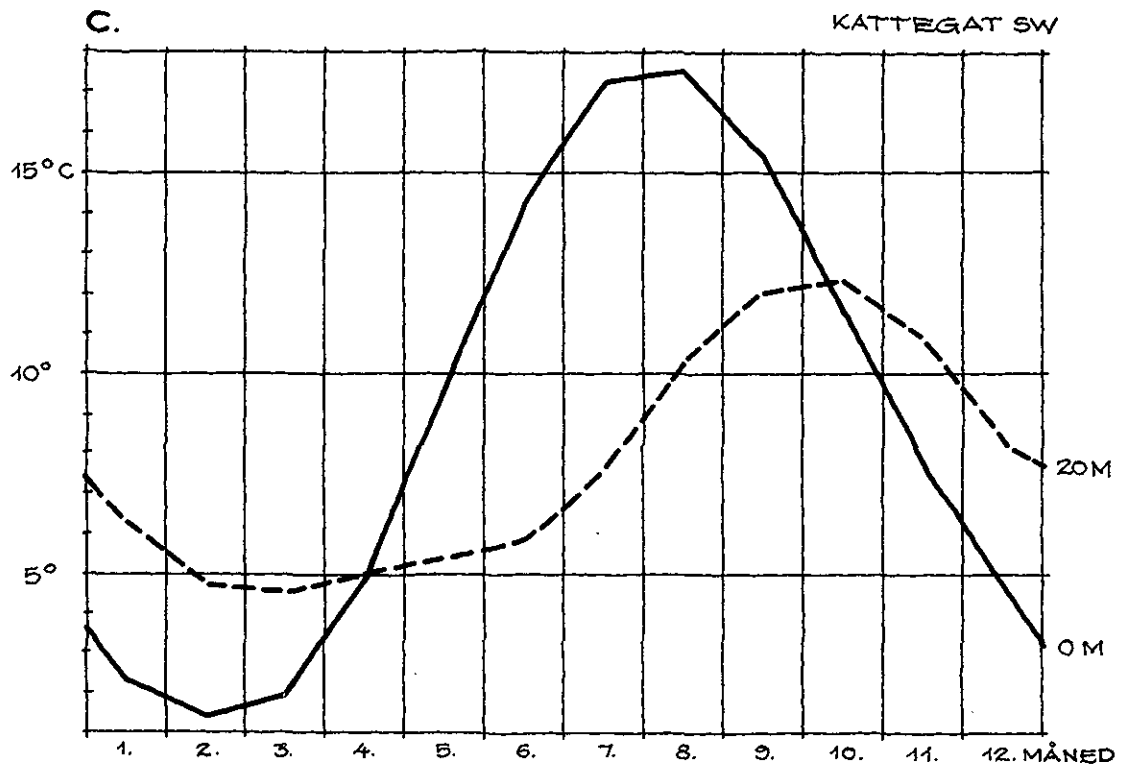


FIG.2.3.2.1cd

DEN ÅRLIGE VARIATION AF TEMPERATUREN

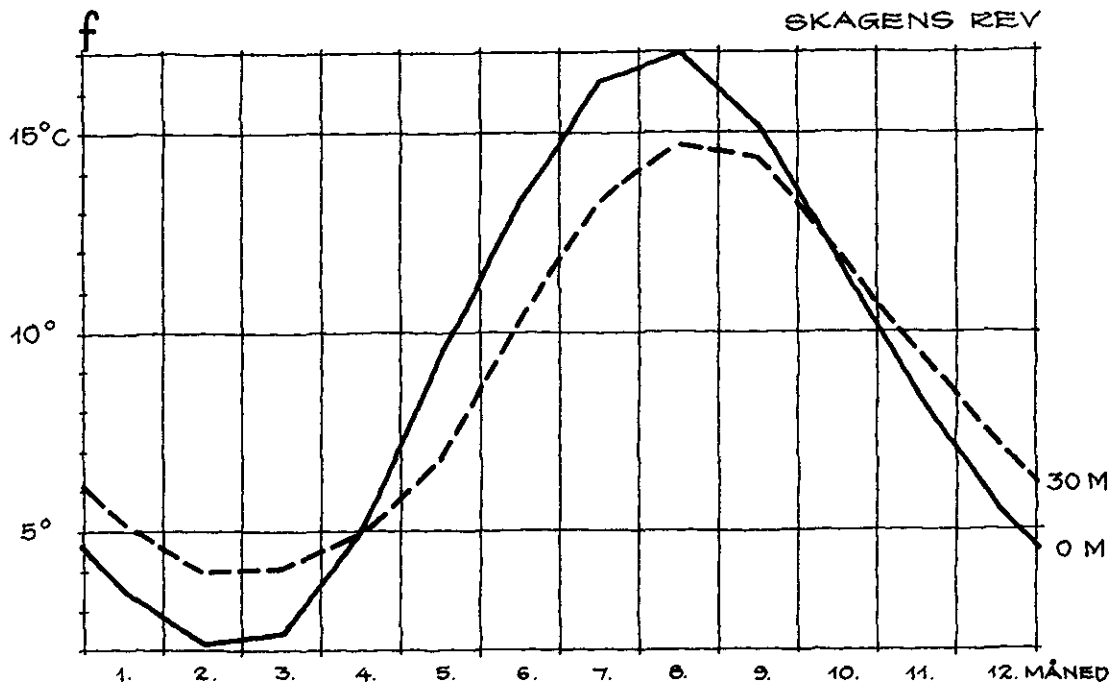
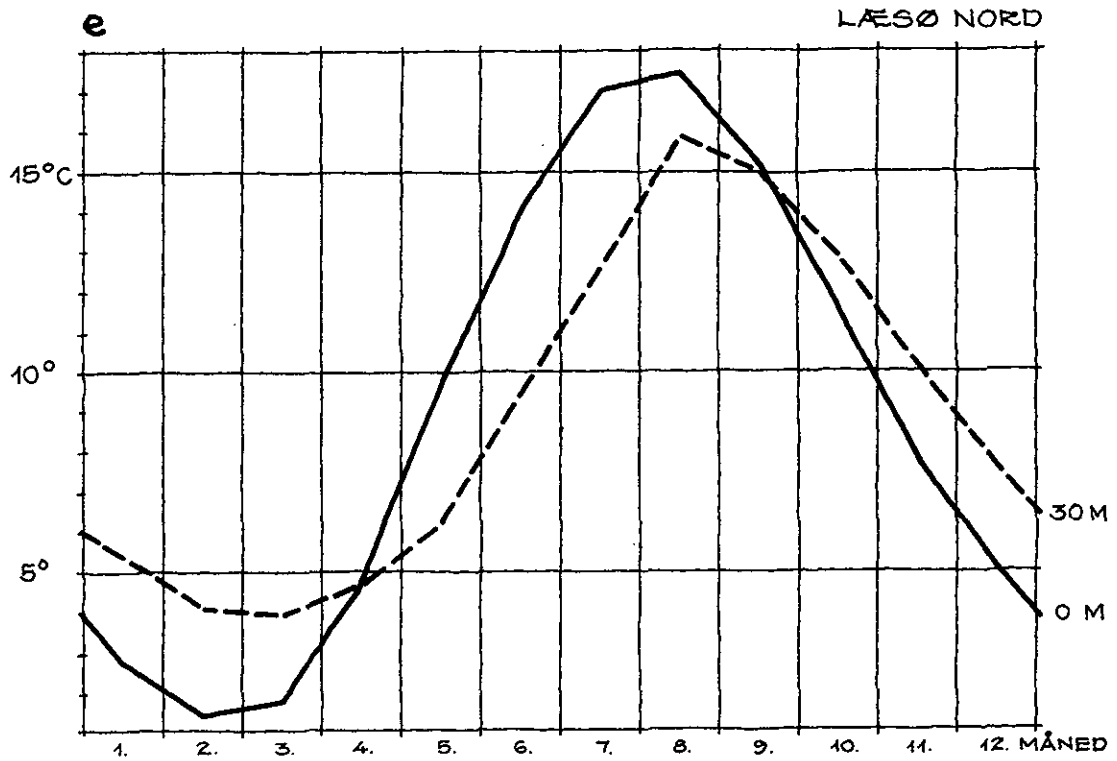
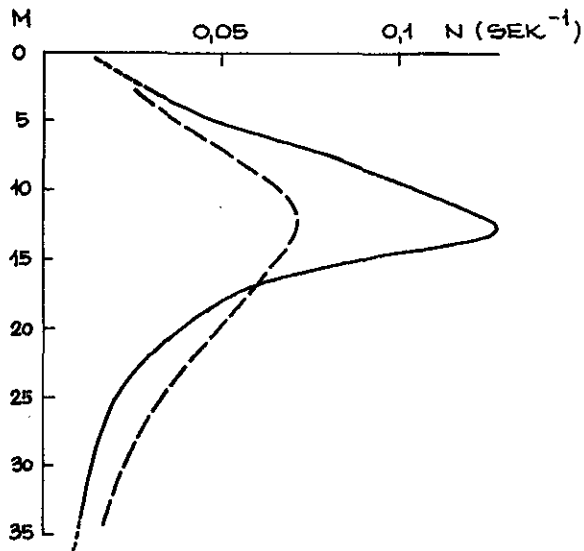


FIG.2.3. 2.1ef



KATTEGAT SW JUNI — FEBRUAR - - -

FIG. 2.3.3.1a

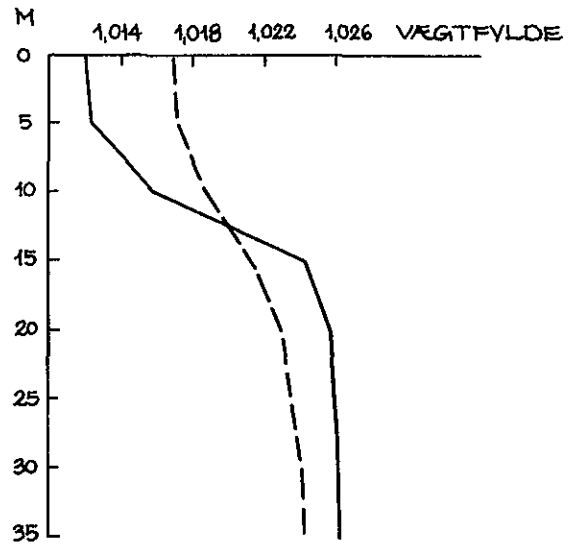
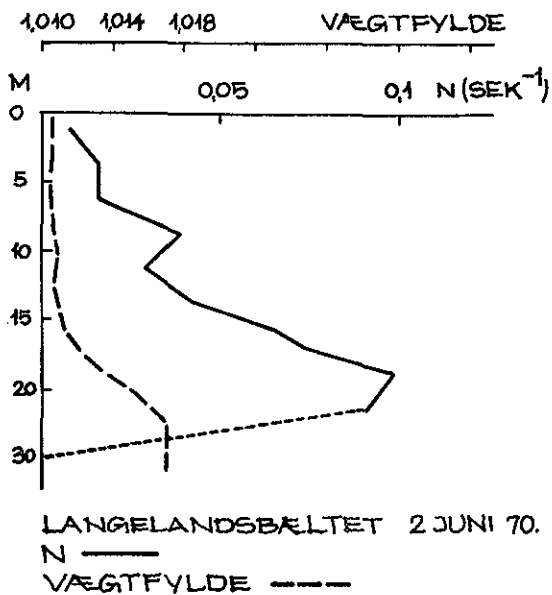


FIG. 2.3.3.1b



LANGELANDBÆLTET 2 JUNI 70.

N —
VÆGTFYLDE - - -

FIG. 2.3.3.2.

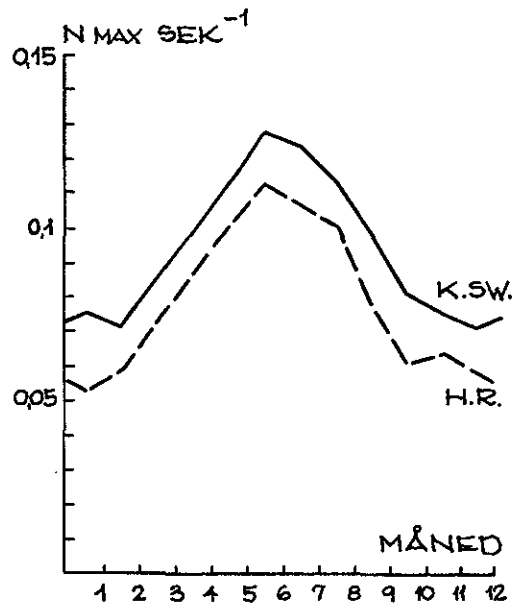


FIG. 2.3.3.3.

- Q. FERSKVANDSTILFØRSELN TIL ØSTERSØEN
- Q_0 TILLØB FRA FLODER
- N NEDBØR TIL ØSTERSØEN
- V FORDAMPNING FRA ØSTERSØEN

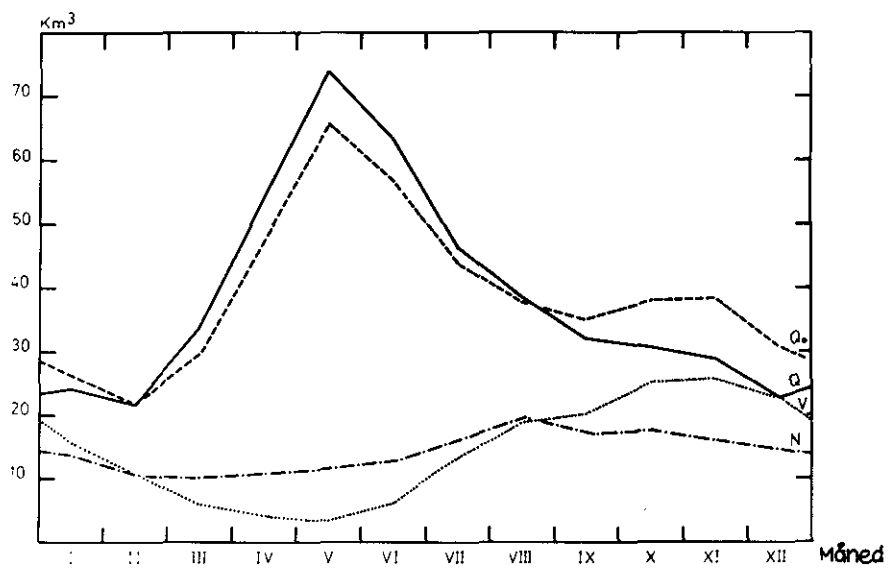


FIG. 2.4.1.1.

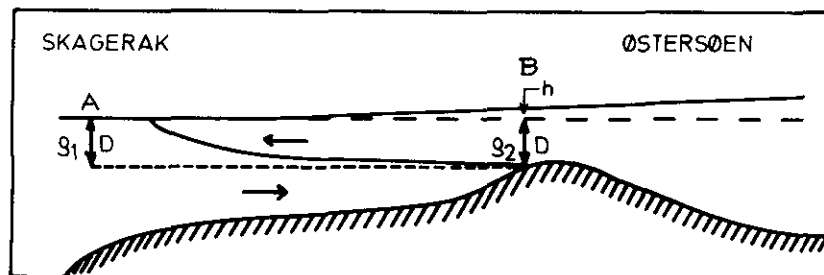
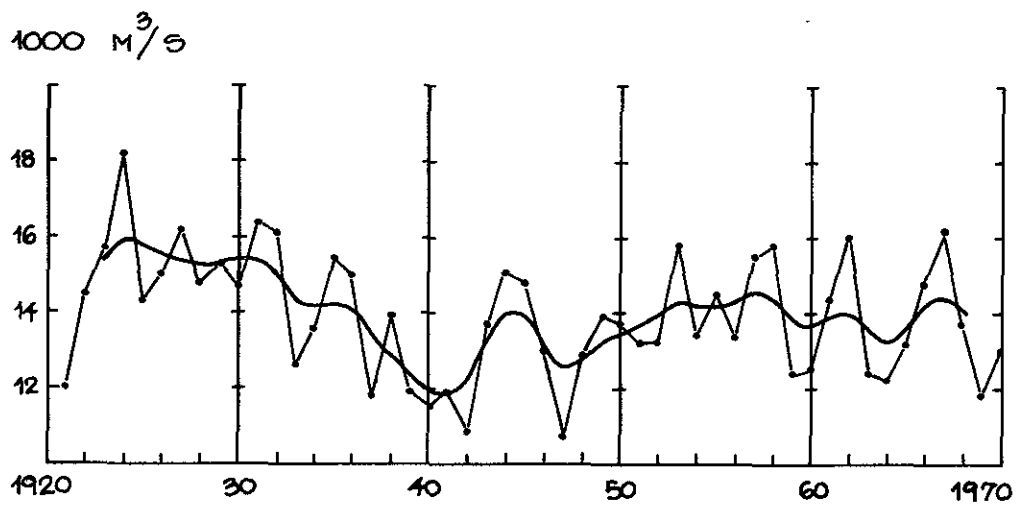


FIG. 2.4.1.2.



FLODAFLØB TIL ØSTERSØEN

FIG. 2.4. 1.1.1.

ANTALLET AF DAGE PR. ÅR MED OVERVEJENDE
Vestlig Vind over England.
Efter Lamb 1973.

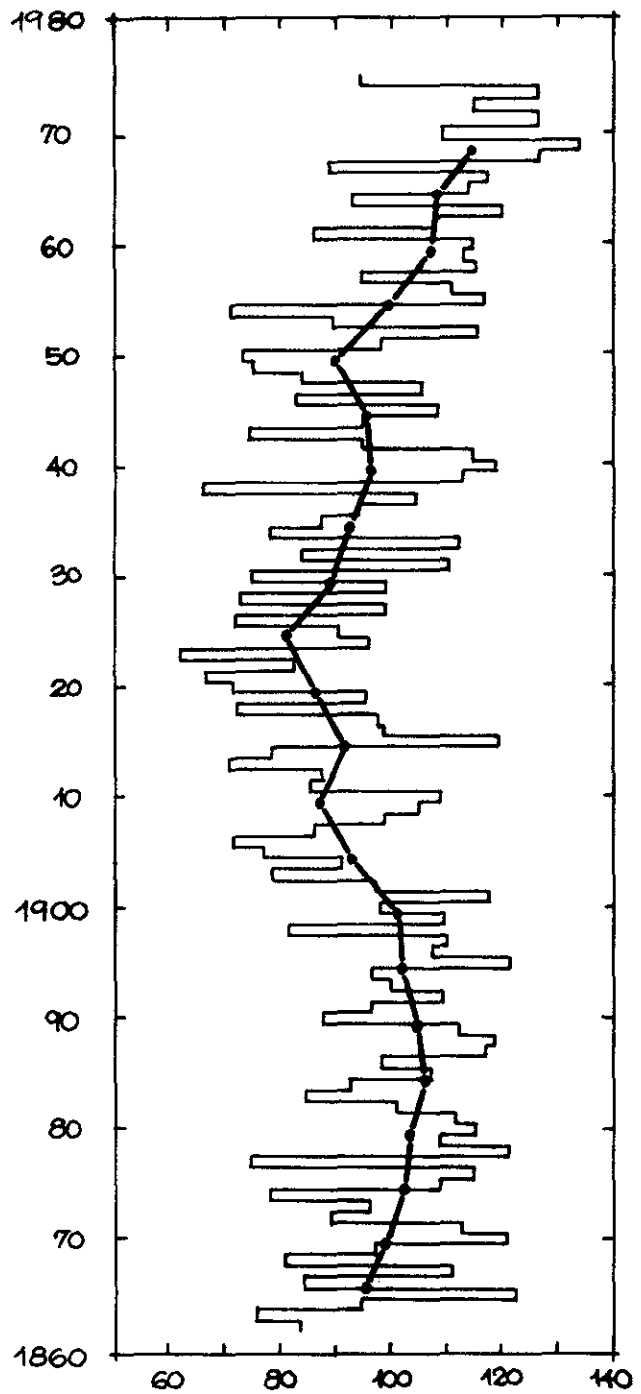
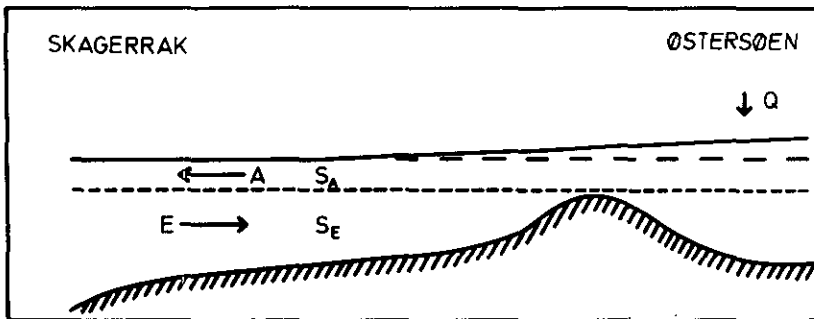
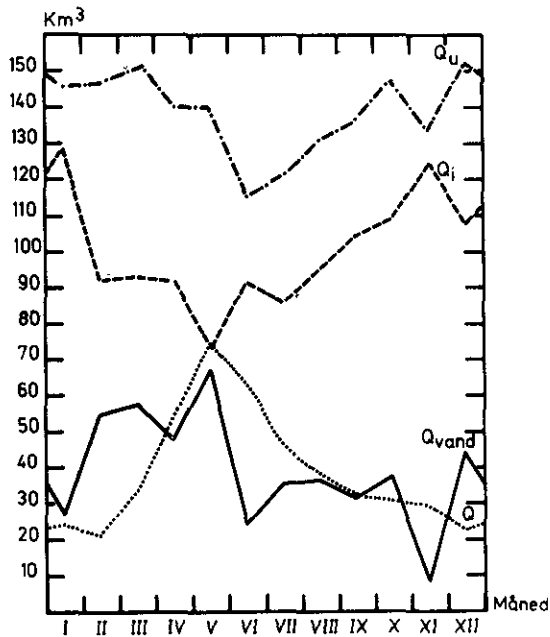


FIG. 2.4.2.1.1.



- A UDSTRØMMENDE VAND
- E INDSTRØMMENDE VAND
- S_A SALTHOLDIGHEDEN I DET UDSTRØMMENDE VAND
- S_E SALTHOLDIGHEDEN I DET INDSTRØMMENDE VAND
- Q FERSKVANDSTILFØRSELN TIL ØSTERSØEN

FIG. 2.5.1.



- Q_u UDADRETTET VANDTRANSPORT
- Q_i INDADRETTET VANDTRANSPORT
- Q_{vand} $Q_u - Q_i$
- Q FERSKVANDSTILFØRSELN TIL ØSTERSØEN

FIG. 2.5.2.

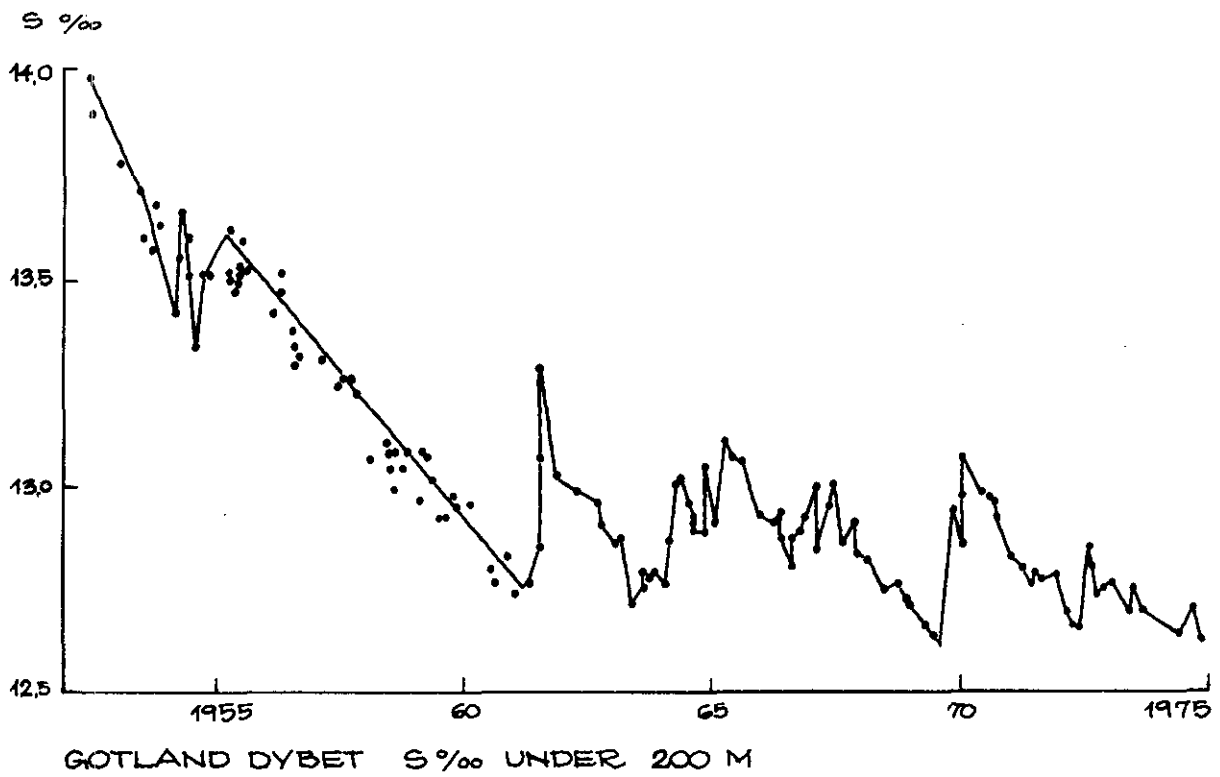
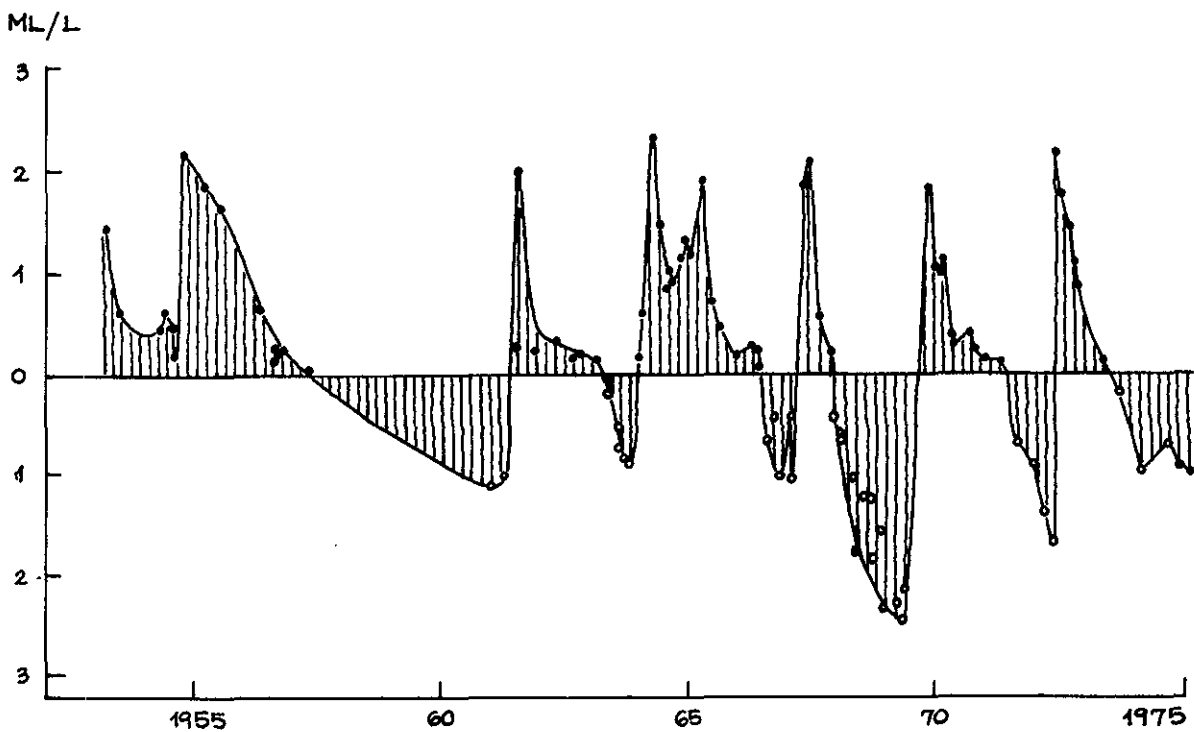


FIG. 2.5.3.



F 81 O₂ OG H₂S I 240 M'S DYBDE

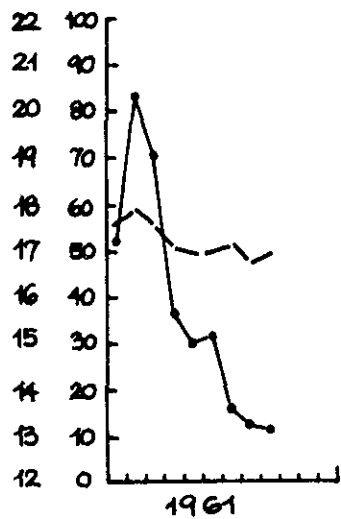
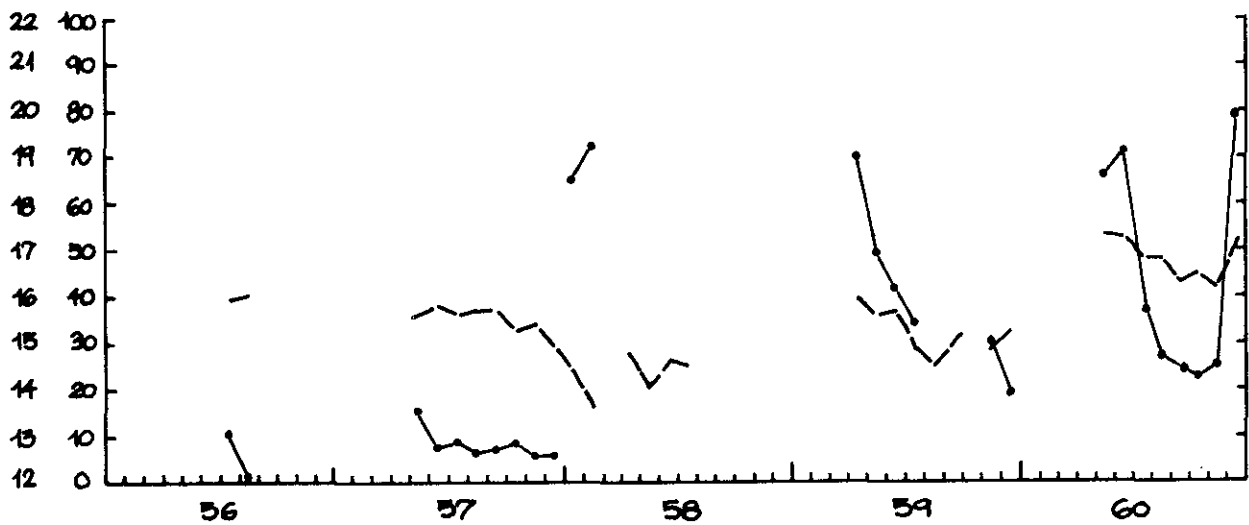
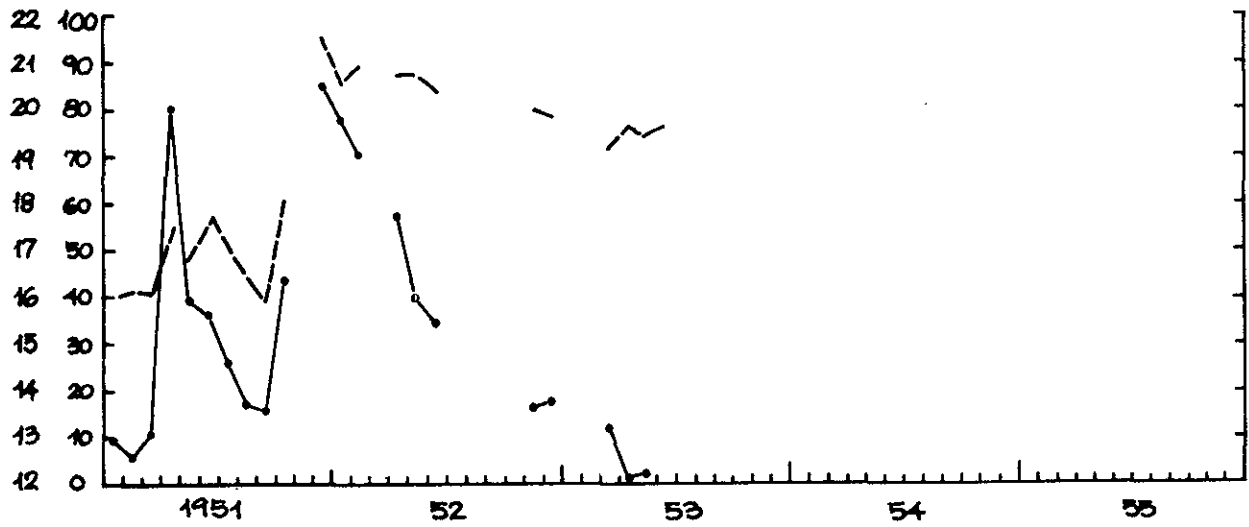
• O₂ ML/L ◦ H₂S (NEGATIVE O₂)

EFTER S. FONSELIUS 1975

FIG. 2.5.4.

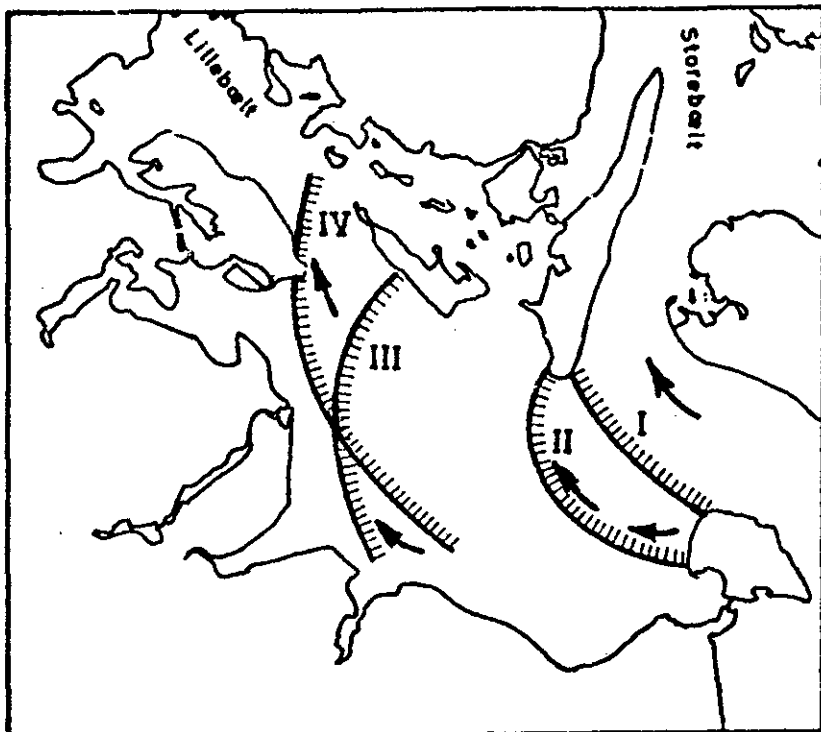
VARIATIONER I ILT OG SALT I 100 M'S DYBDE I BORNHOLMS DYBET
 E 15° 13' 8" - N 55° 18' 5"

SALT ILT
 ‰ ‰



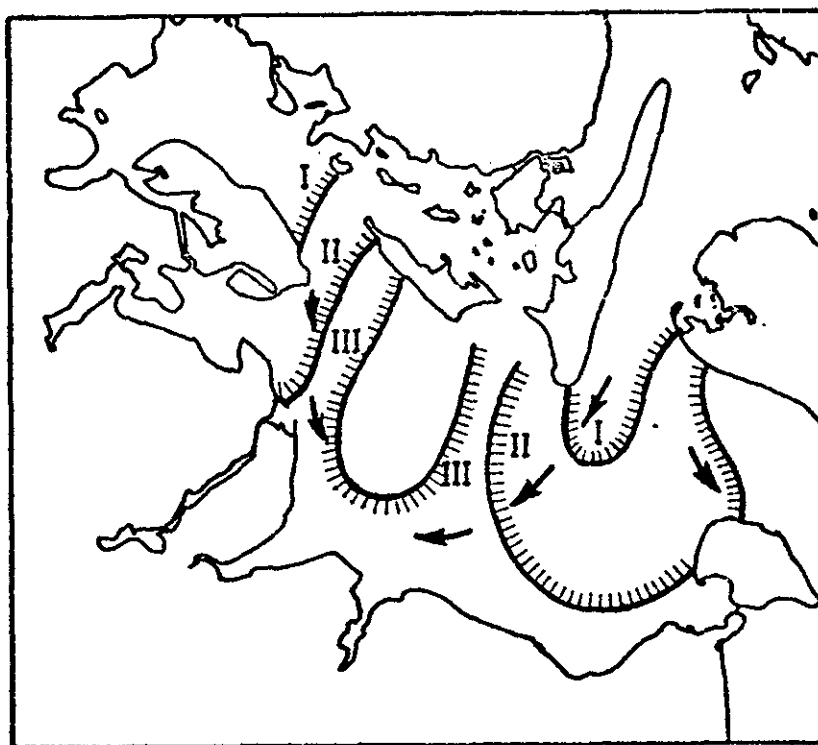
ILT — SALT - - -

FIG. 2.5.5.



UDSTRØMNING

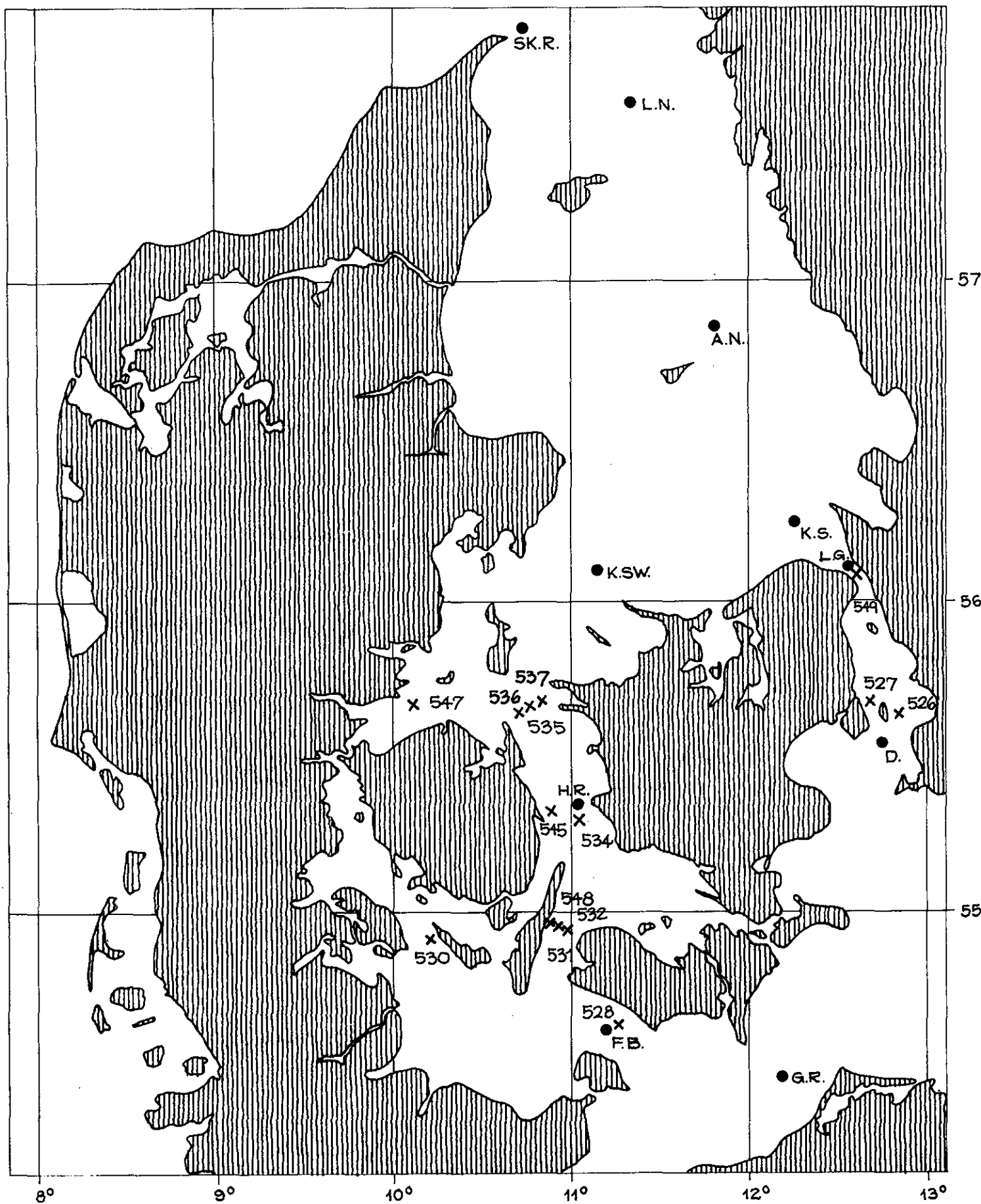
FIG. 2.5.3.1.



INDSTRØMNING

FIG. 2.5.3.1.

EFTER H. WATTENBERG 1949



SK.R. - SKAGENS REV
 L.N. - LÆSØ NORD
 A.N. - ANHOLT NORD
 K.S.W. - KATTEGAT SYDV
 K.S. - KATTEGAT SYD
 H.R. - HALSKOV REV
 F.B. - FEHMERNBELT
 G.R. - GEDSER REV
 D. - DROGDEN

x STATIONER MED SELVREGISTRERENDE
 STRØMMÅLERE

L.G. - LAPPEGRUND

FIG. 2.6.1.

THE BELT PROJECT

THE SOUND, SOUTH

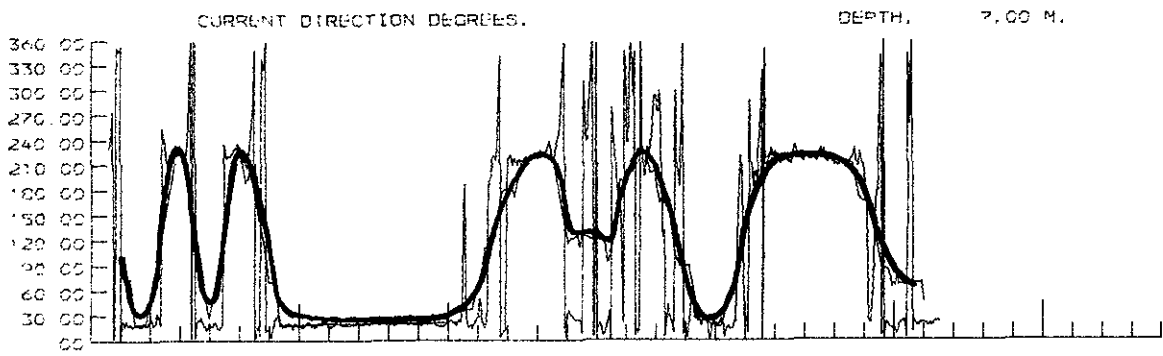
STATION 526

5537.40 N

1250.90 E

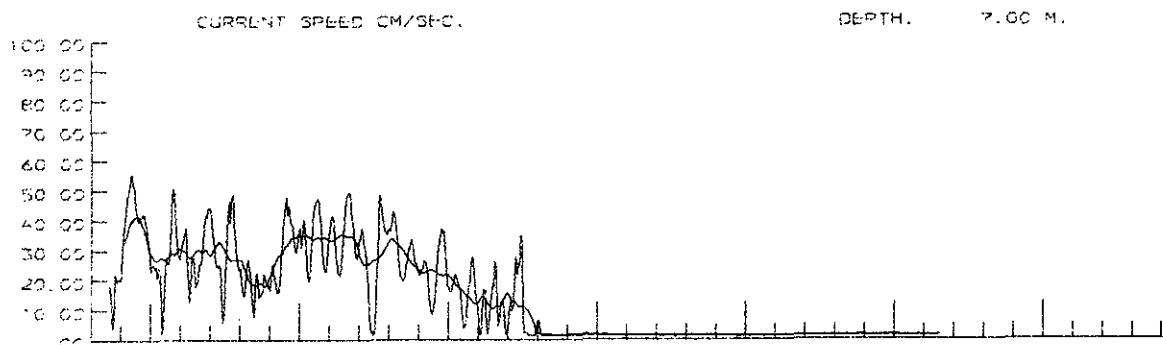
1975.04.28.14.20.00 TO 1975.05.26.13.00.00

TIMEINT. 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



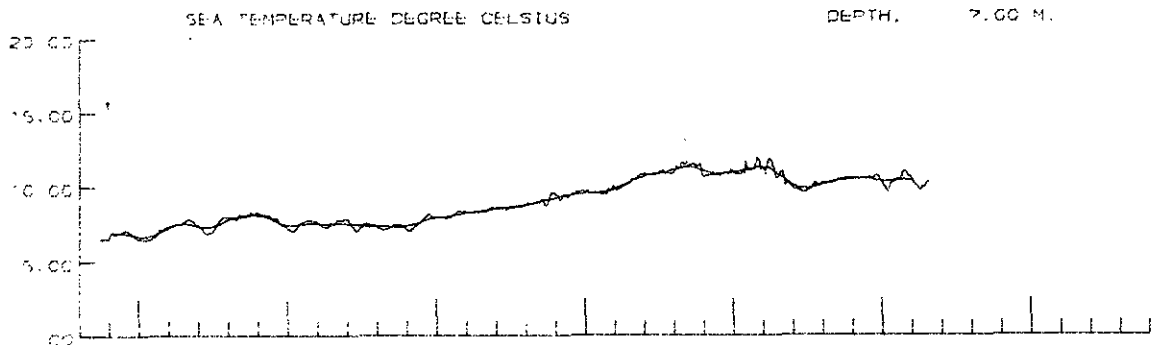
19750428
00 00 00

19750603
00.00.00
1 UNIT =
1 DAY.



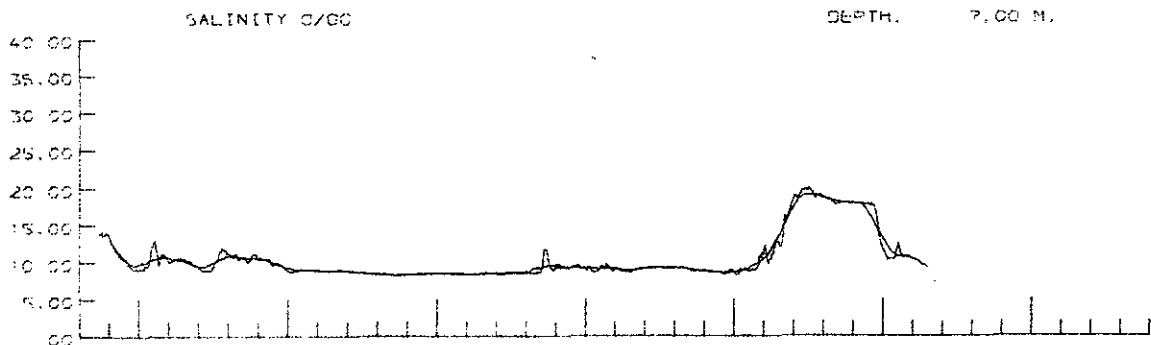
19750428
00 00 00

19750603
00.00.00
1 UNIT =
1 DAY.



19750428
00 00 00

19750603
00.00.00
1 UNIT =
1 DAY.



19750428
00 00 00

19750603
00.00.00
1 UNIT =
1 DAY.

THE BELT PROJECT

THE SOUND, SOUTH

STATION 527

5539.50 N

1242.20 E

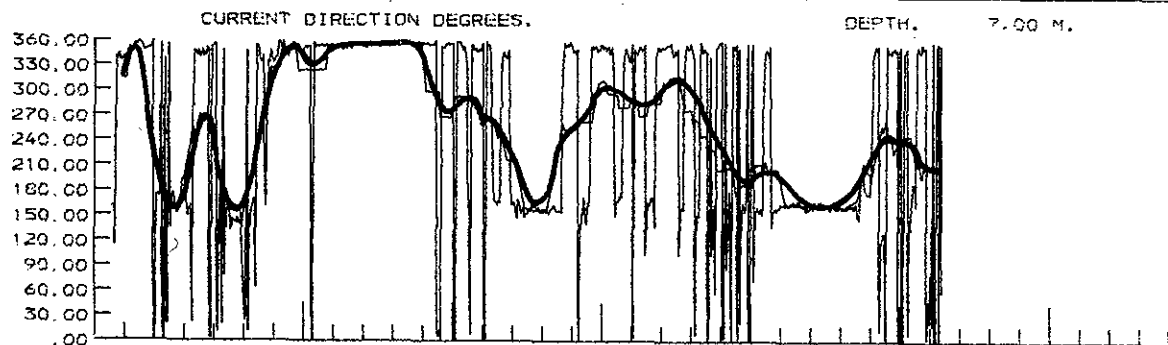
1975:04:28:12:30.00

TO 1975:05:26:10:50.00

TIMEINT.

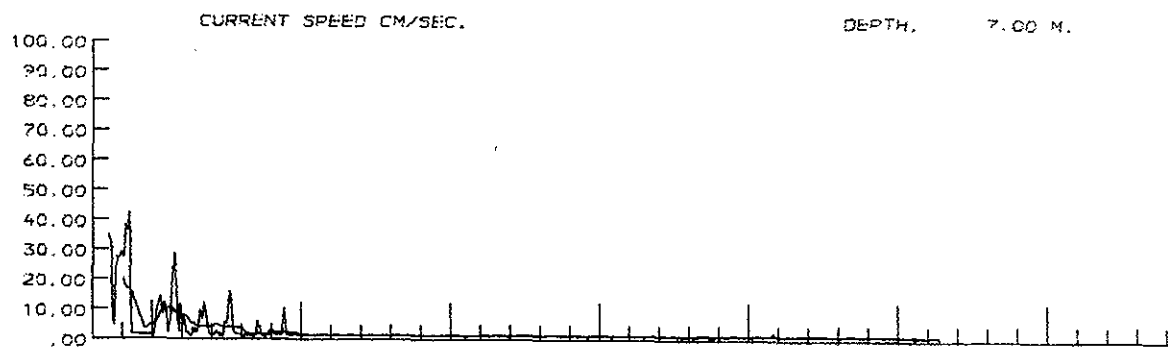
3600 SECONDS - RUNNING MEAN IS TAKEN OVER

25 TIMEINT.



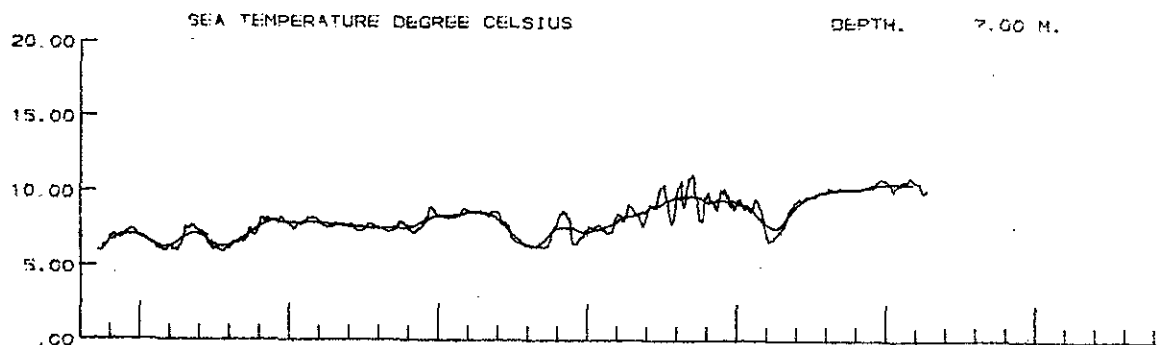
19750428
00.00.00

19750603
00.00.00
1 UNIT
1 DAY.



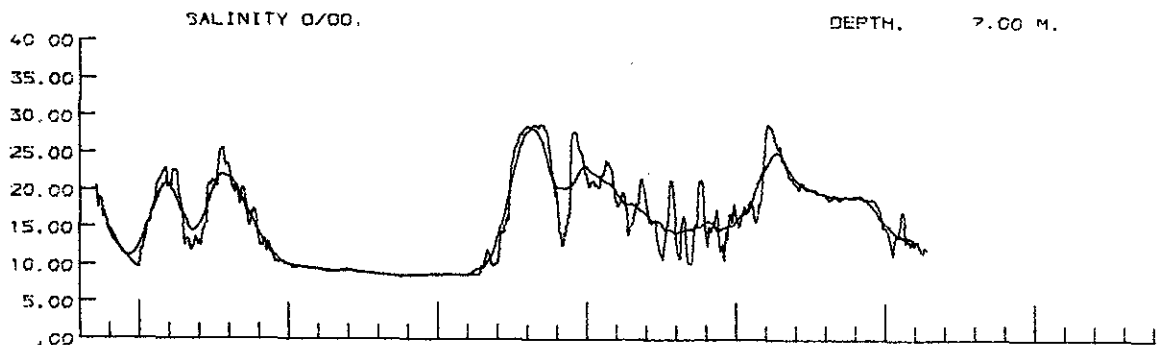
19750428
00.00.00

19750603
00.00.00
1 UNIT
1 DAY.



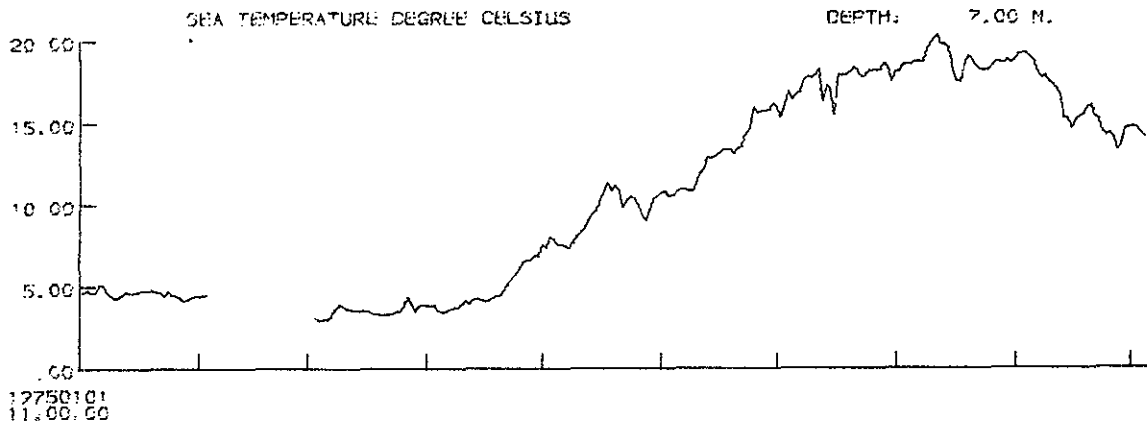
19750428
00.00.00

19750603
00.00.00
1 UNIT
1 DAY.

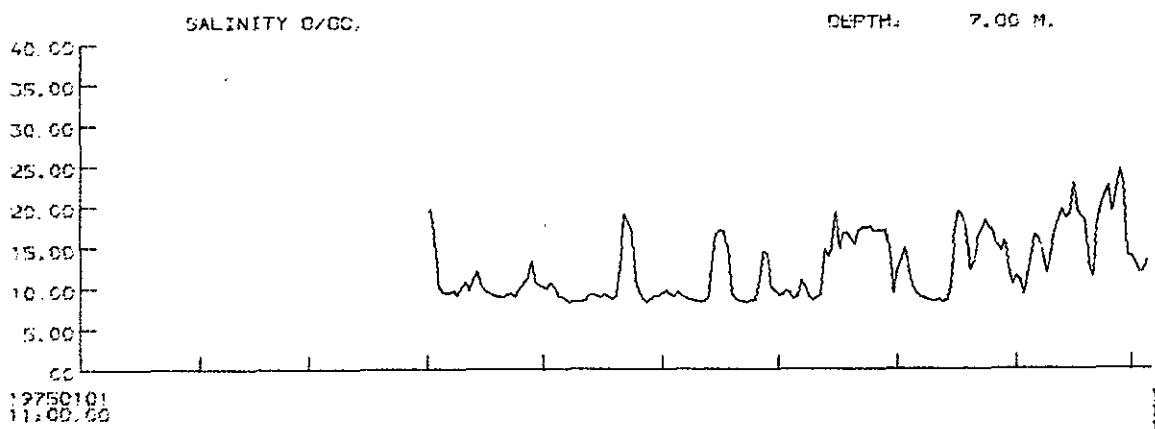


19750428
00.00.00

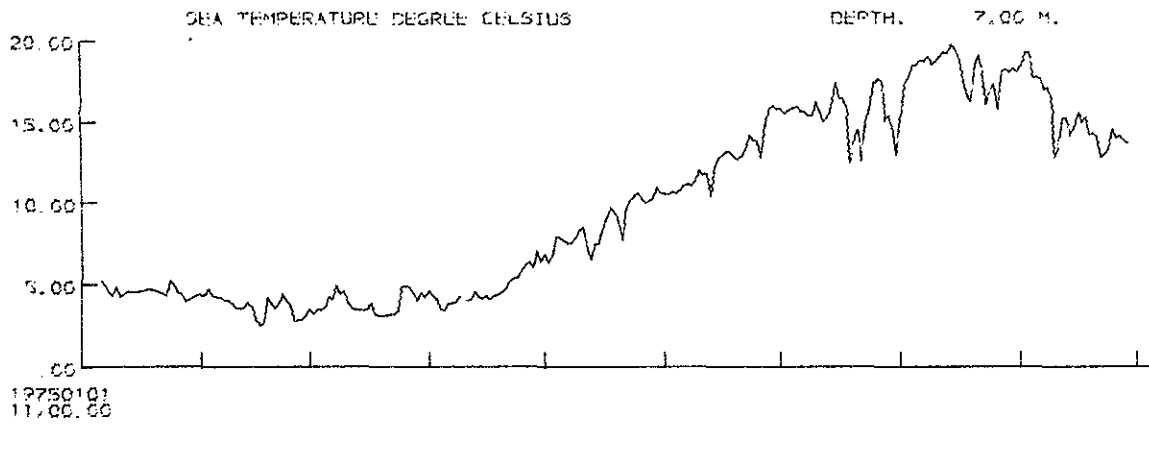
19750603
00.00.00
1 UNIT
1 DAY.



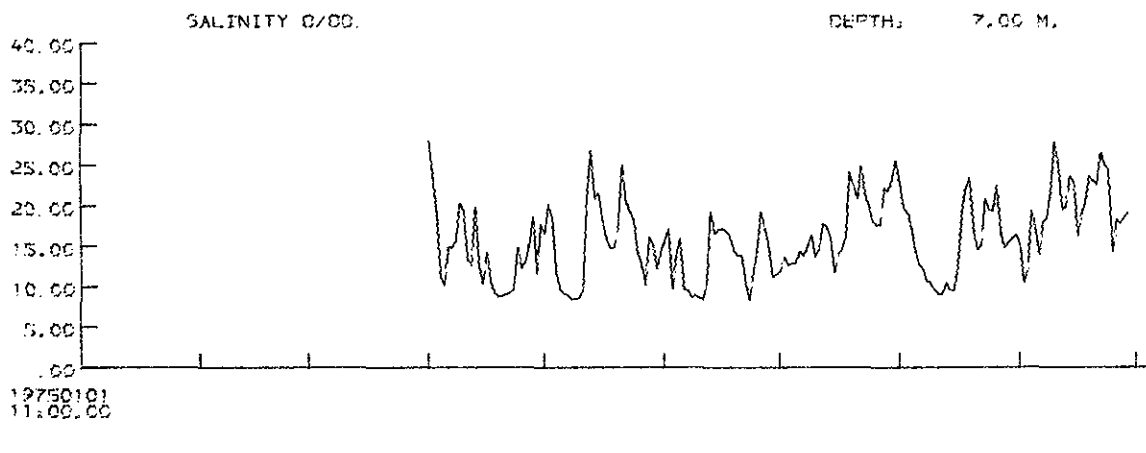
THE SOUND, SOUTH STATION: 526 5537.40 N 1250.90 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:06:14:30:00 TIMEINT.: 66400 SEC.



THE SOUND, SOUTH STATION: 526 5537.40 N 1250.90 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:06:14:30:00 TIMEINT.: 66400 SEC.



THE SOUND, SOUTH STATION: 527 5539.50 N 1242.20 E
START: 1975.01.01, 11:00:00 STOP: 1975.10.06, 10:30:00 TIMEINT.: 66400 SEC.



THE SOUND, SOUTH STATION: 527 5539.50 N 1242.20 E
START: 1975.01.01, 11:00:00 STOP: 1975.10.06, 10:30:00 TIMEINT.: 66400 SEC.

THE BELT PROJECT

GREAT BELT, SOUTH

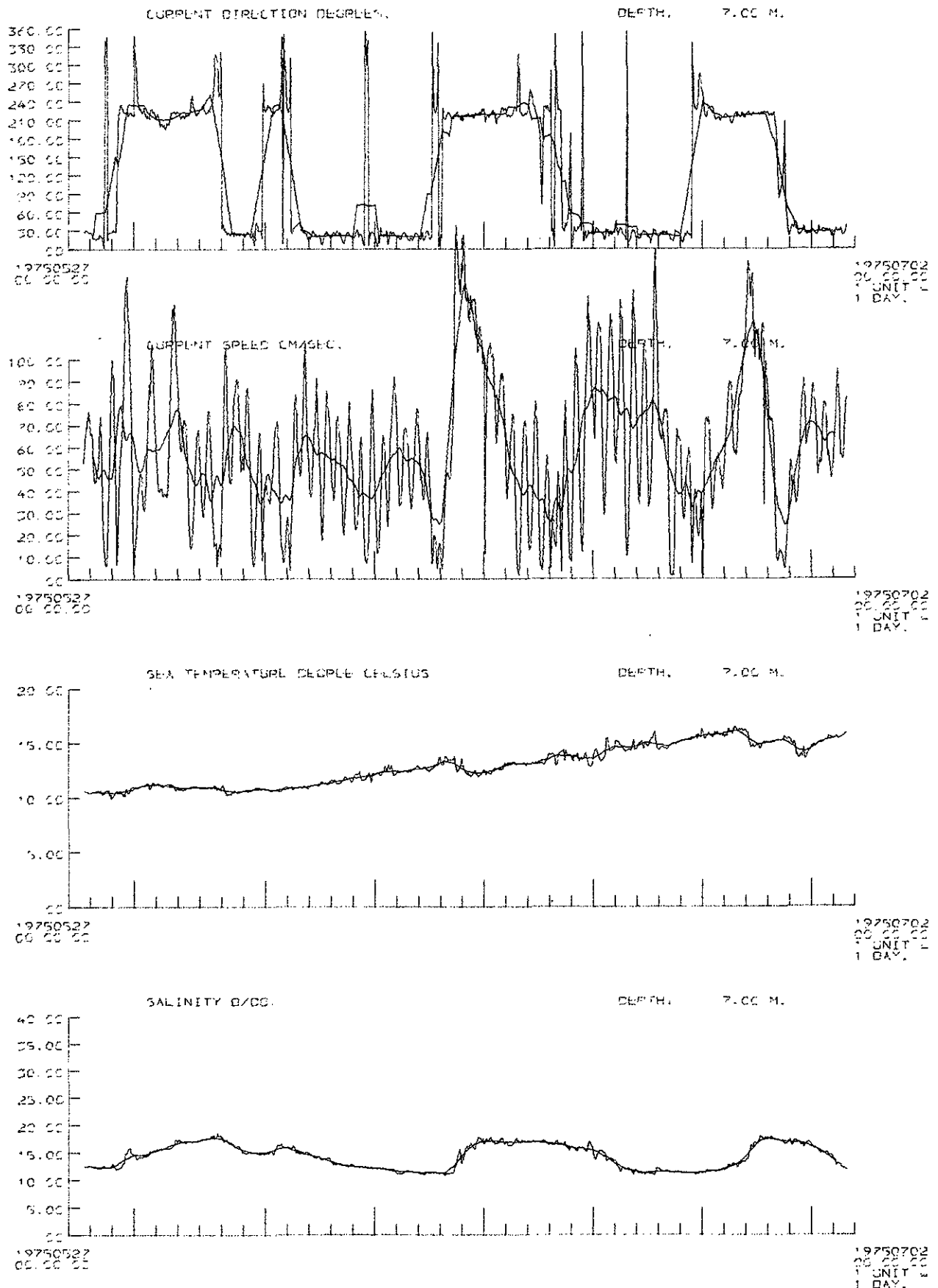
STATION 532

5455.90 N

1055.00 E

1975.05.27.15.20.00 TO 1975.07.01.14.50.00

TIMEINT. 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



ID: KL-1264-1
1975:07.23.16.36.26
VERS. 2.01

FIG. 2.6.2.1.

THE BELT PROJECT

GREAT BELT, SOUTH

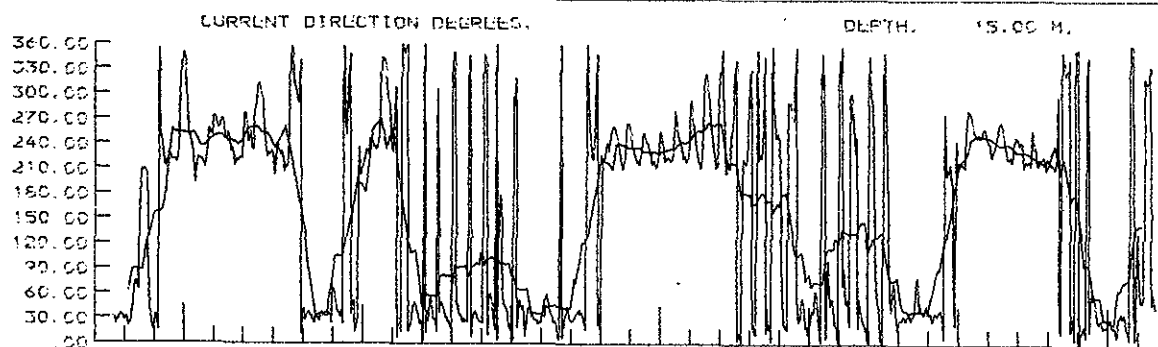
STATION 532

5455.90 N

1055.00 E

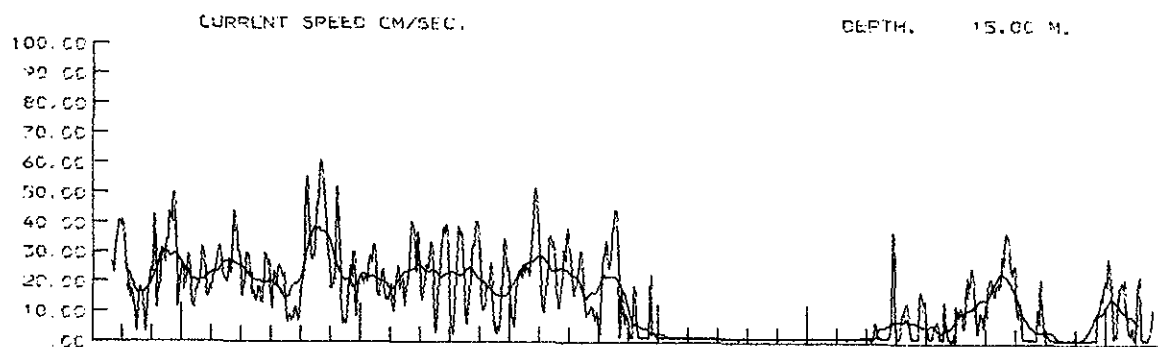
1975.05.27, 15.20.00 TO 1975.07.01, 14.50.00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



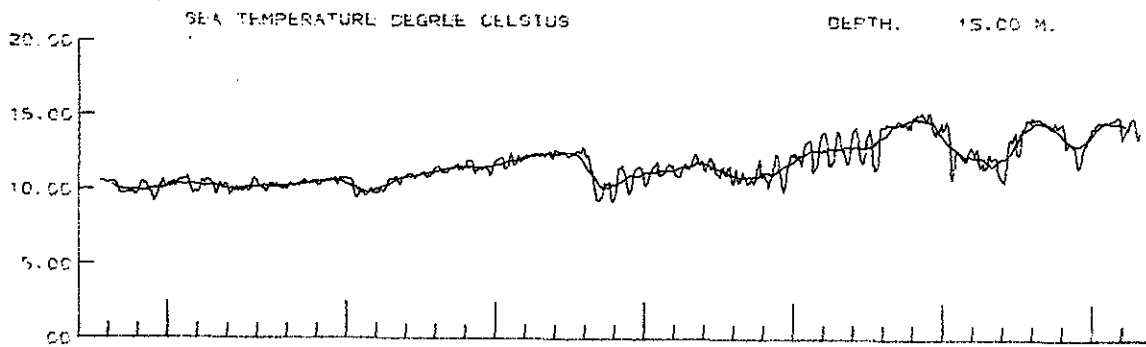
19750527
00:00:00

19750702
00:00:00
UNIT: 1
DAY: 1



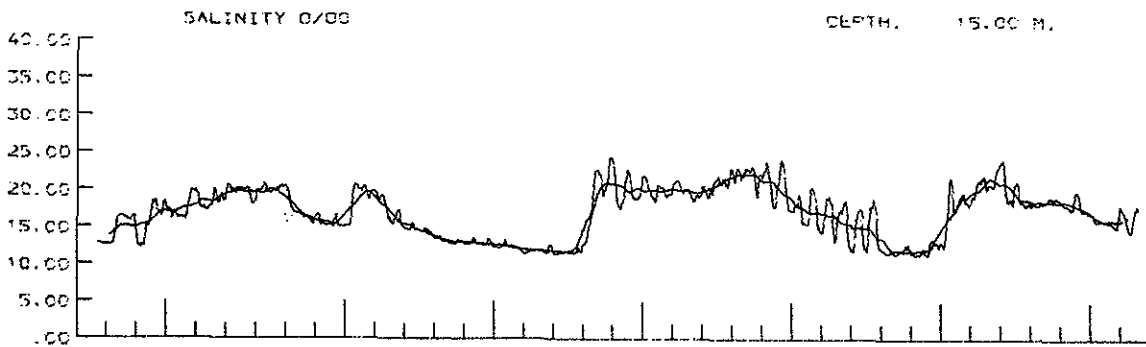
19750527
00:00:00

19750702
00:00:00
UNIT: 1
DAY: 1



19750527
00:00:00

19750702
00:00:00
UNIT: 1
DAY: 1



19750527
00:00:00

19750702
00:00:00
UNIT: 1
DAY: 1

THE BELT PROJECT

VESTERRENDEN

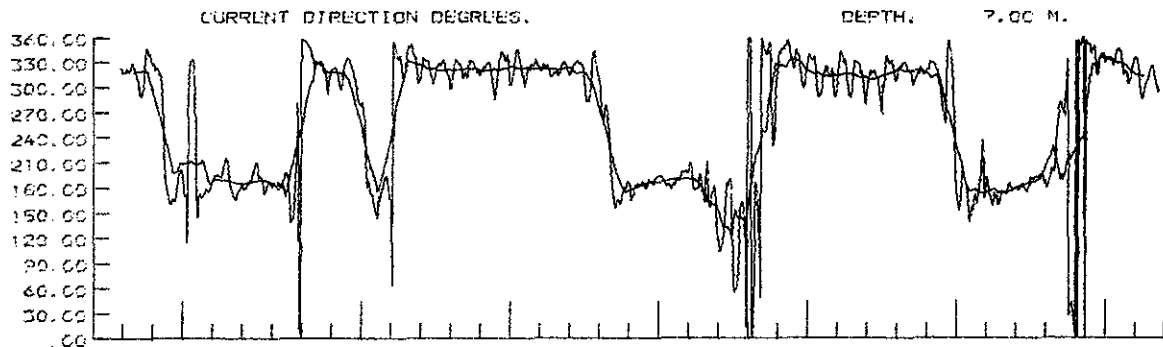
STATION 545

5518.30 N

1053.60 E

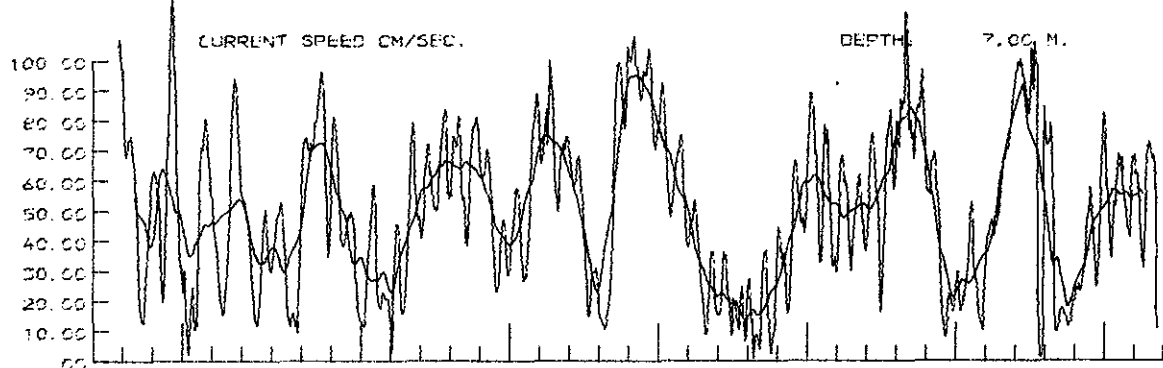
1975.05.27;20.50.00 TO 1975.07.01;19.20.00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



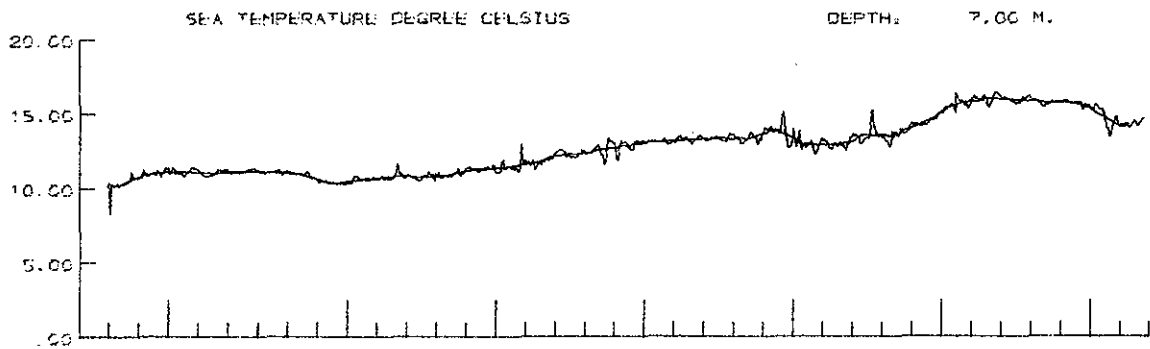
19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



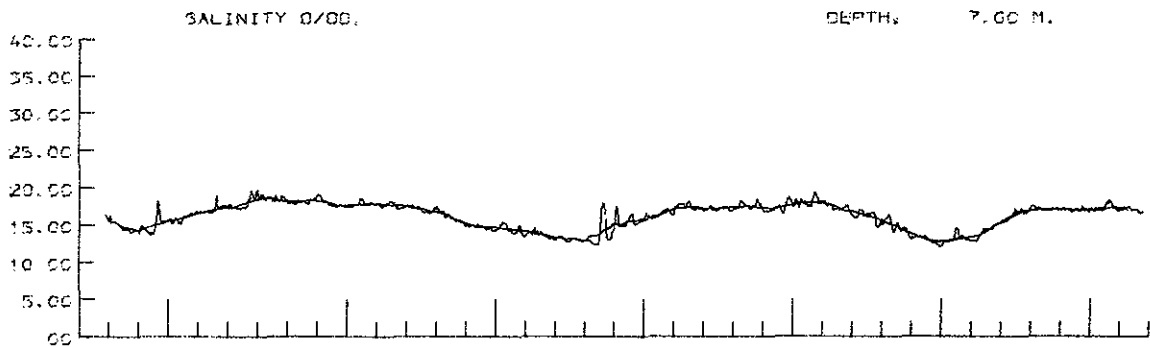
19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.

THE BELT PROJECT

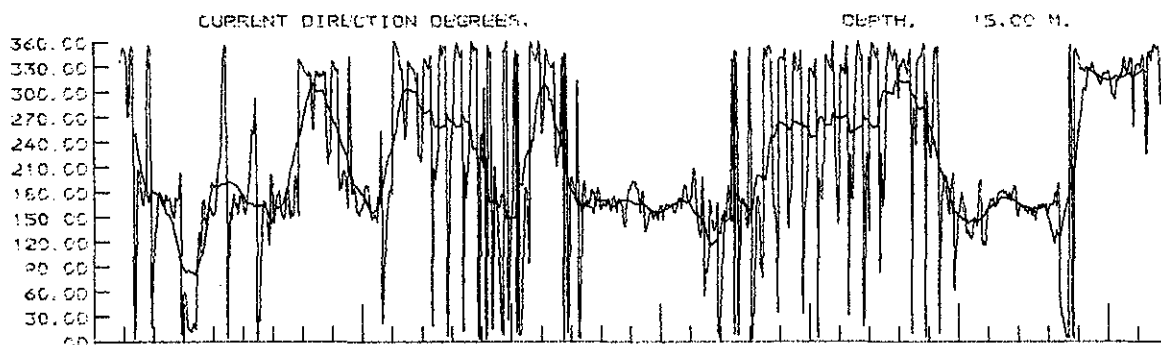
VESTERRENDEN

STATION 545

5518.30 N 1053.60 E

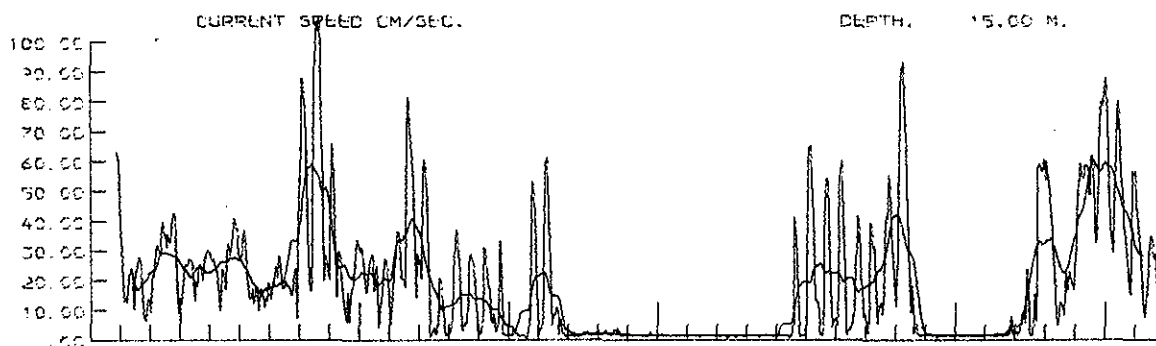
1975.05.27.20.50.00 TO 1975.07.01.19.20.00

TIMEINT., 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



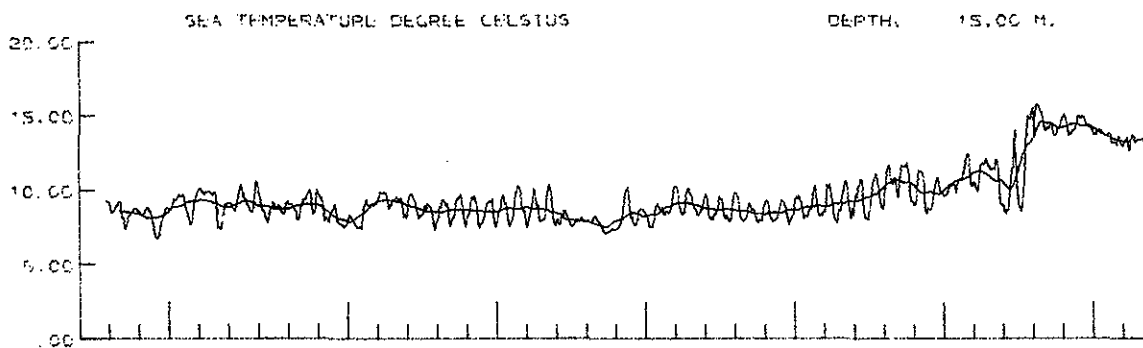
19750527
00.00.00

19750701
00.00.00
1 UNIT
1 DAY



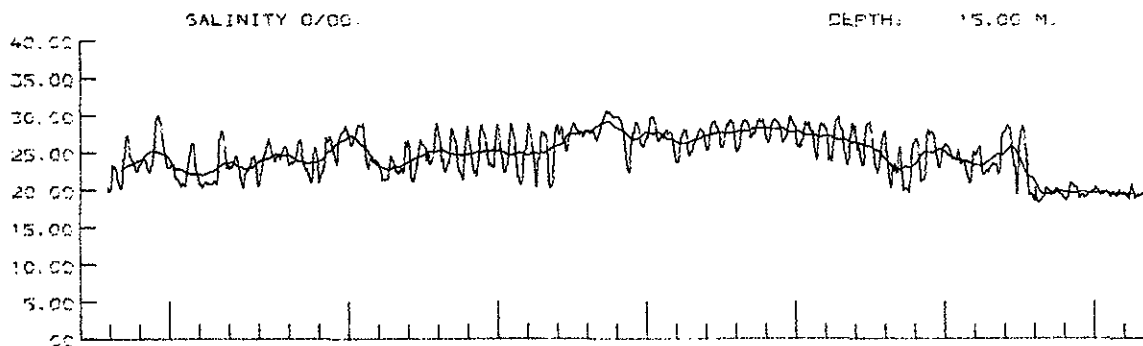
19750527
00.00.00

19750701
00.00.00
1 UNIT
1 DAY



19750527
00.00.00

19750701
00.00.00
1 UNIT
1 DAY



19750527
00.00.00

19750701
00.00.00
1 UNIT
1 DAY

THE BELT PROJECT

GREAT BELT , NORTH

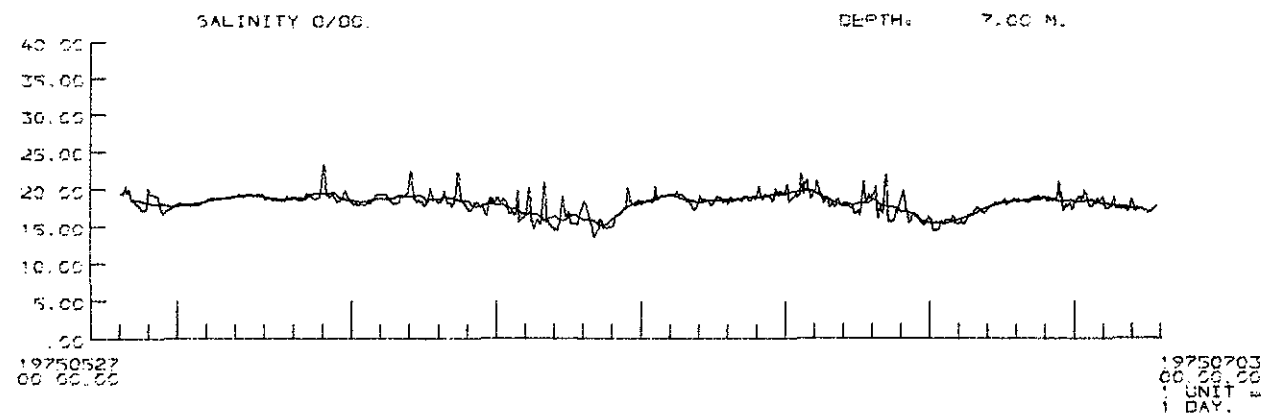
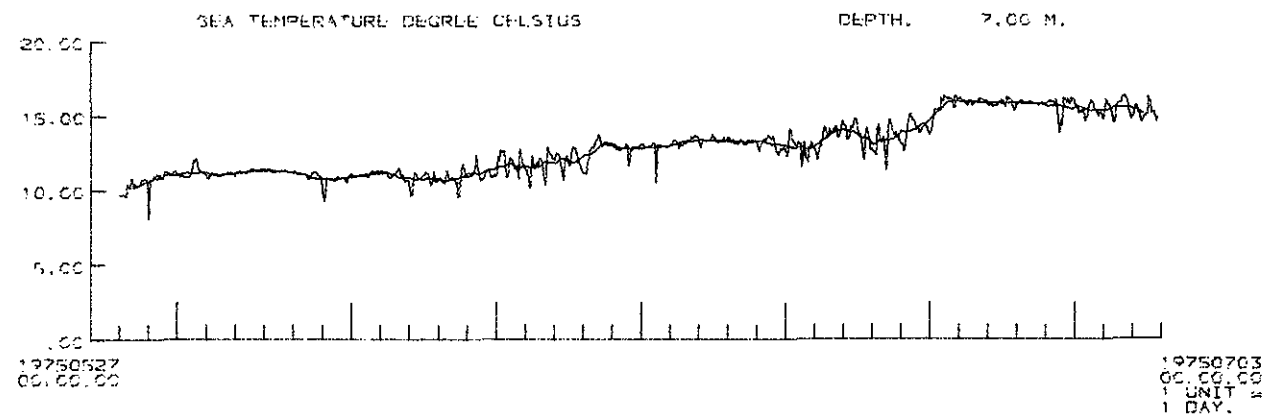
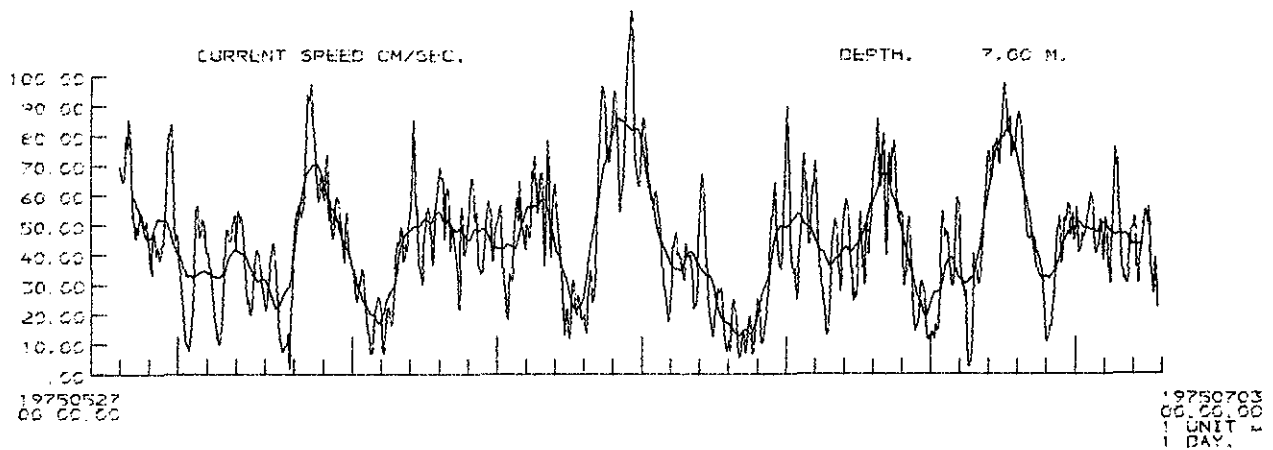
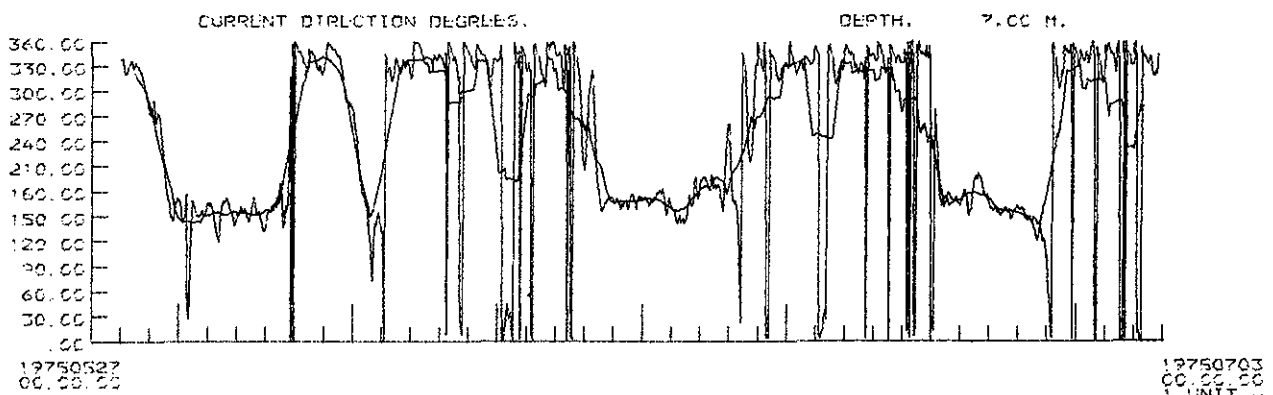
STATION 53e

5537.70 N

1045.30 E

1975:05.27.23:10:00 TO 1975:07.02.21:20:00

TIMEINT. 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



THE BELT PROJECT

GREAT BELT, NORTH

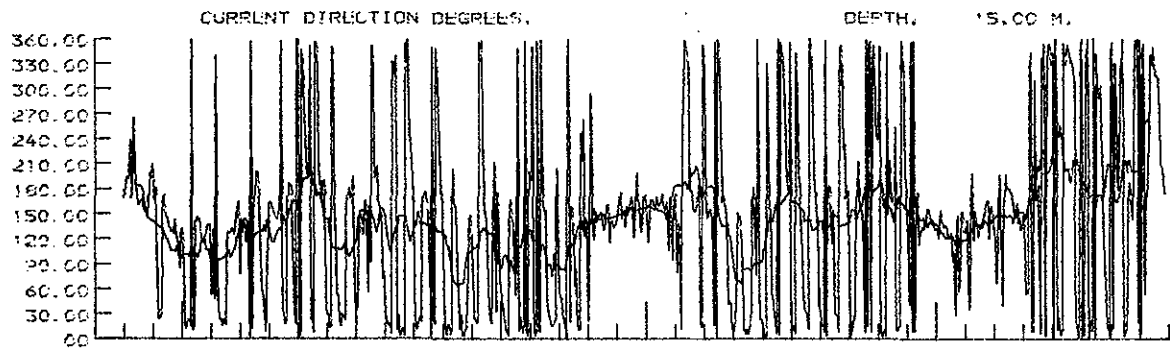
STATION 536

5537.70 N

1045.30 E

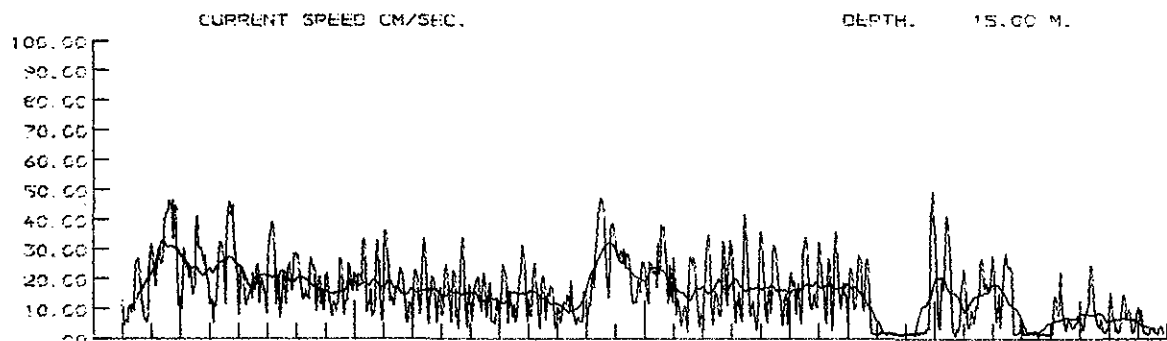
1975.05.27:23:10.00 TO 1975.07.02:21:20.00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



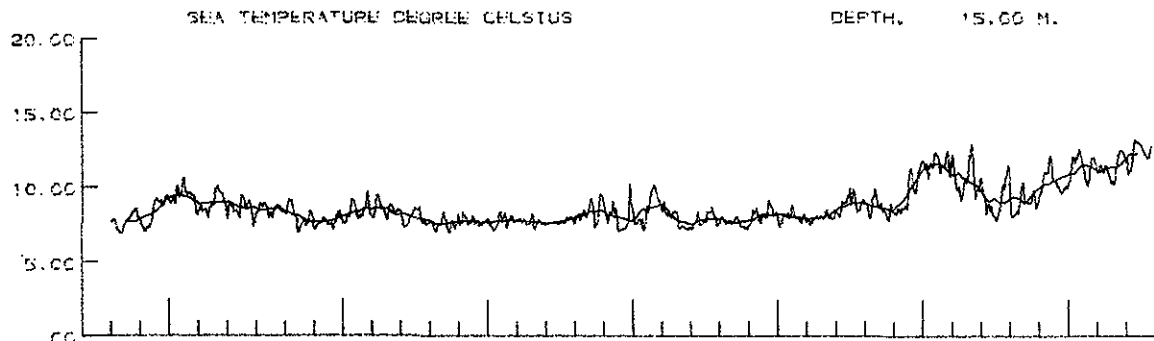
19750527
00.00.00

19750703
00.00.00
1 UNIT
1 DAY.



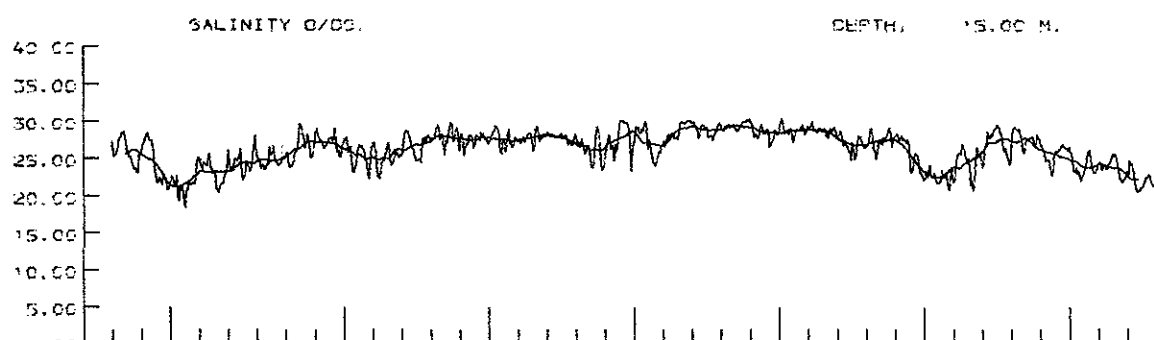
19750527
00.00.00

19750703
00.00.00
1 UNIT
1 DAY.



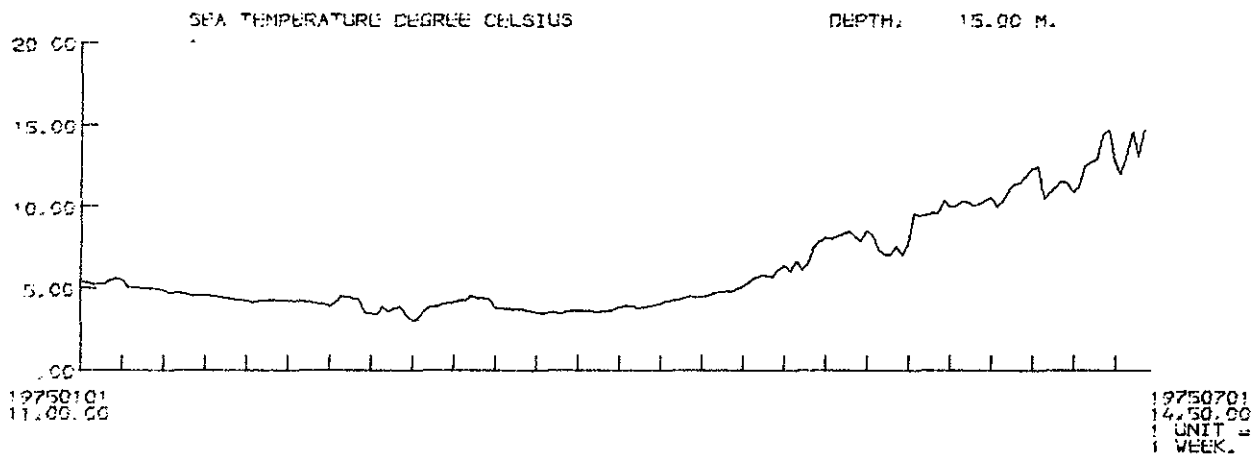
19750527
00.00.00

19750703
00.00.00
1 UNIT
1 DAY.

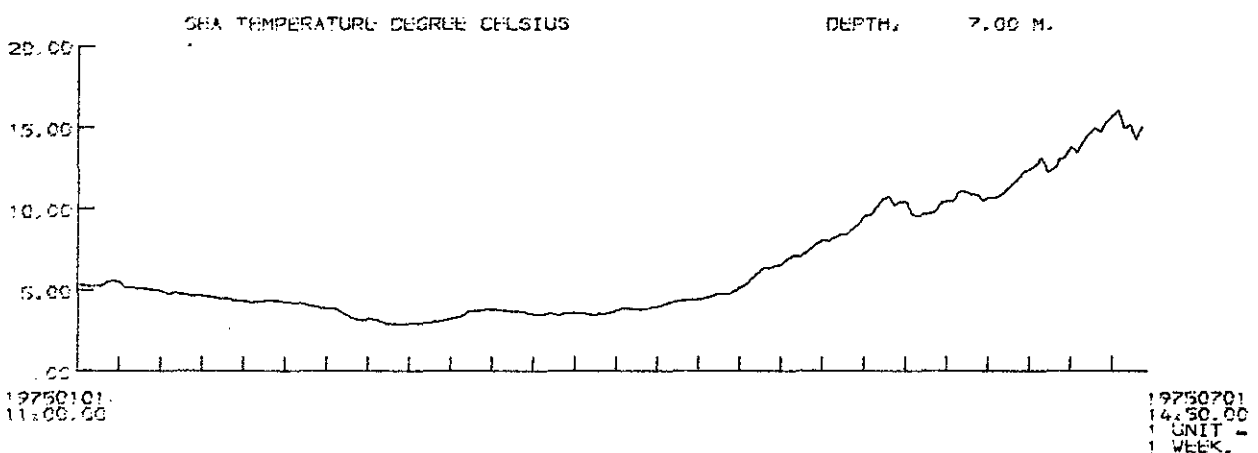


19750527
00.00.00

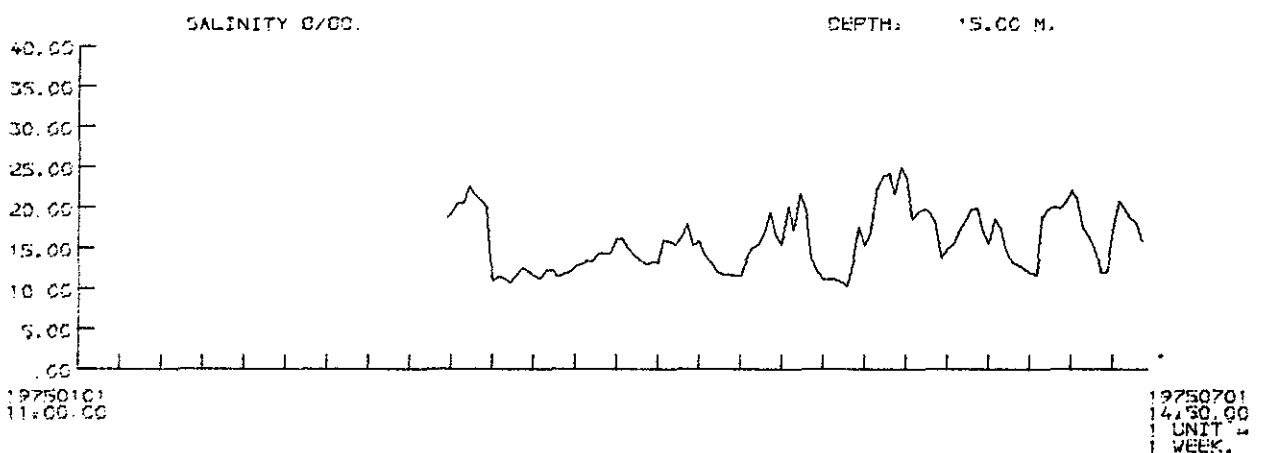
19750703
00.00.00
1 UNIT
1 DAY.



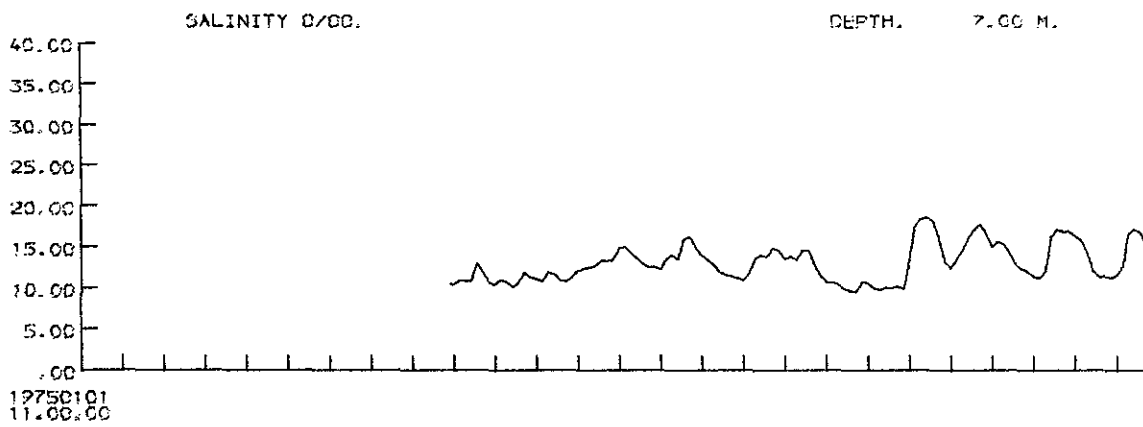
GREAT BELT, SOUTH STATION: 532 5455.90 N 1055.00 E
START: 1975:01:01:11:00:00 STOP: 1975:07:01:14:50:00 TIMEINT.: 66400 SEC.



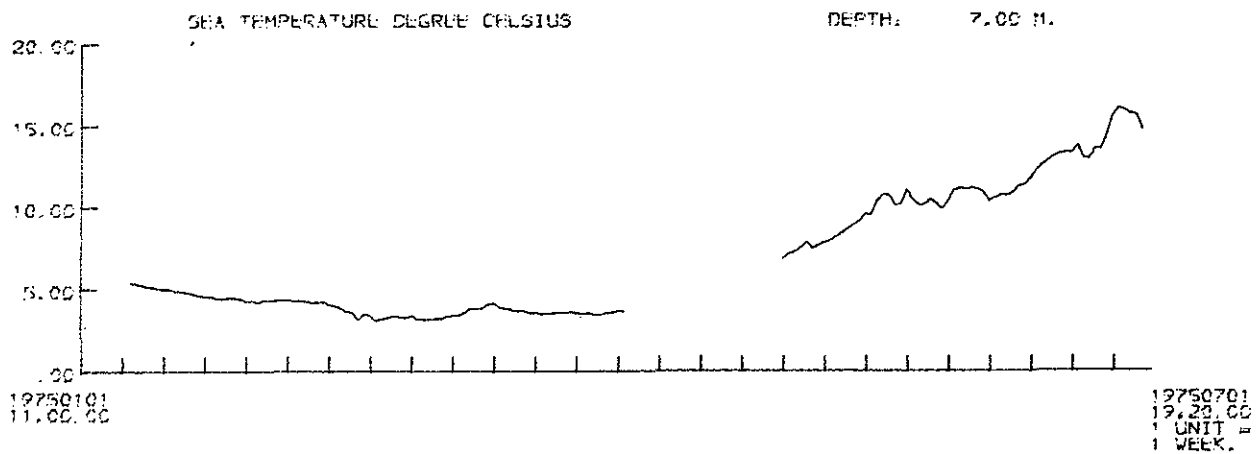
GREAT BELT, SOUTH STATION: 532 5455.90 N 1055.00 E
START: 1975:01:01:11:00:00 STOP: 1975:07:01:14:50:00 TIMEINT.: 66400 SEC.



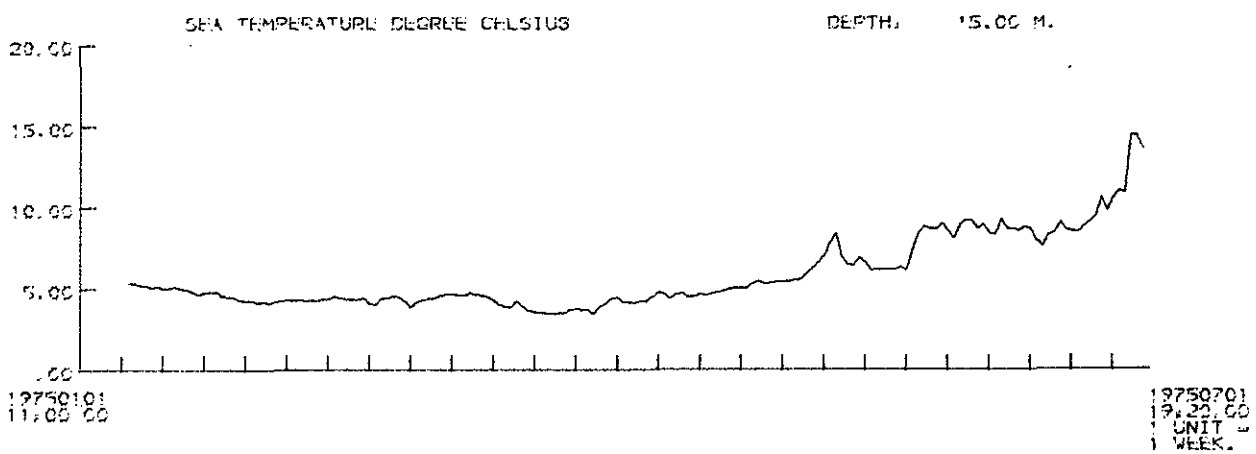
GREAT BELT, SOUTH STATION: 532 5455.90 N 1055.00 E
START: 1975:01:01:11:00:00 STOP: 1975:07:01:14:50:00 TIMEINT.: 66400 SEC.



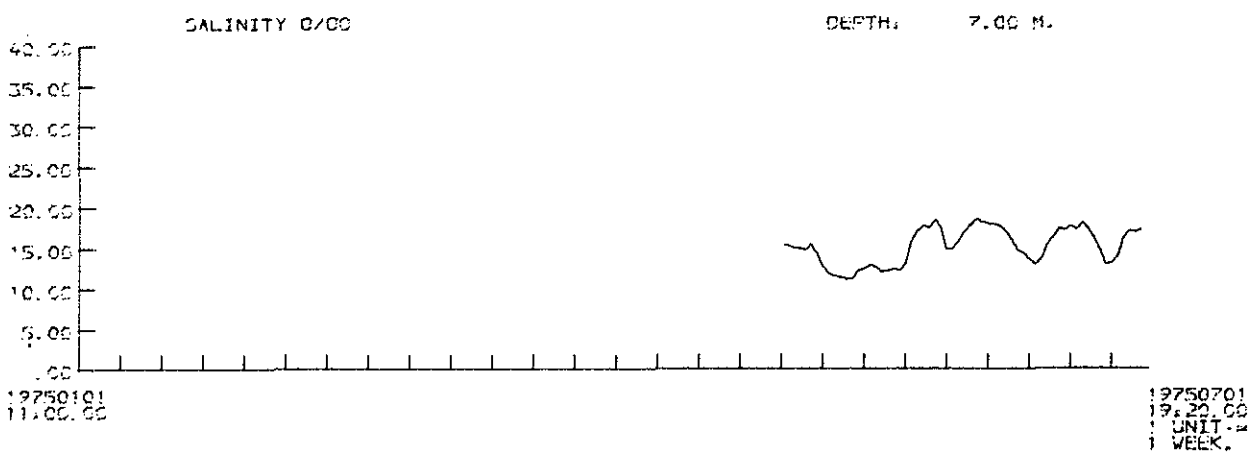
GREAT BELT, SOUTH STATION: 532 5455.90 N 1055.00 E
 START: 1975.01.01:11.00:00 STOP: 1975.07.01:14.50:00 TIMEINT.: 86400 SEC.



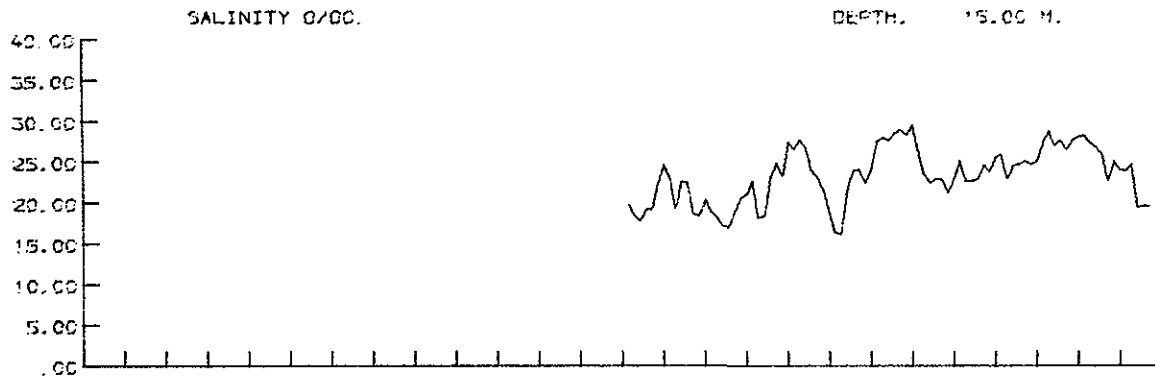
VESTERRENDEN STATION: 545 5516.30 N 1053.60 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:01:19:20:00 TIMEINT.: 86400 SEC.



VESTERRENDEN STATION: 545 5516.30 N 1053.60 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:01:19:20:00 TIMEINT.: 86400 SEC.



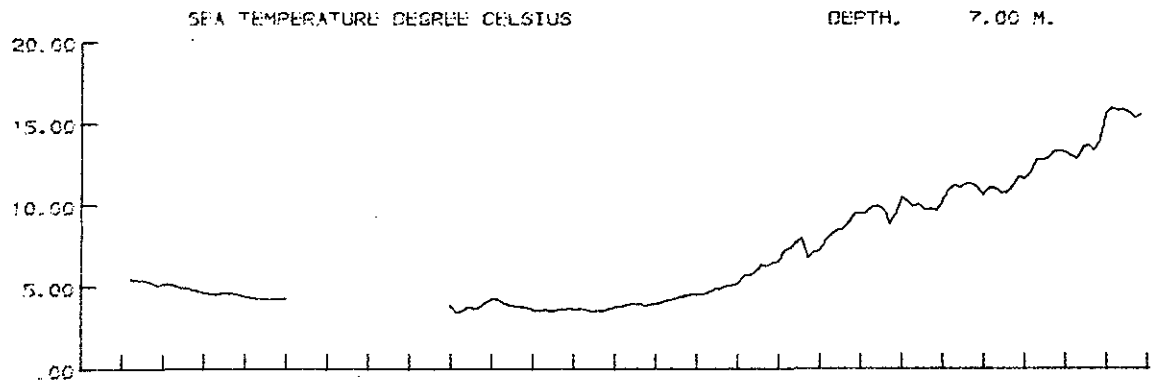
VESTERRENDEN STATION: 545 5516.30 N 1053.60 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:01:19:20:00 TIMEINT.: 86400 SEC.



19750101
11.00.00

19750701
19.20.00
UNIT =
WEEK.

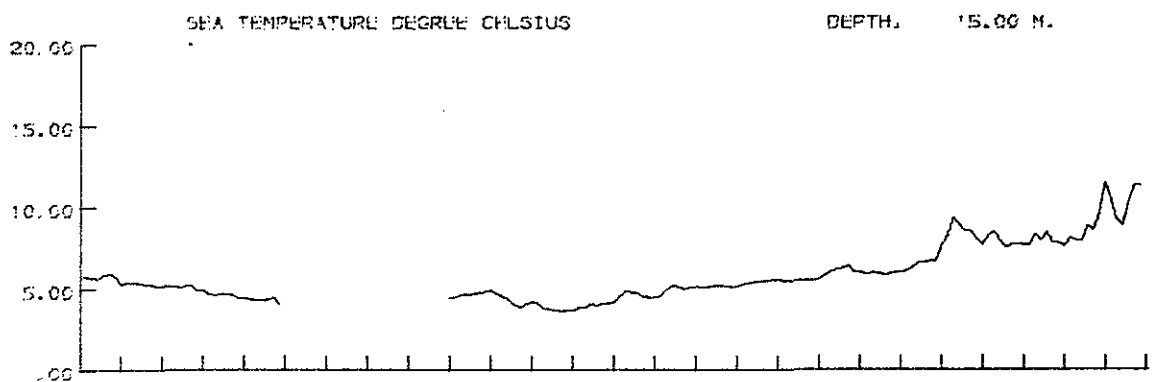
VESTERRENDEN STATION: 545 5518.30 N 1053.60 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:01:19:20:00 TIMEINT.: 86400 SEC.



19750101
11:00:00

19750702
21:20:00
1 UNIT
1 WEEK

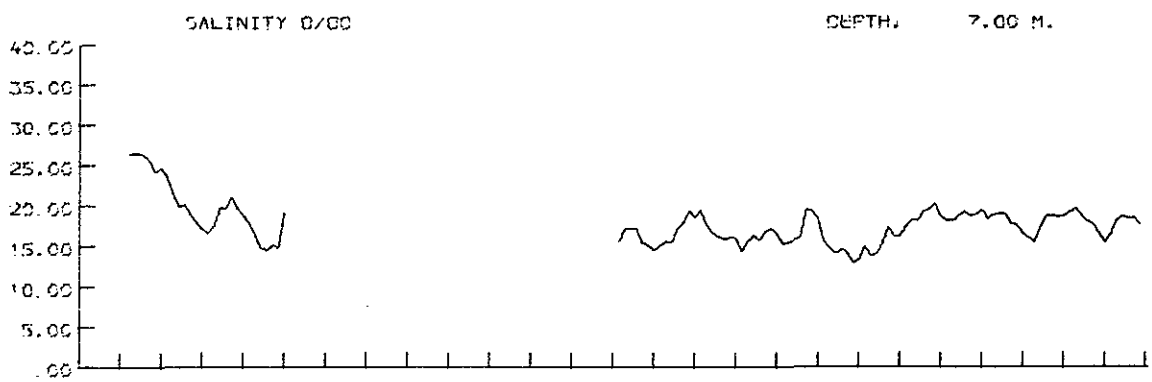
GREAT BELT, NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:02:21:20:00 TIMEINT.: 86400 SEC.



19750101
11:00:00

19750702
21:20:00
1 UNIT
1 WEEK

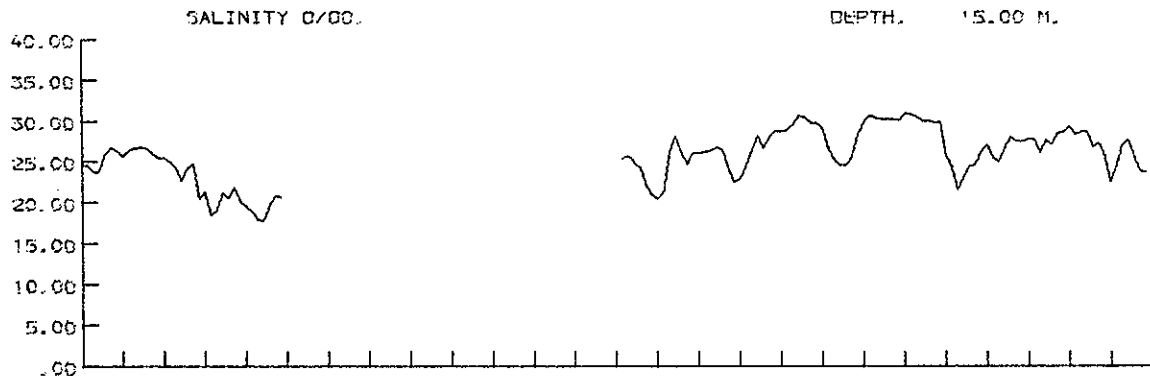
GREAT BELT, NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:02:21:20:00 TIMEINT.: 86400 SEC.



19750101
11:00:00

19750702
21:20:00
1 UNIT
1 WEEK

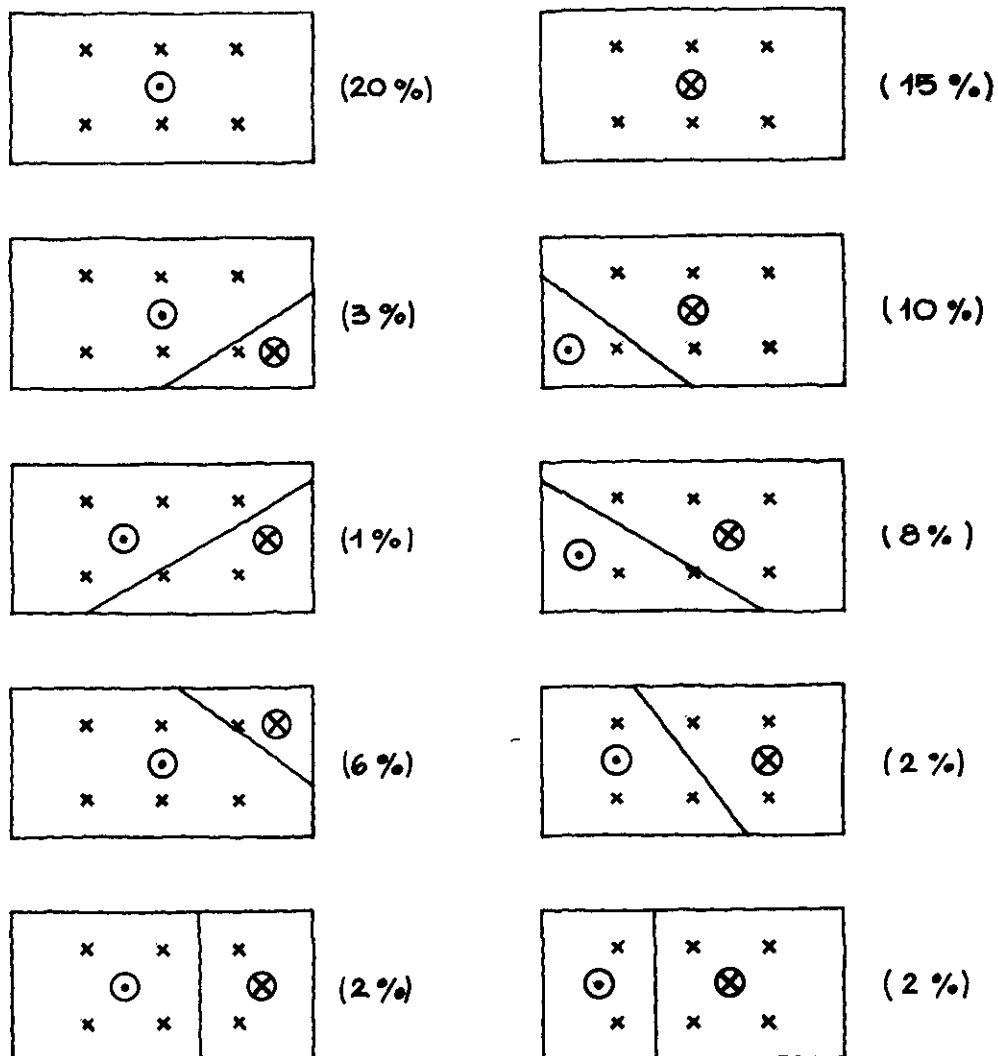
GREAT BELT, NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:02:21:20:00 TIMEINT.: 86400 SEC.



19750101
11:00:00

19750702
21:20:00
1 UNIT
1 WEEK

GREAT BELT , NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1975:01:01:11:00:00 STOP: 1975:07:02:21:20:00 TIMEINT.: 86400 SEC.



DE HYPPIGST FOREKOMMENDE STRØMNINGSITUATIONER I SNITTET FYNSHOVED-ASNÆSREV I PERIODEN 1 SEPT. 74 - 1. JULI 1975. TALLENE I PARENTES ANGIVER TIDEN I PROCENT AF DEN SAMLEDE MÅLEPERIODE MED SAMTIDIGE REGISTRERINGER I 7 OG 15 METERS DYBDE VED STATIONERNE 535, 536 OG 537.

- ⊙ SYDGAÆNDE STRØM, MOD ØSTERSØEN
- ⊗ NORDGAÆNDE STRØM, MOD NORDSØEN
- x STRØMMÅLER

FIG.2.6.2.13.

THE BELT PROJECT

LITTLE BELT, SOUTH

STATION 530

5453.60 N

1012.50 E

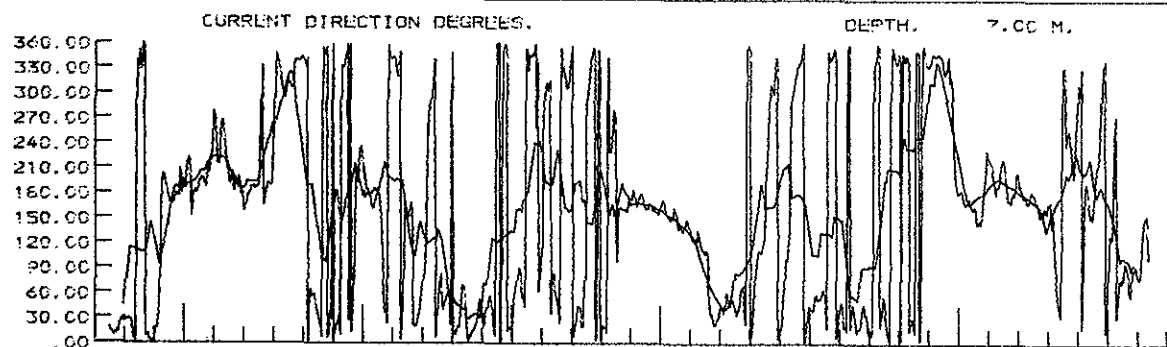
1975:05:27:10:20:00

TO 1975:07:01:09:20:00

TIMEINT.:

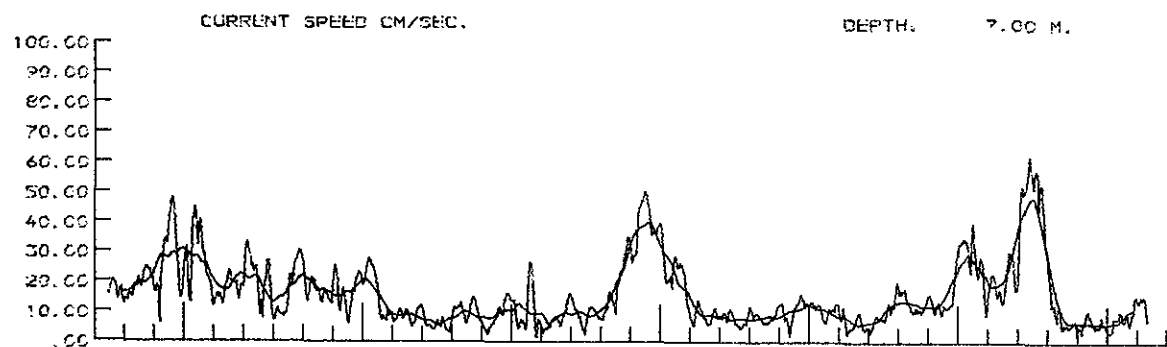
3600 SECONDS - RUNNING MEAN IS TAKEN OVER

25 TIMEINT.



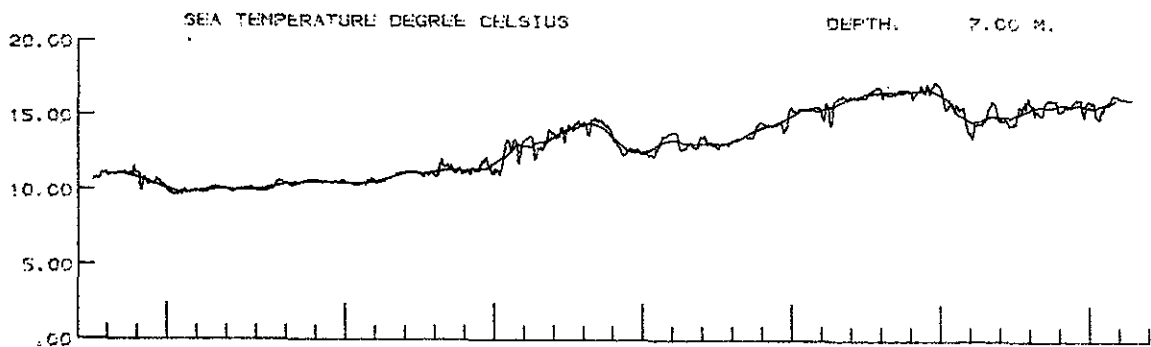
19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



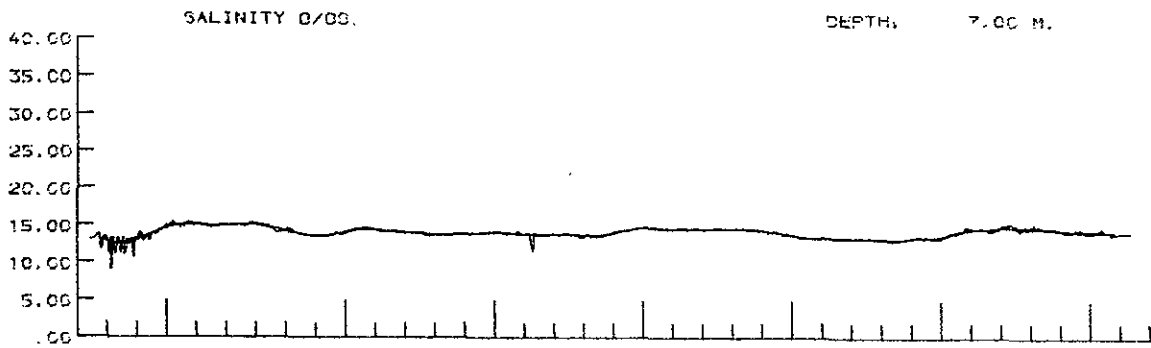
19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



19750527
00.00.00

19750702
00.00.00
1 UNIT =
1 DAY.



19750527
00.00.00

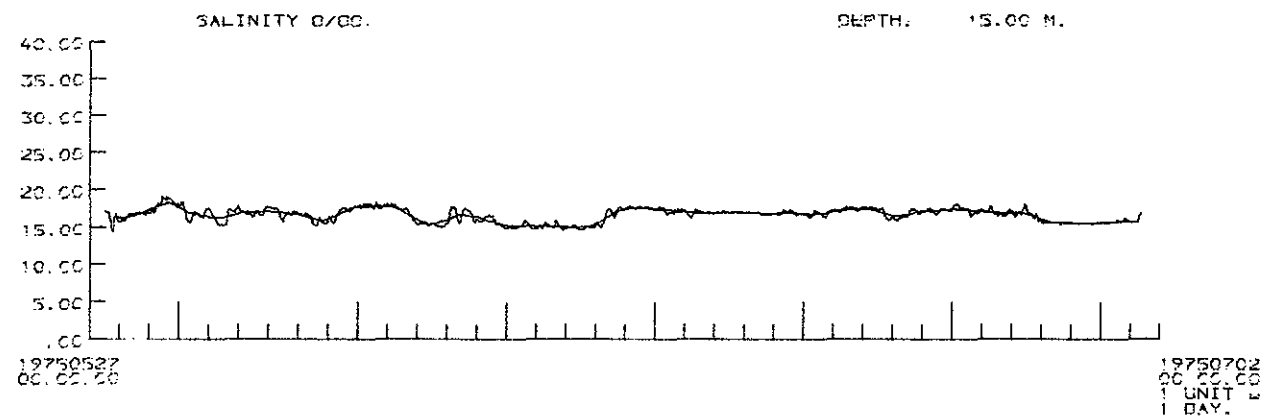
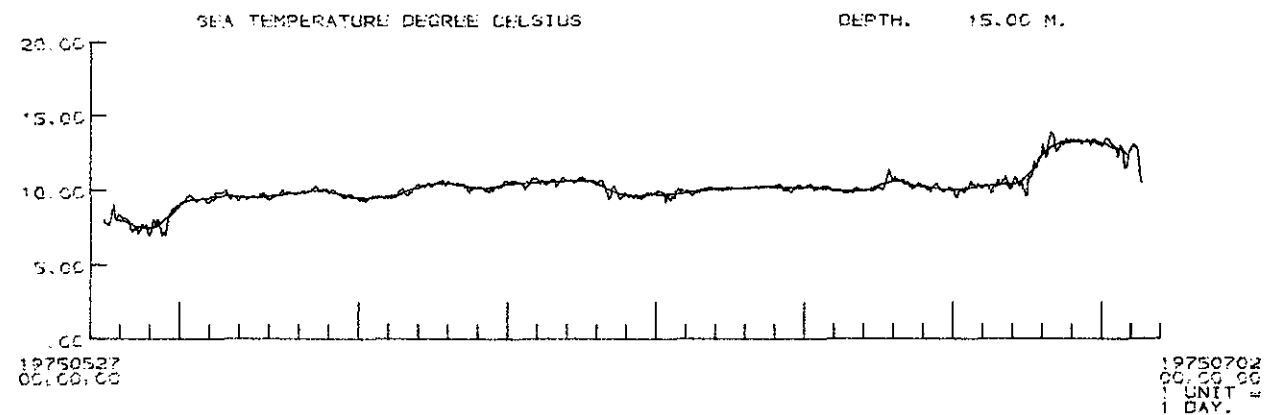
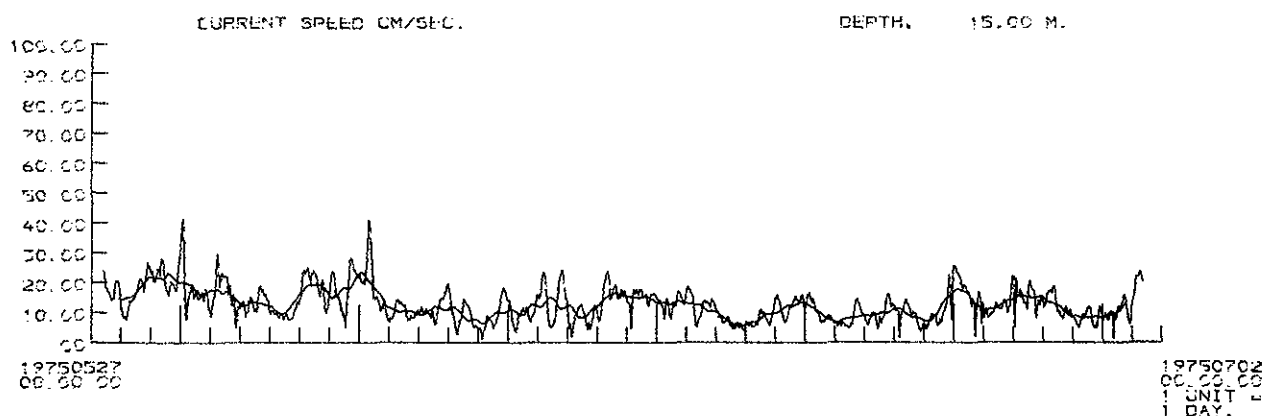
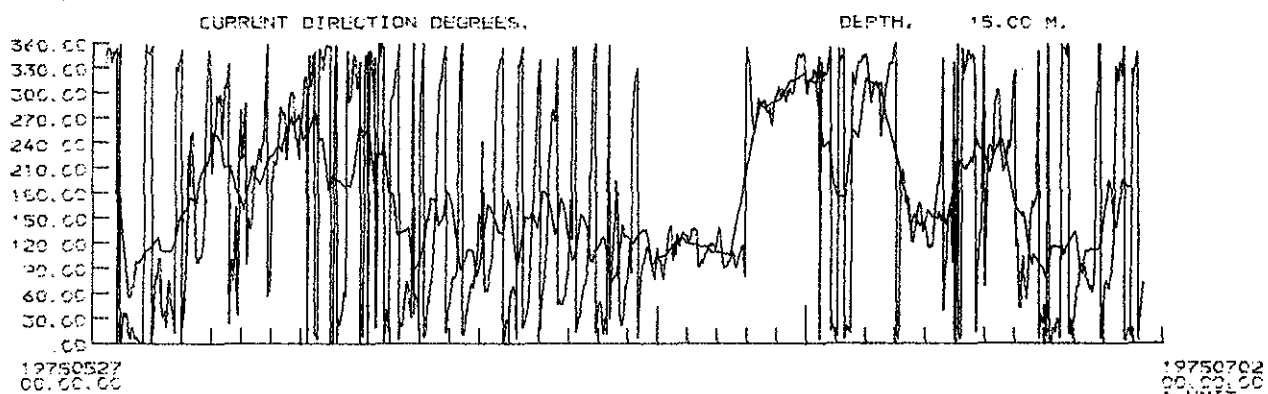
19750702
00.00.00
1 UNIT =
1 DAY.

THE BELT PROJECT

LITTLE BELT, SOUTH STATION 530 5453.60 N 1012.50 E

1975:05.27:10.20.00 TO 1975:07.01.09.20.00

TIMEINT.. 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



THE BELT PROJECT

LITTLE BELT, SOUTH

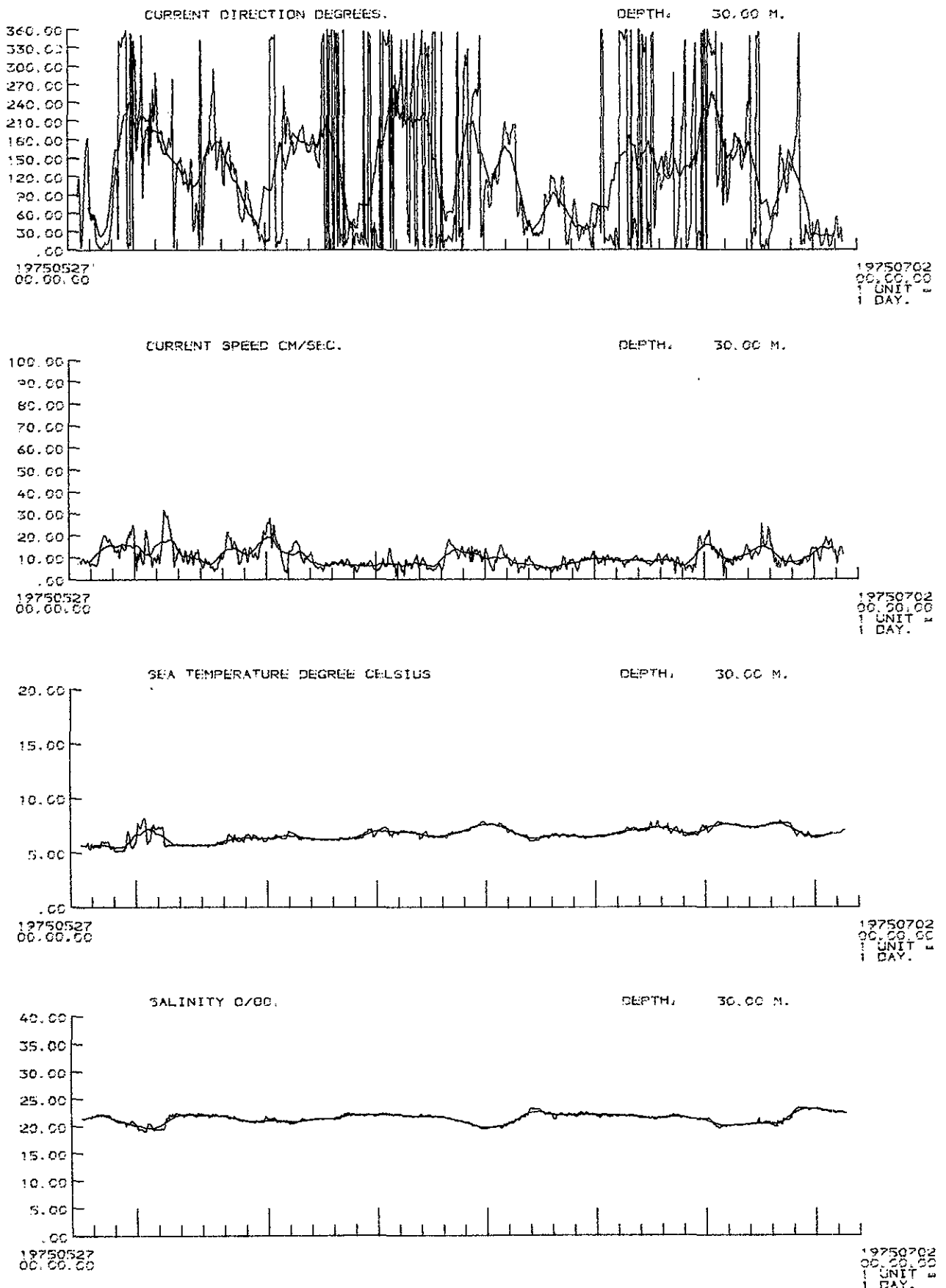
STATION 530

5453.60 N

1012.50 E

1975:05:27:10:20.00 TO 1975:07:01:09:20.00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



ID: KL-1110-4
1975:07:21:17:27:59
VERS.: 2.01

FIG. 2.6.3.3.

THE BELT PROJECT

BJOERNS KNUDE

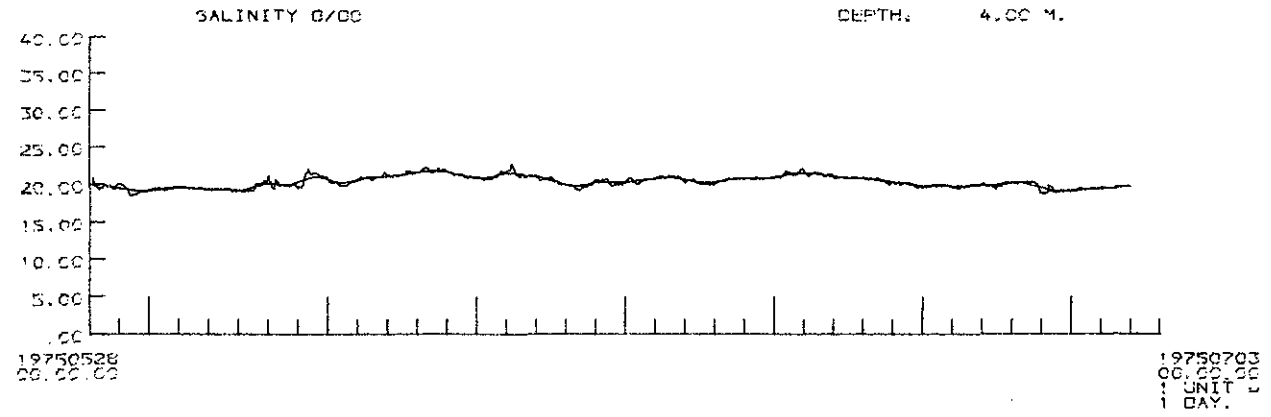
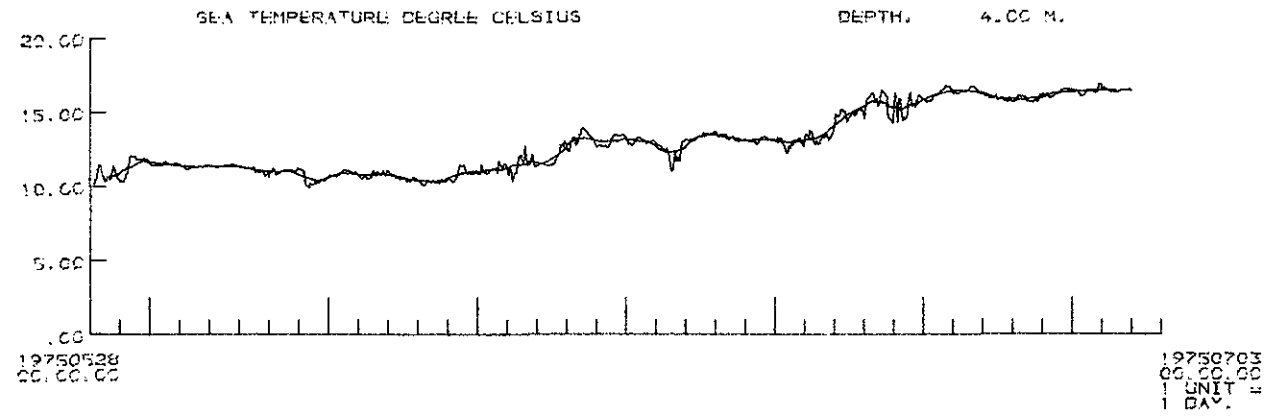
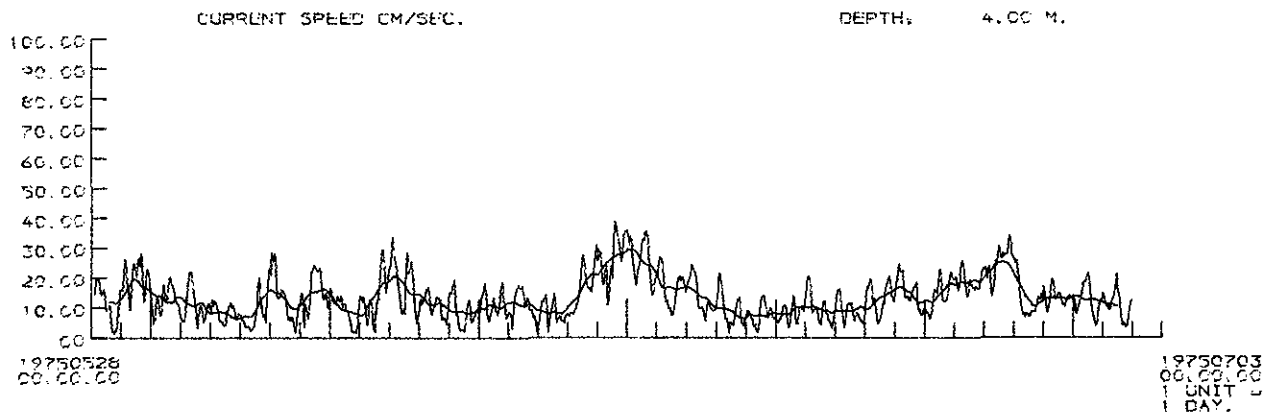
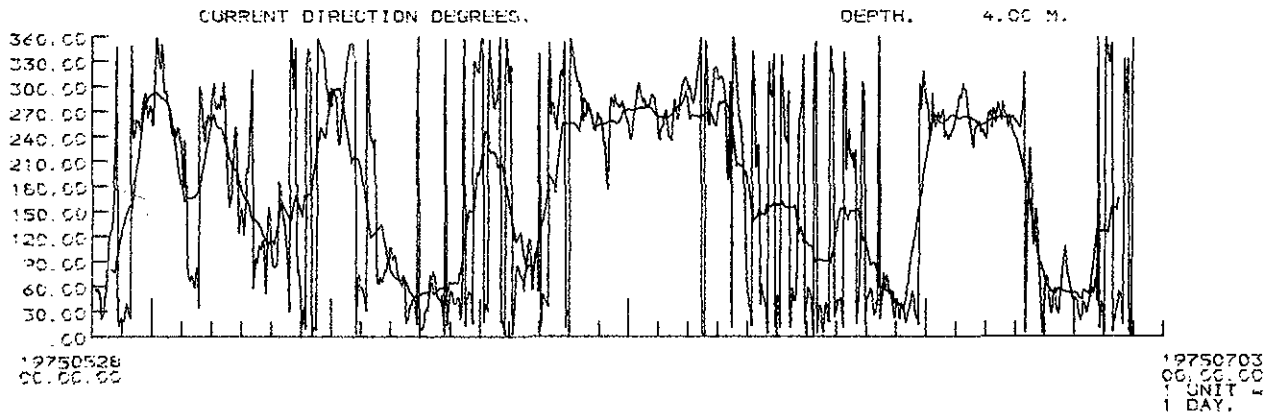
STATION 547

5540.50 N

1005.50 E

1975:05:28:02:40:00 TO 1975:07:02:01:00:00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



THE BELT PROJECT

BJOERNS KNUDE

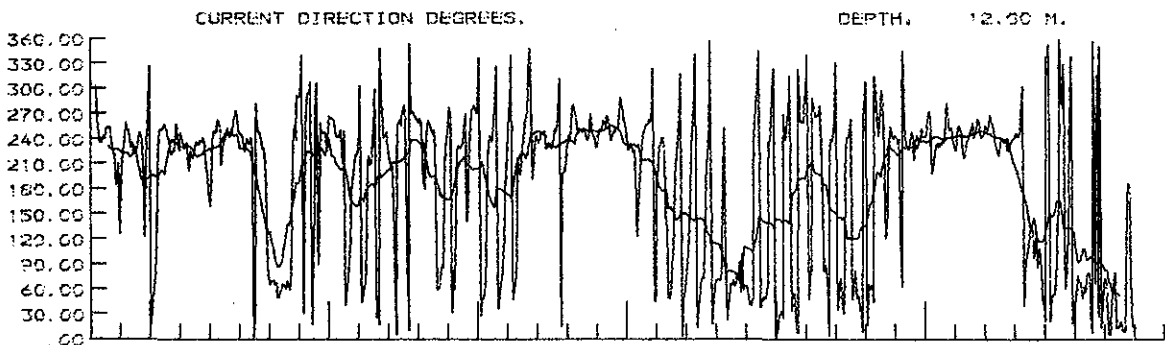
STATION 547

5540.50 N

1005.50 E

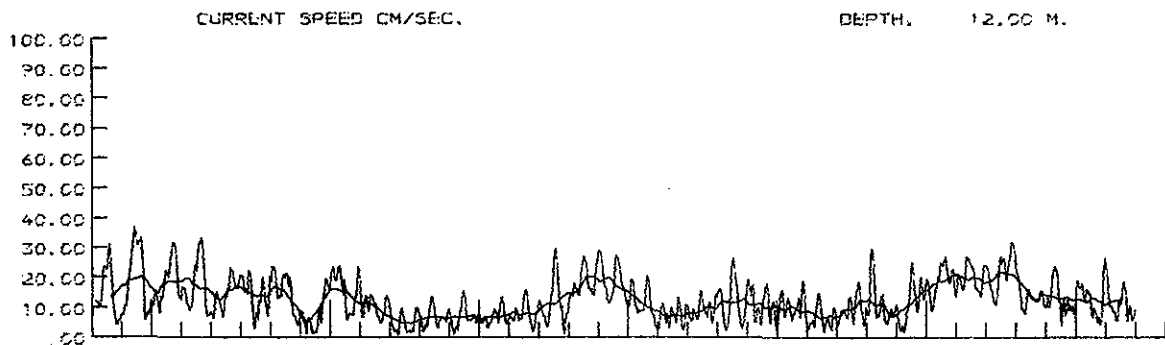
1975:05:28:02:40:00 TO 1975:07:02:01:00:00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



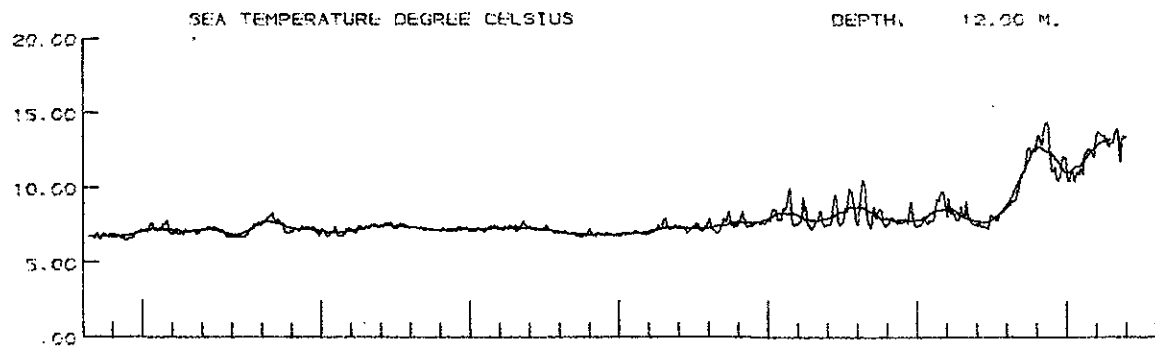
19750528
00.00.00

19750703
00.00.00
1 UNIT =
1 DAY.



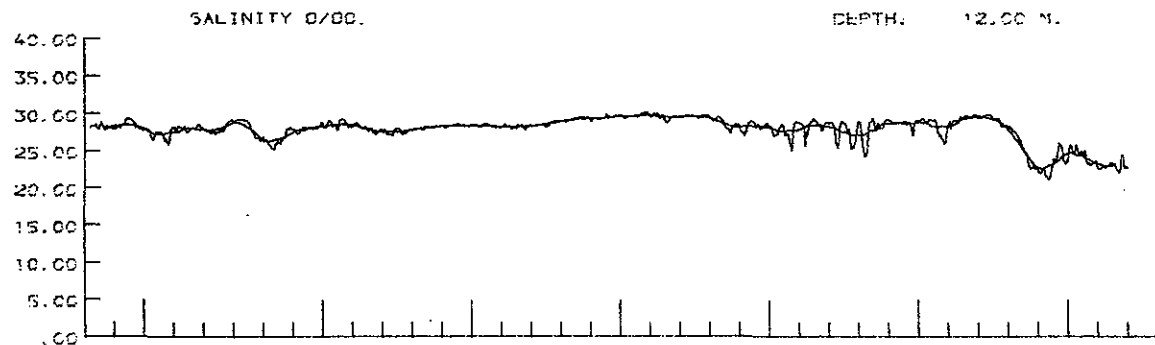
19750528
00.00.00

19750703
00.00.00
1 UNIT =
1 DAY.



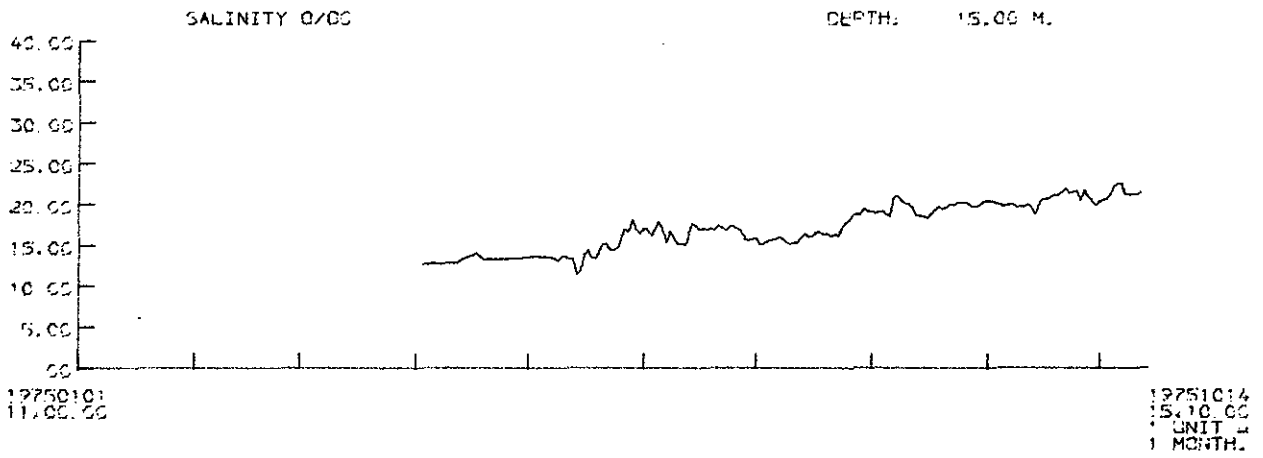
19750528
00.00.00

19750703
00.00.00
1 UNIT =
1 DAY.

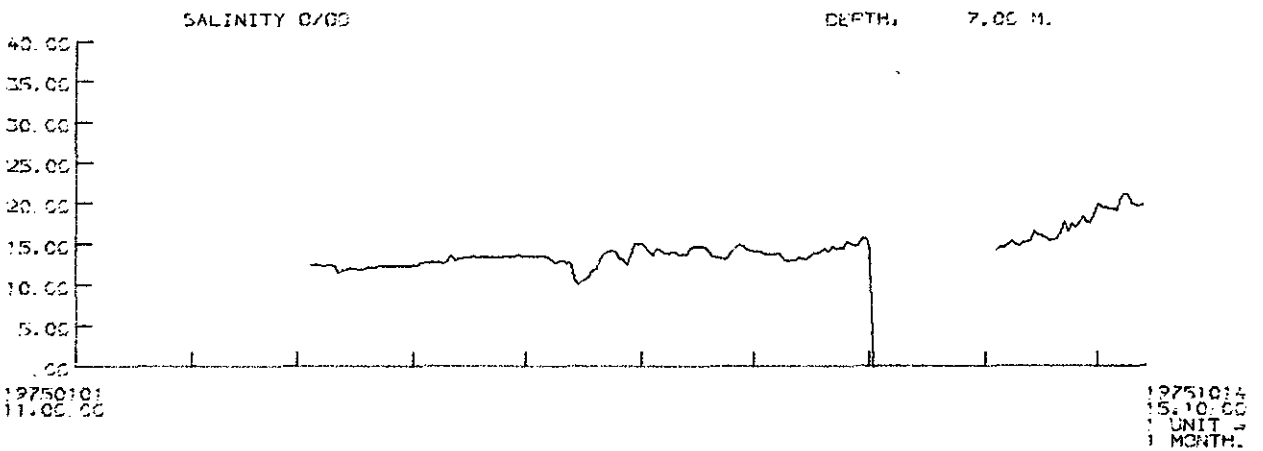


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00.00.00

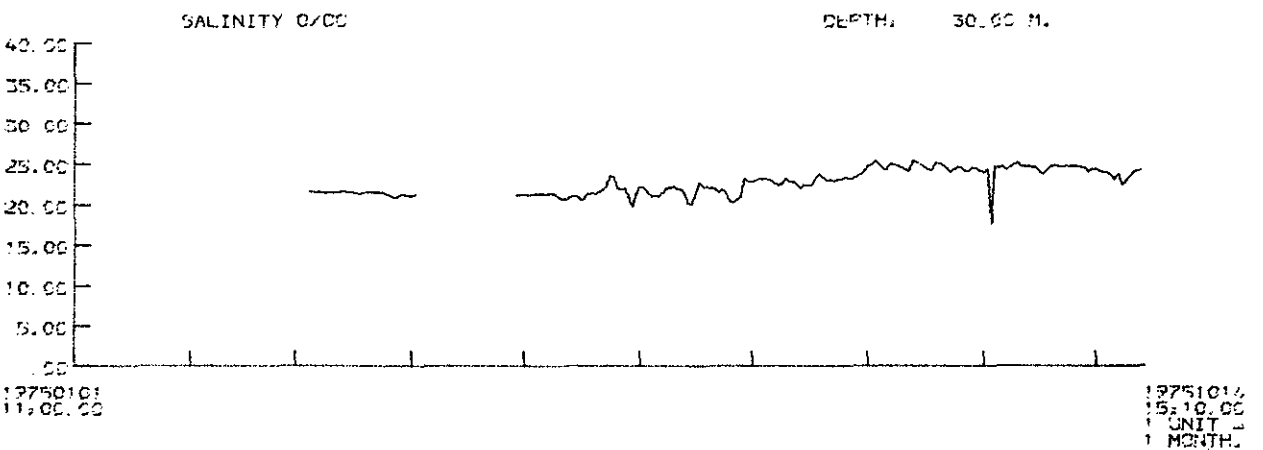
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1 UNIT =
1 DAY.



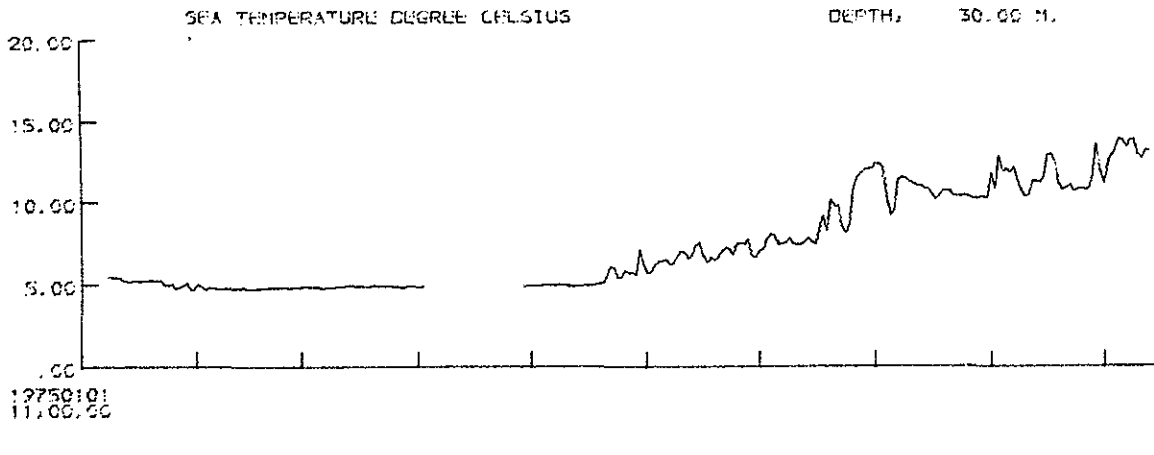
LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.



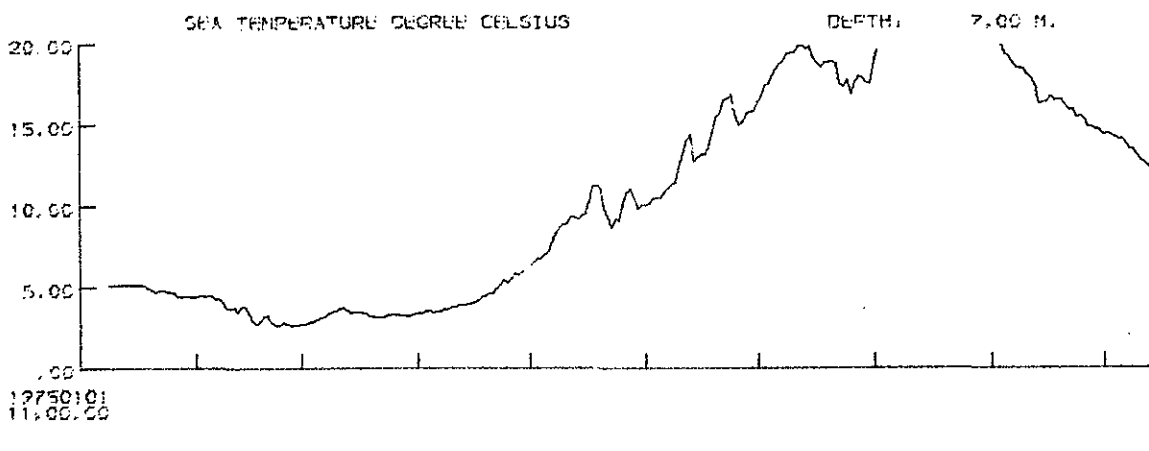
LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.



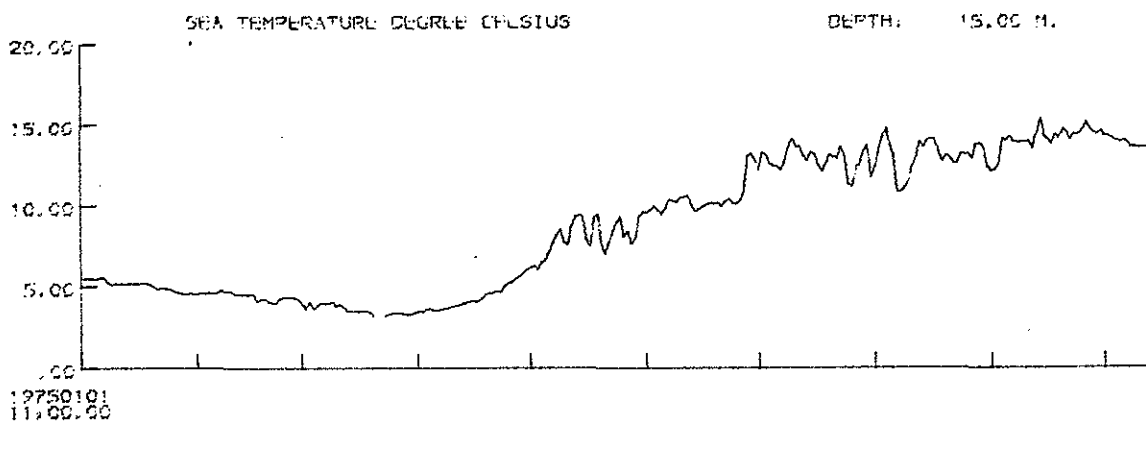
LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.



LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.



LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.



LITTLE BELT, SOUTH STATION: 530 5453.60 N 1012.50 E
 START: 1975:01:01:11:00:00 STOP: 1975:10:14:15:10:00 TIMEINT.: 86400 SEC.

Figurer til kapitel 3

Preliminære transportberegninger i Store Bælt

af

Torben Jacobsen, Miljøstyrelsen

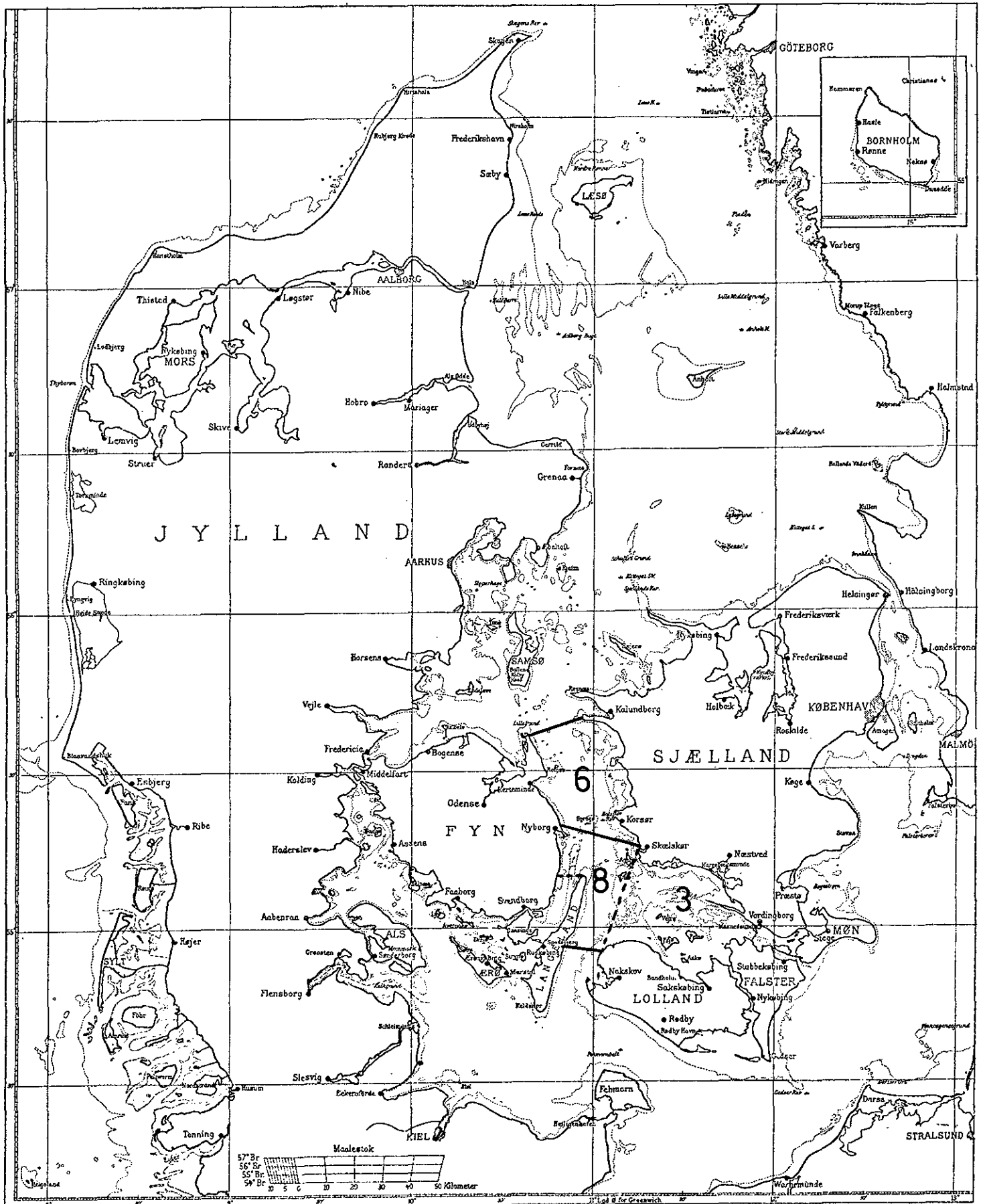
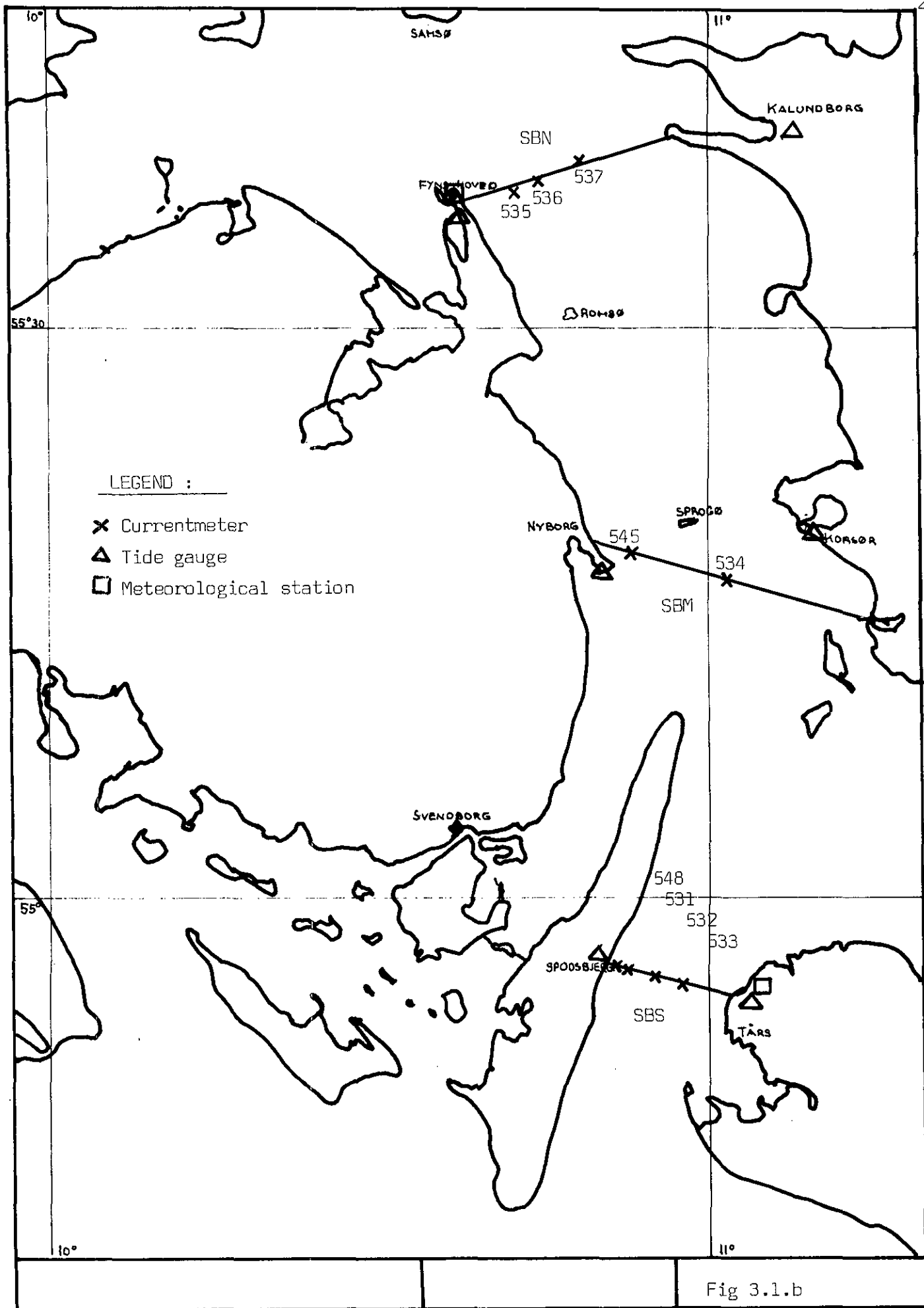


Fig 3.1.a

MAP SHOWING DANISH STRAITS AND COMPUTATION AREAS IN STORE BELT.



POSITIONS OF SECTIONS FOR TRANSPORT-CALCULATION, AND POSITIONS OF INSTRUMENTS.

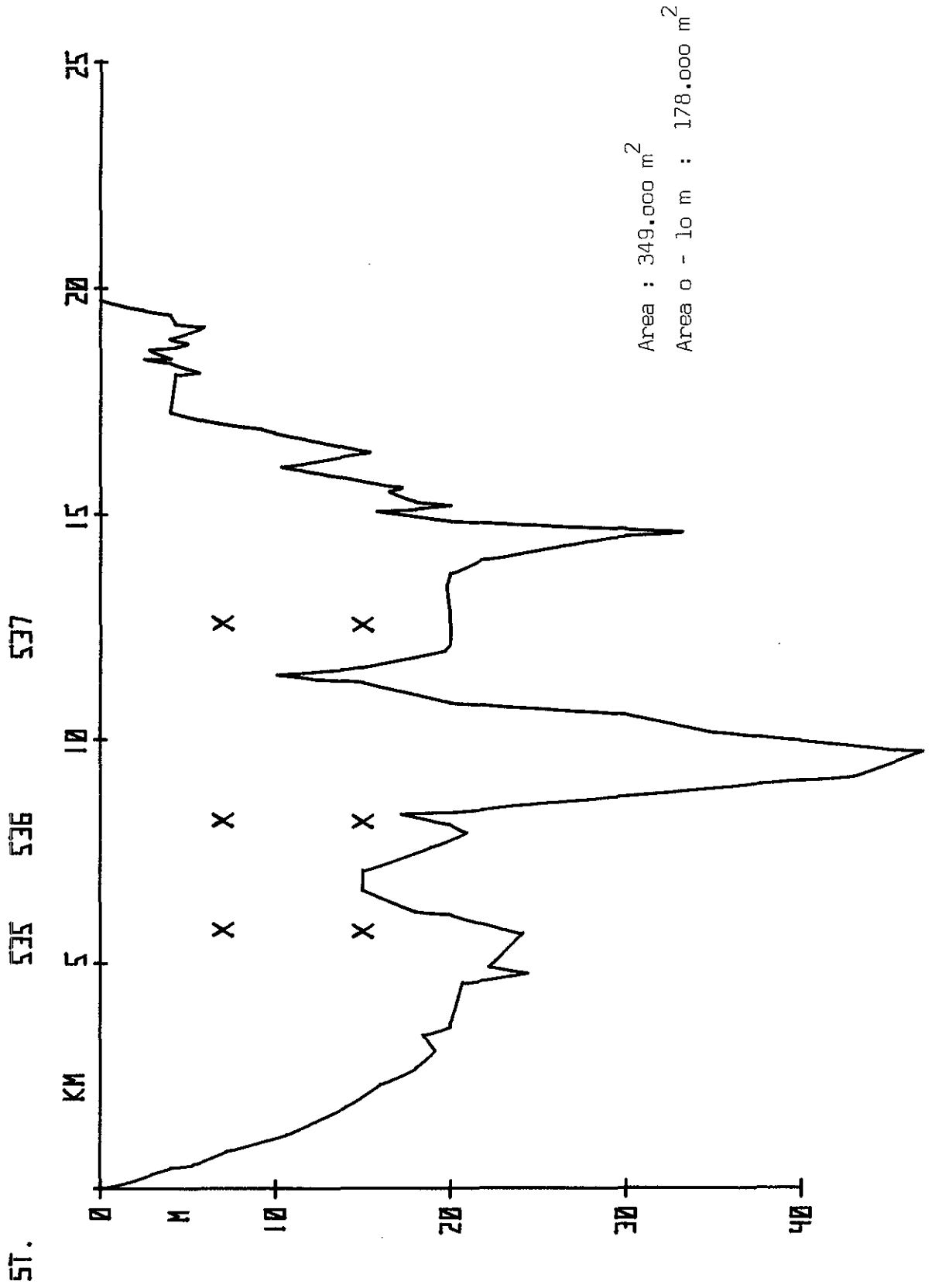


Fig 3.2

SECTION SBN : STORE BELT NORD
POSITION OF CURRENTMETERS SHOWN.

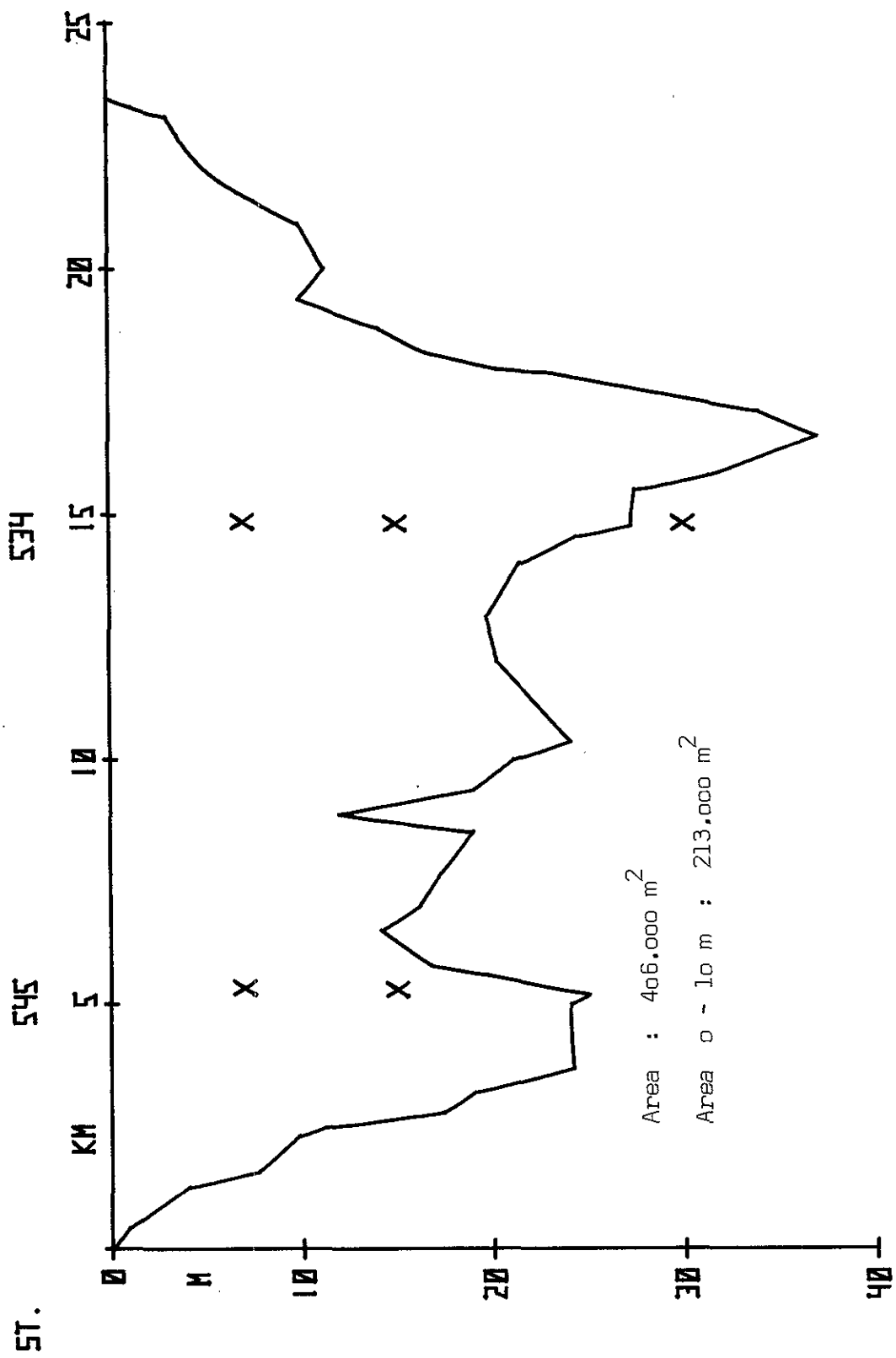


Fig 3.3

SECTION SBM : STORE BELT MIDDLE
POSITION OF CURRENTMETERS SHOWN.

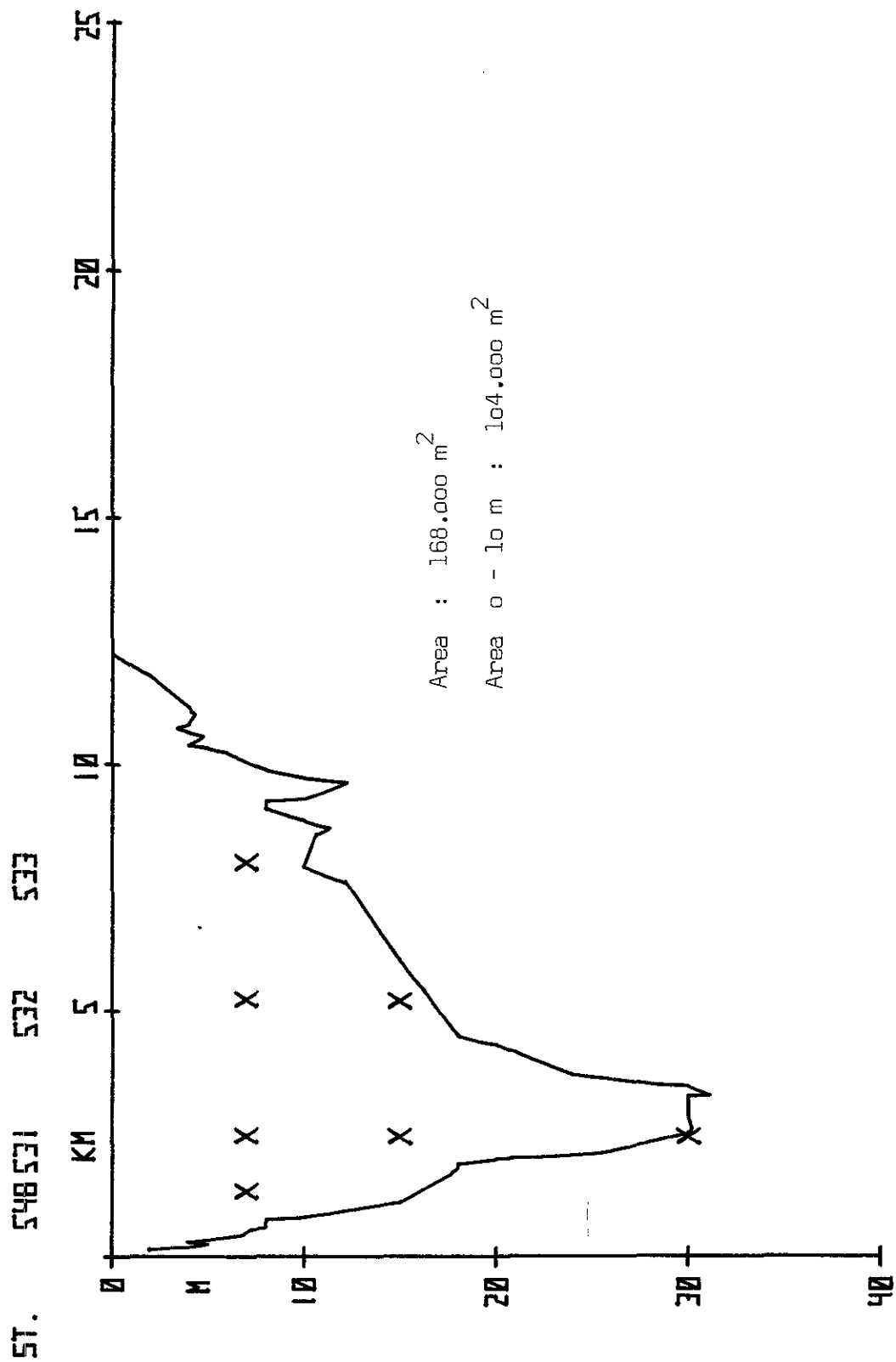


Fig 3.4

SECTION SBS : STORE BELT SOUTH
POSITION OF CURRENTMETERS SHOWN

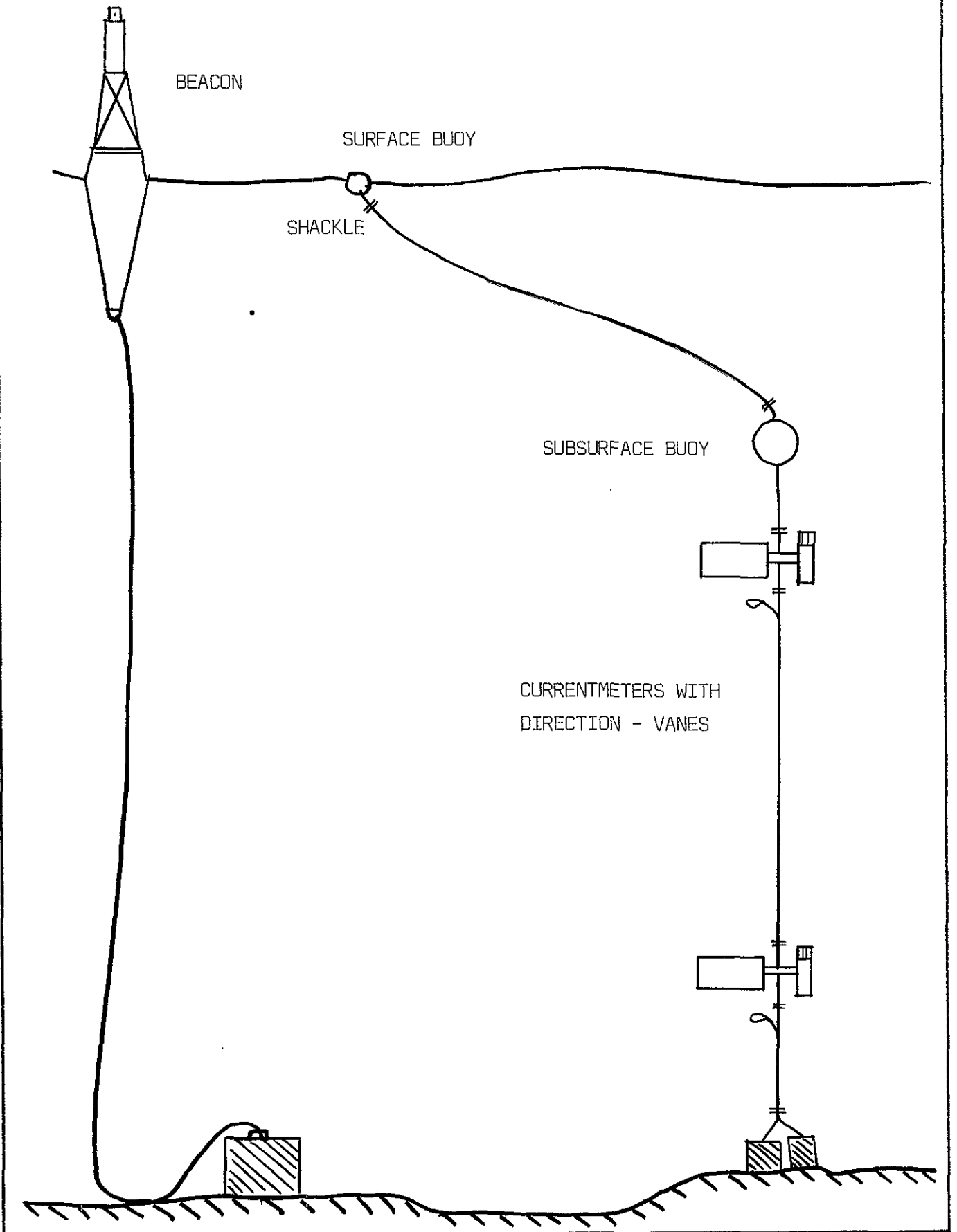


Fig 3.5

Mooring of Instruments.

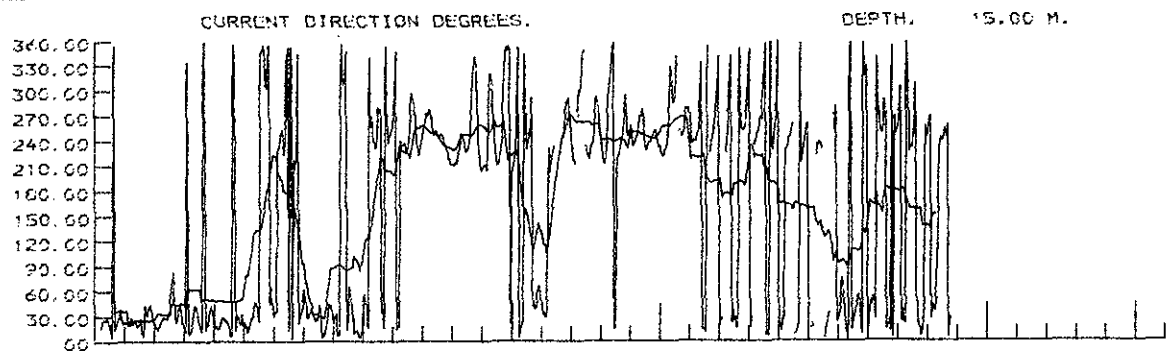
GREAT BELT, SOUTH

STATION 532

5455.90 N, 1055.00 E

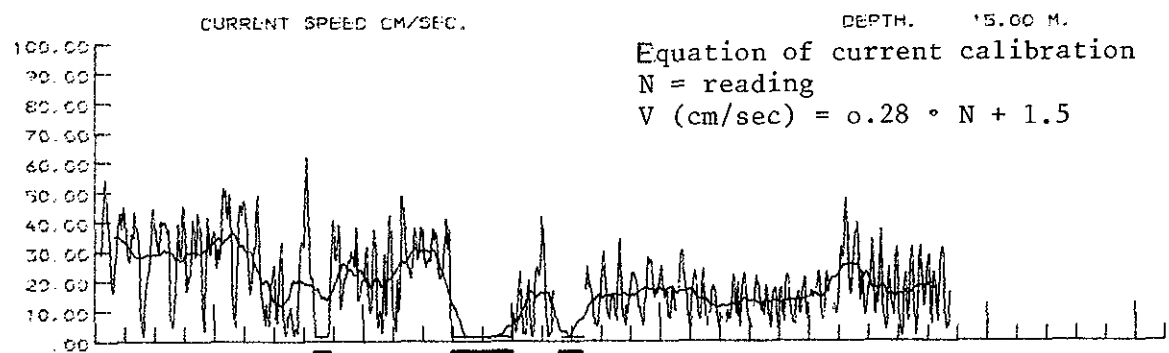
1975.08.06.04.10.00 TO 1975.09.03.18.40.00

TIMEINT.: 3600 SECONDS - RUNNING MEAN IS TAKEN OVER 25 TIMEINT.



19750806 00.00.00

19750911 00.00.00
1 UNIT = 1 DAY.

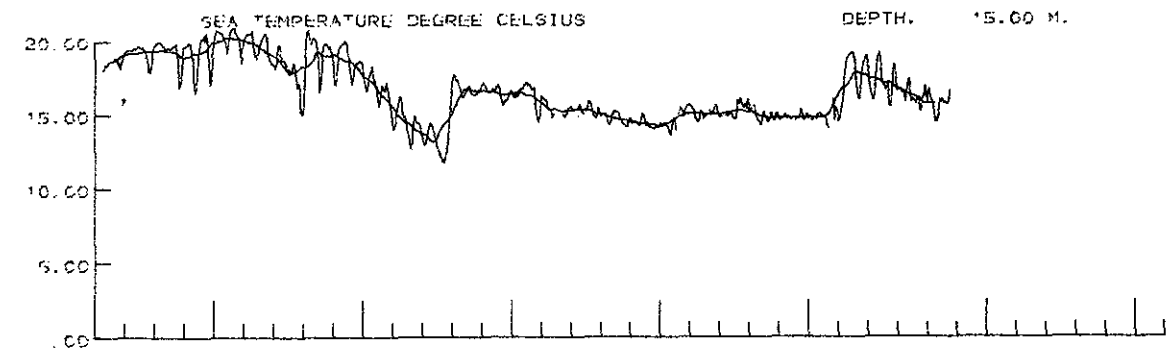


Equation of current calibration
 $N = \text{reading}$
 $V \text{ (cm/sec)} = 0.28 \cdot N + 1.5$

Rotor blocked

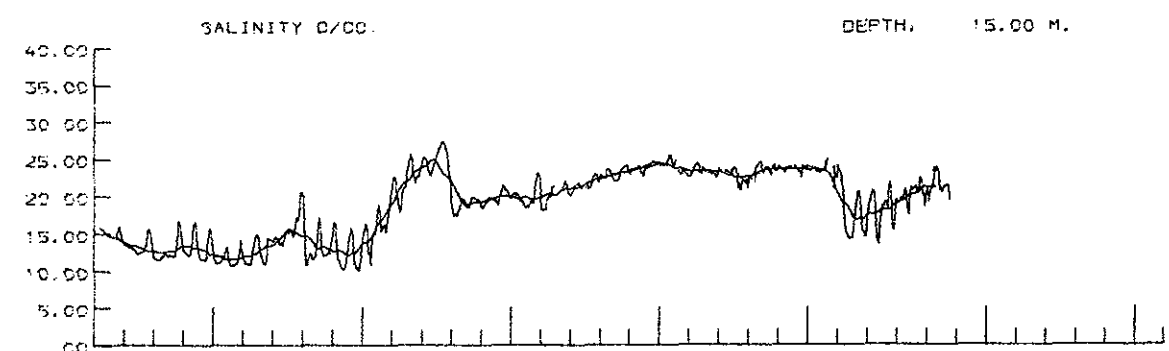
19750806 00.00.00

19750911 00.00.00
1 UNIT = 1 DAY.



19750806 00.00.00

19750911 00.00.00
1 UNIT = 1 DAY.



19750806 00.00.00

19750911 00.00.00
1 UNIT = 1 DAY.

ID: KL-1264-3
 1975:09:10:18:22:47
 VERS.: 2.01

Fig 3.6
 Example of current-meter data,
 During 1 month.

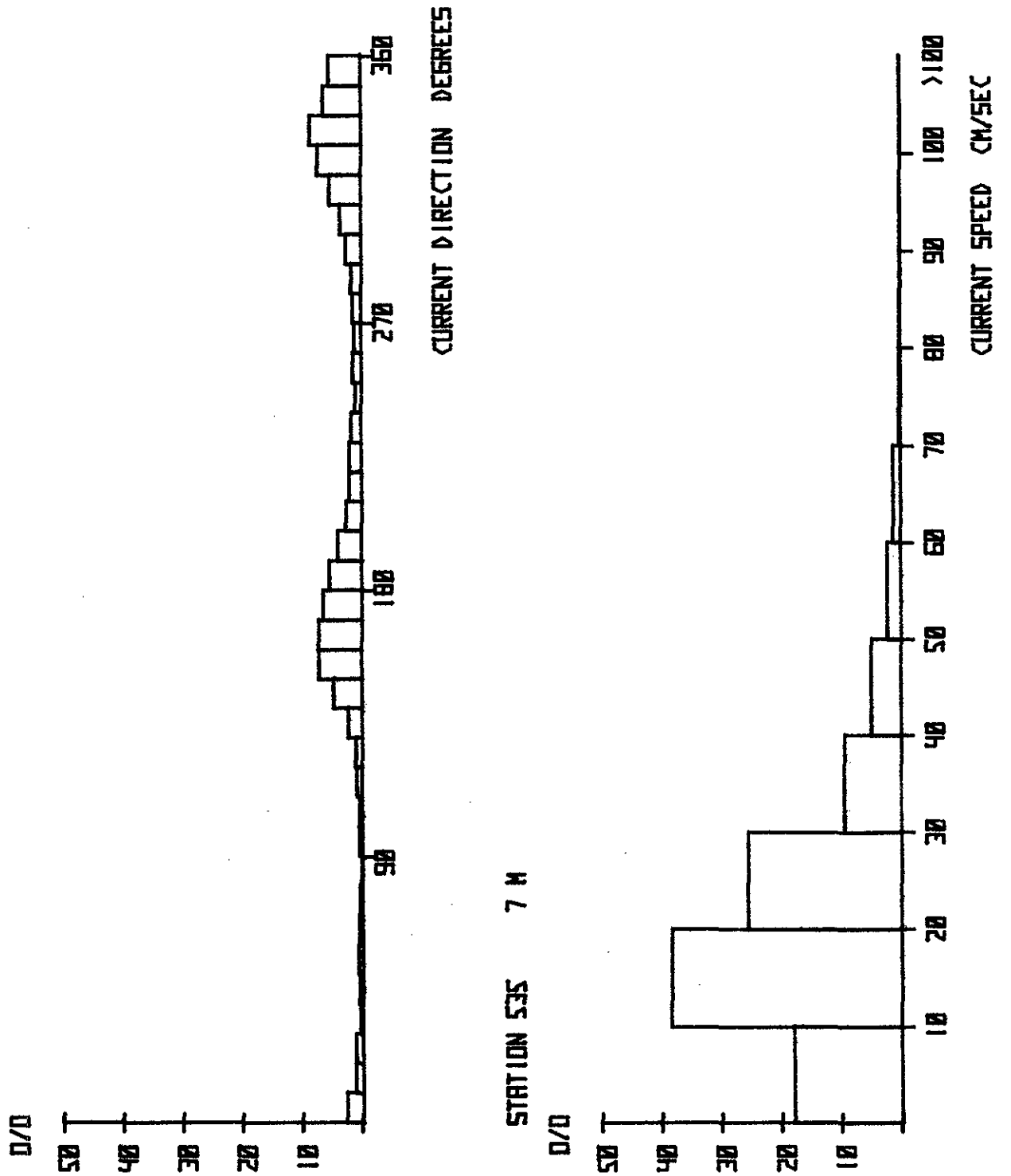


Fig 4.1

Distribution of hourly means of current speed and direction.

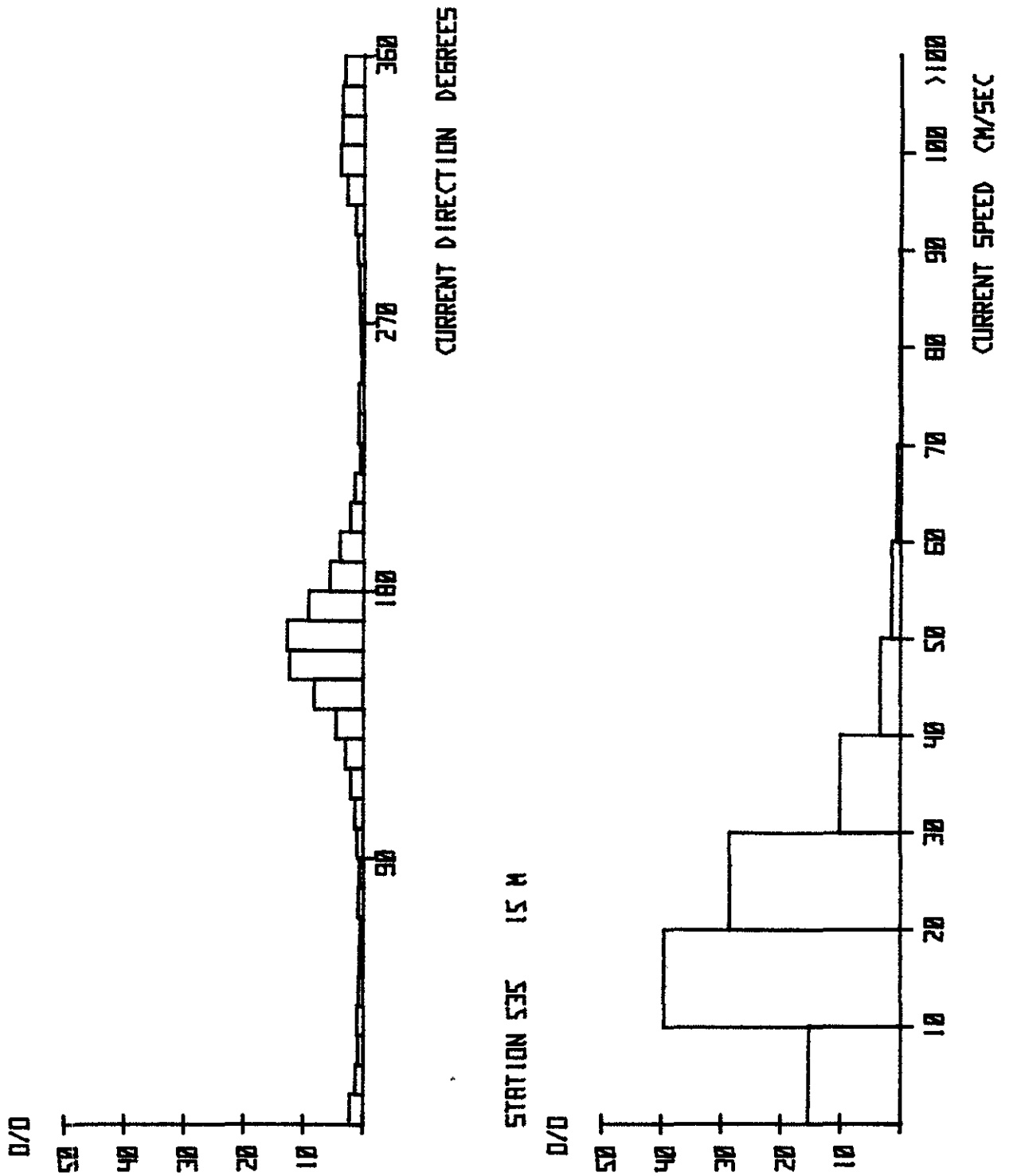


Fig 4.2

Distribution of hourly means of current speed and direction.

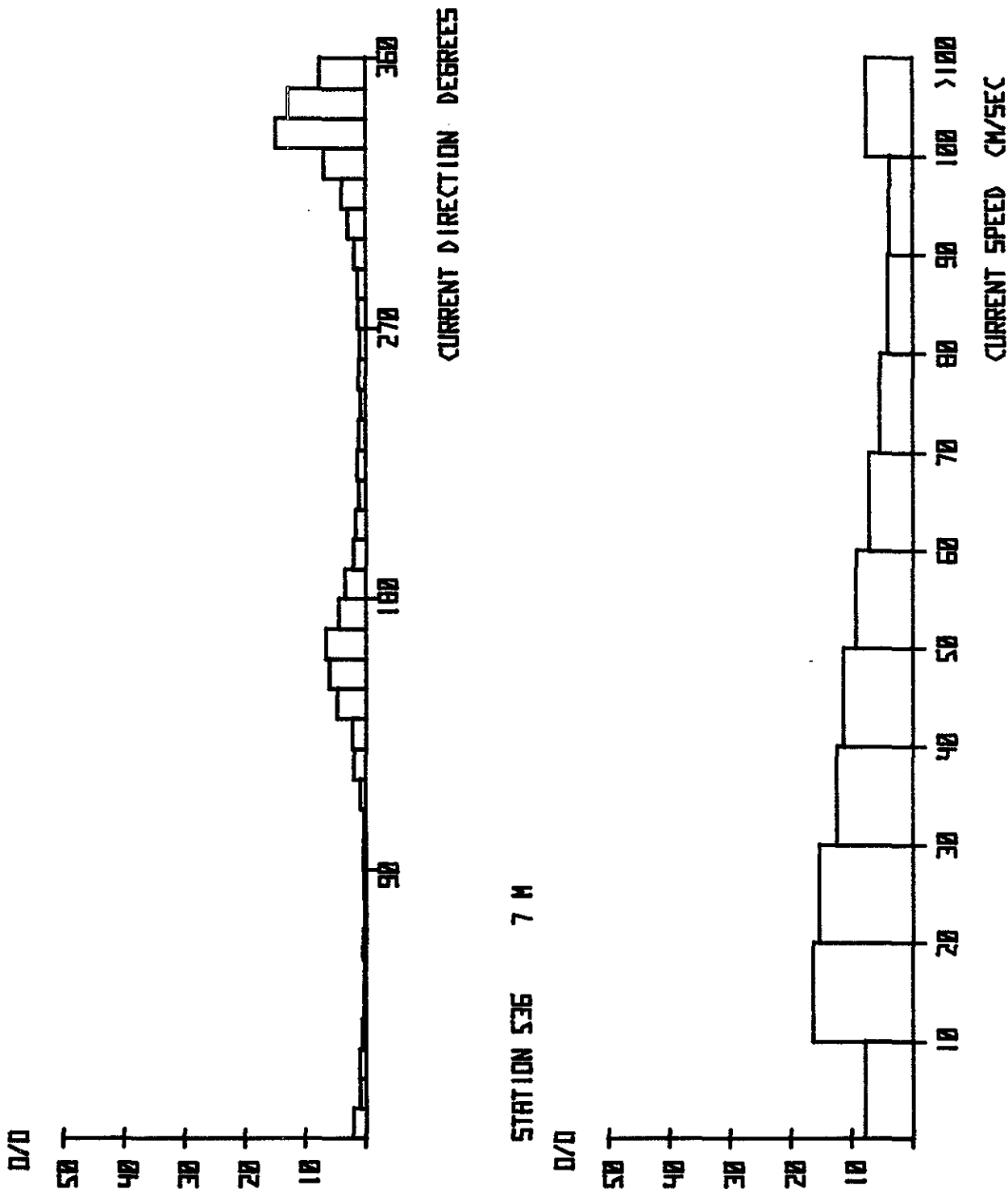


Fig 4.3

Distribution of hourly means of current speed and direction.

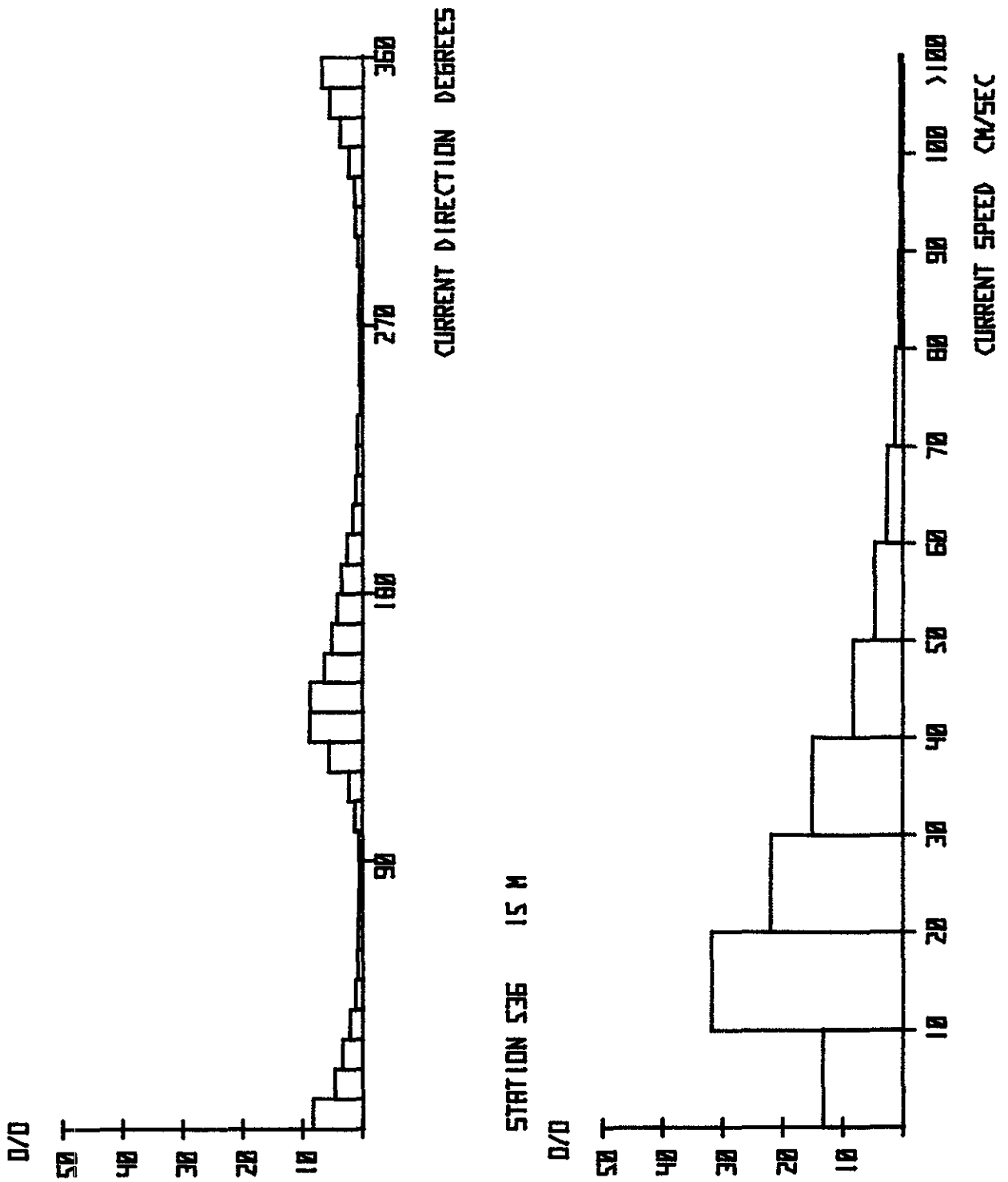


Fig 4.4

Distribution of hourly means of current speed and direction.

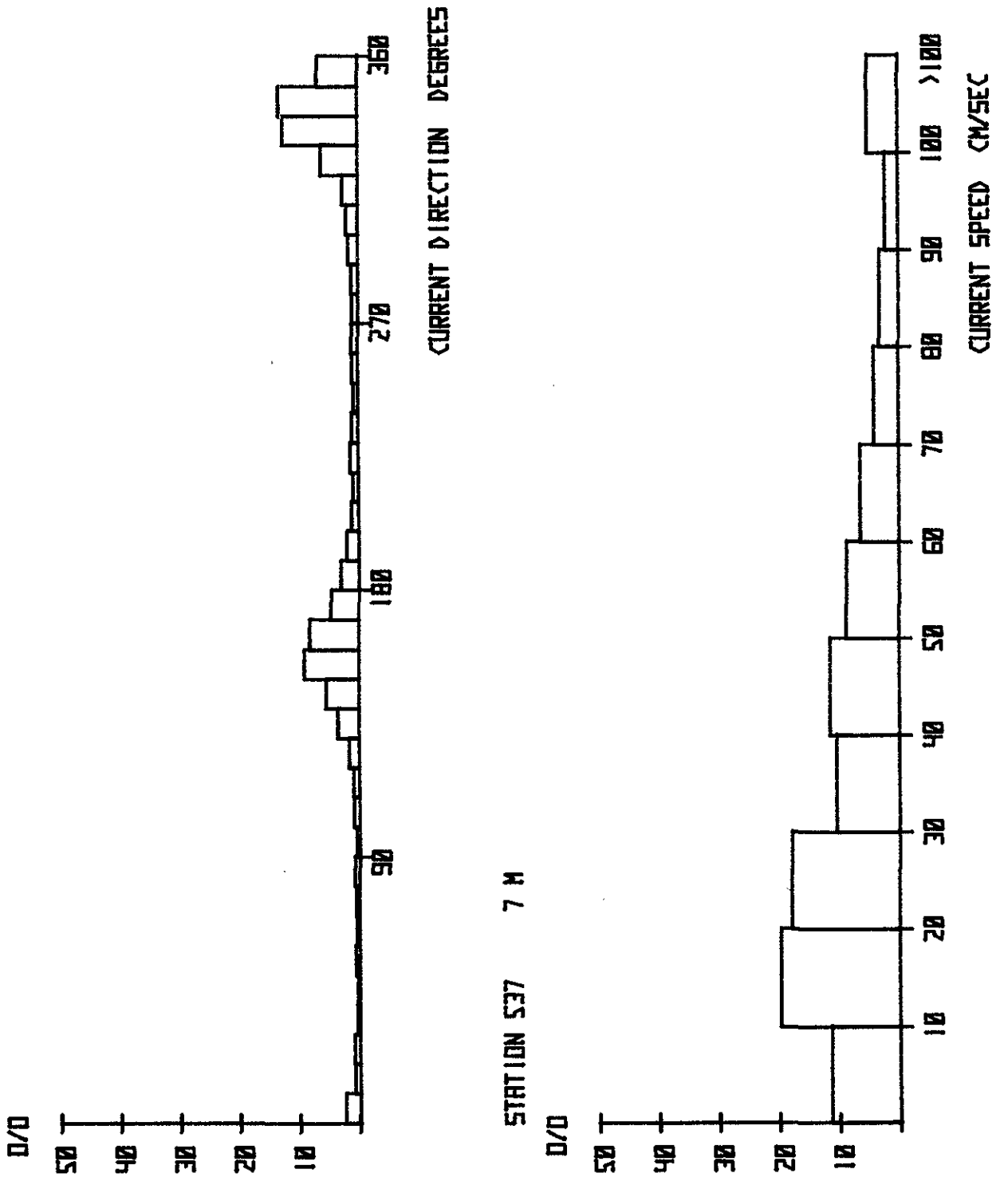


Fig 4.5

Distribution of hourly means of current speed and direction.

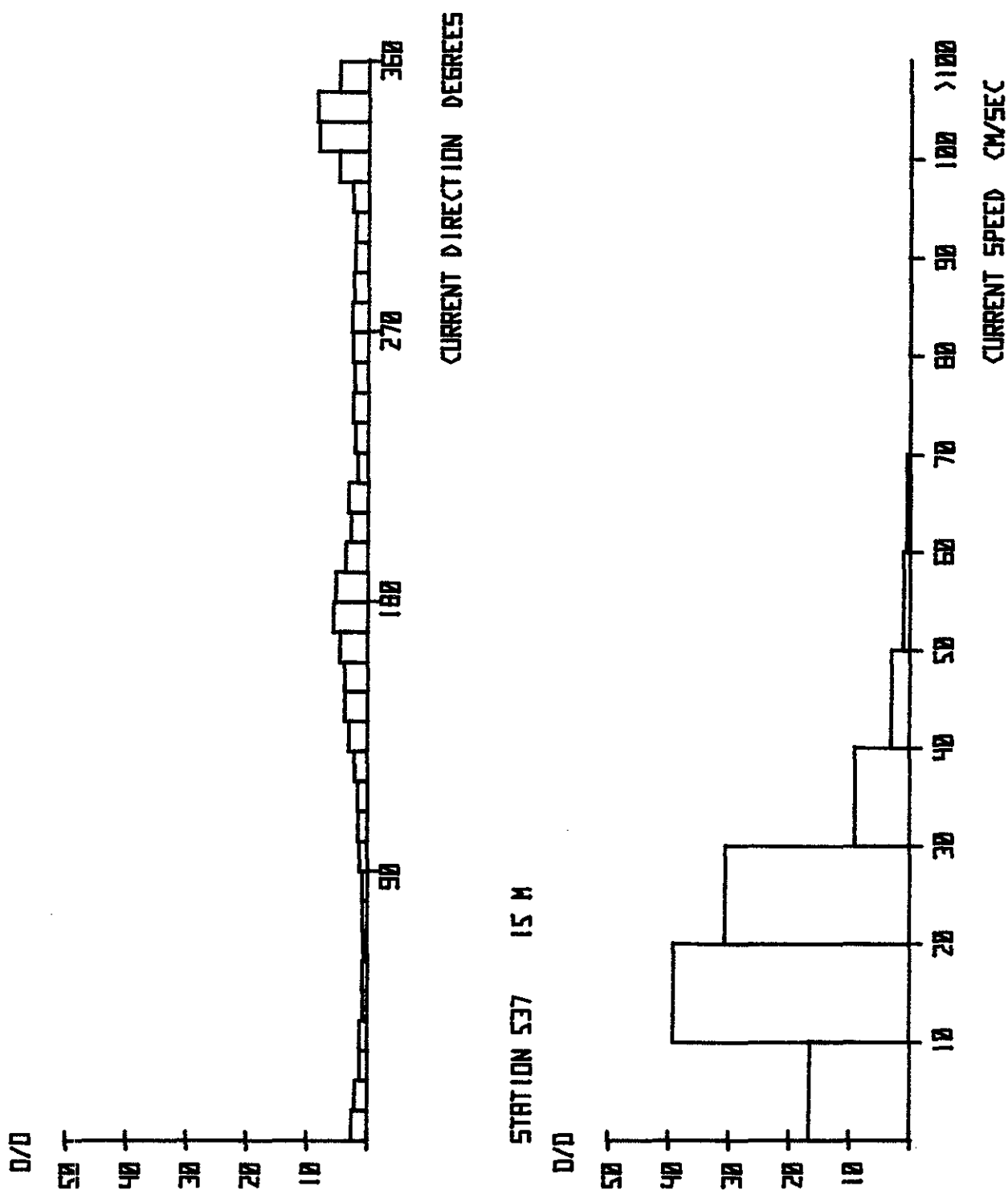


Fig 4.6

Distribution of hourly means of current speed and direction.

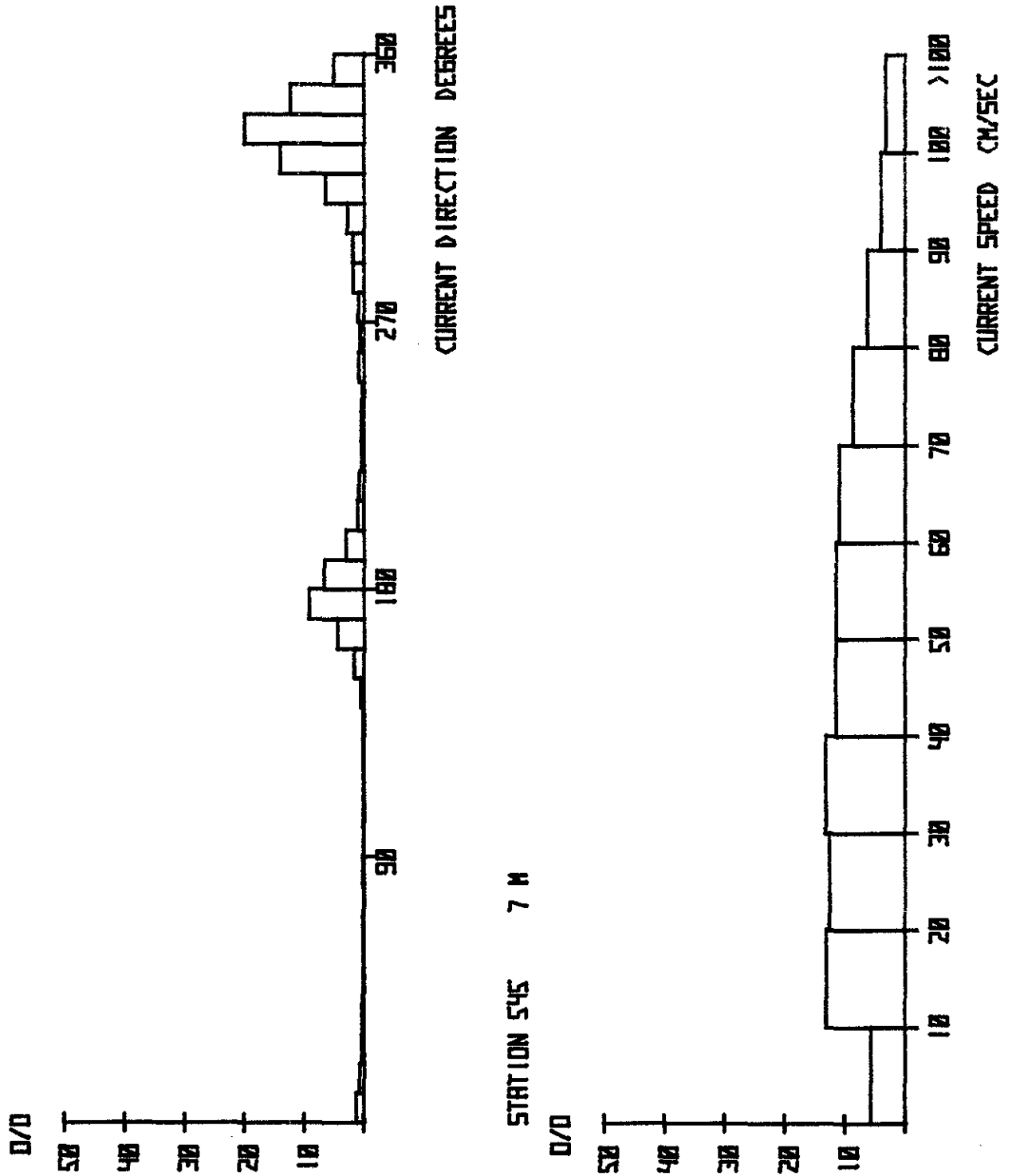


Fig 4.7

Distribution of hourly means of current speed and direction.

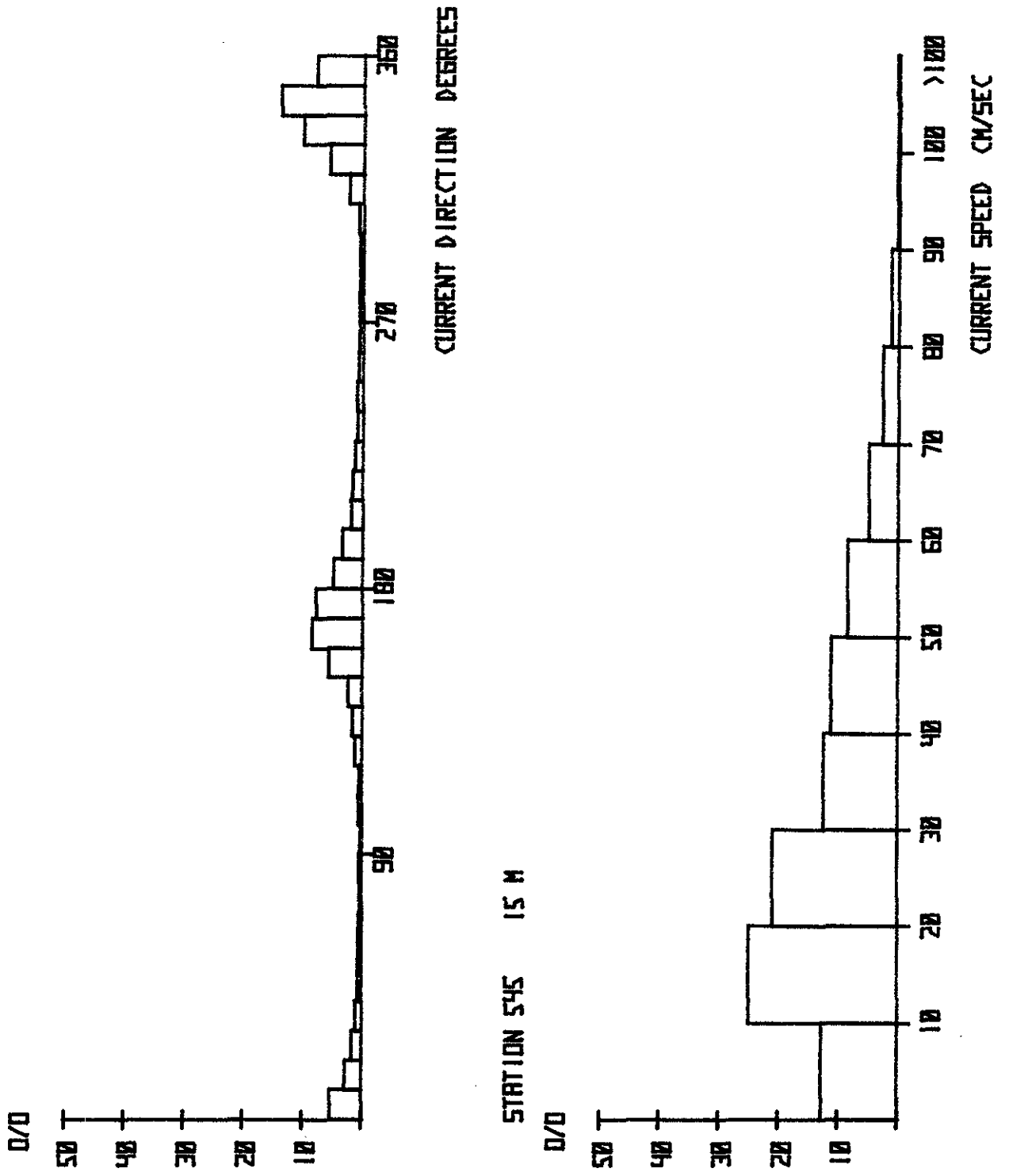


Fig 4.8

Distribution of hourly means of current speed and direction.

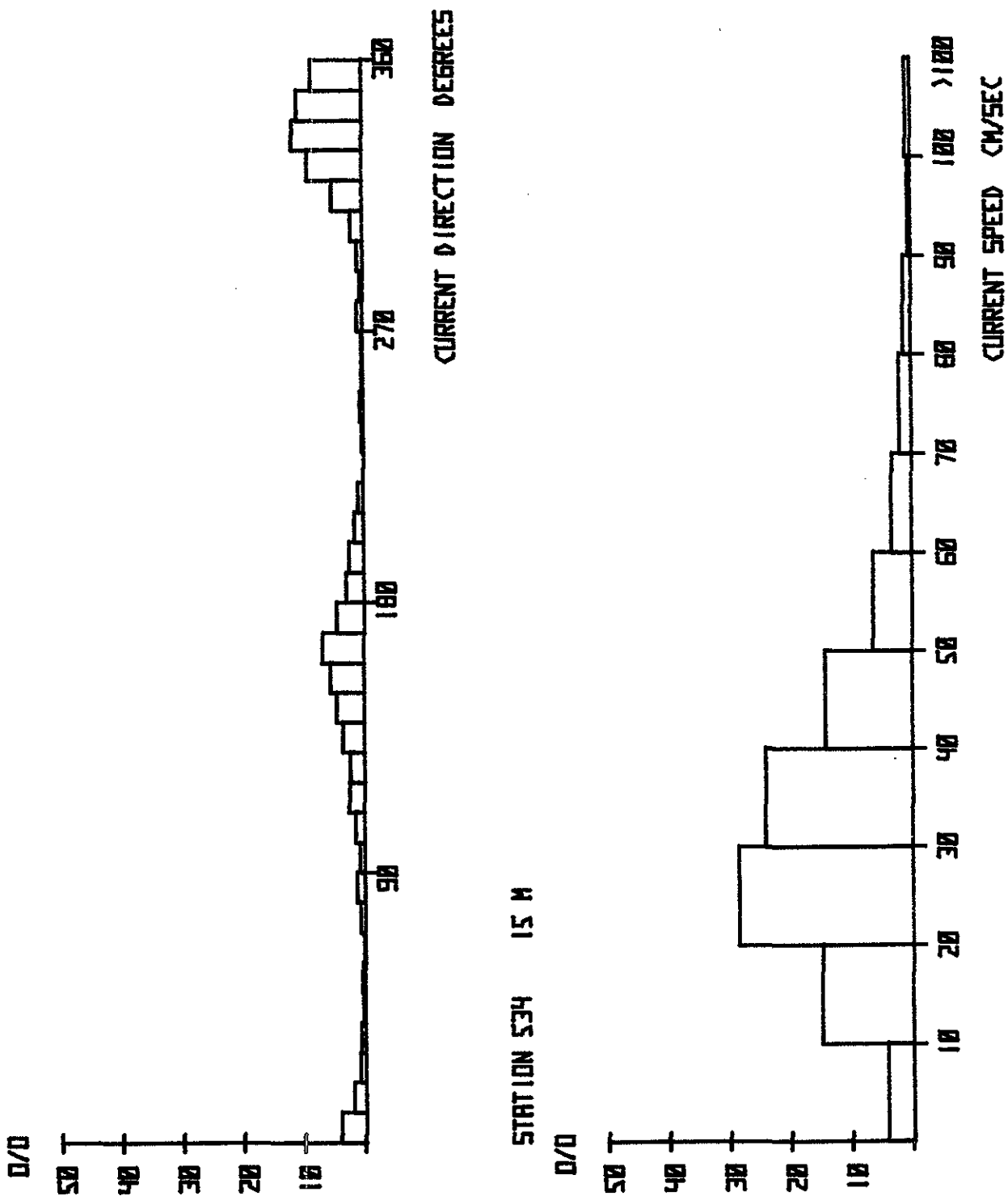


Fig 4.10

Distribution of hourly means of current speed and direction.

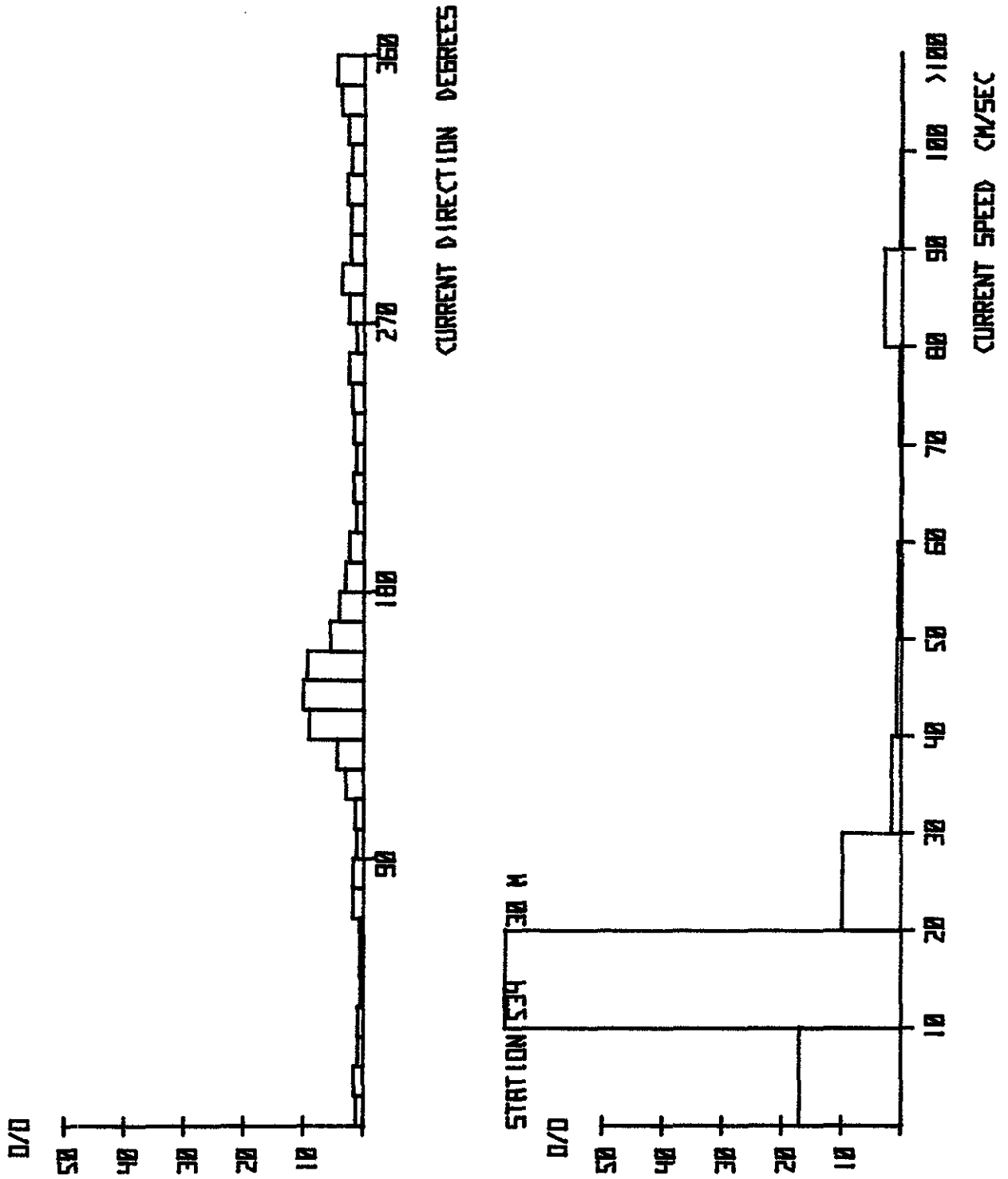


Fig 4.11

Distribution of hourly means of current speed and direction.

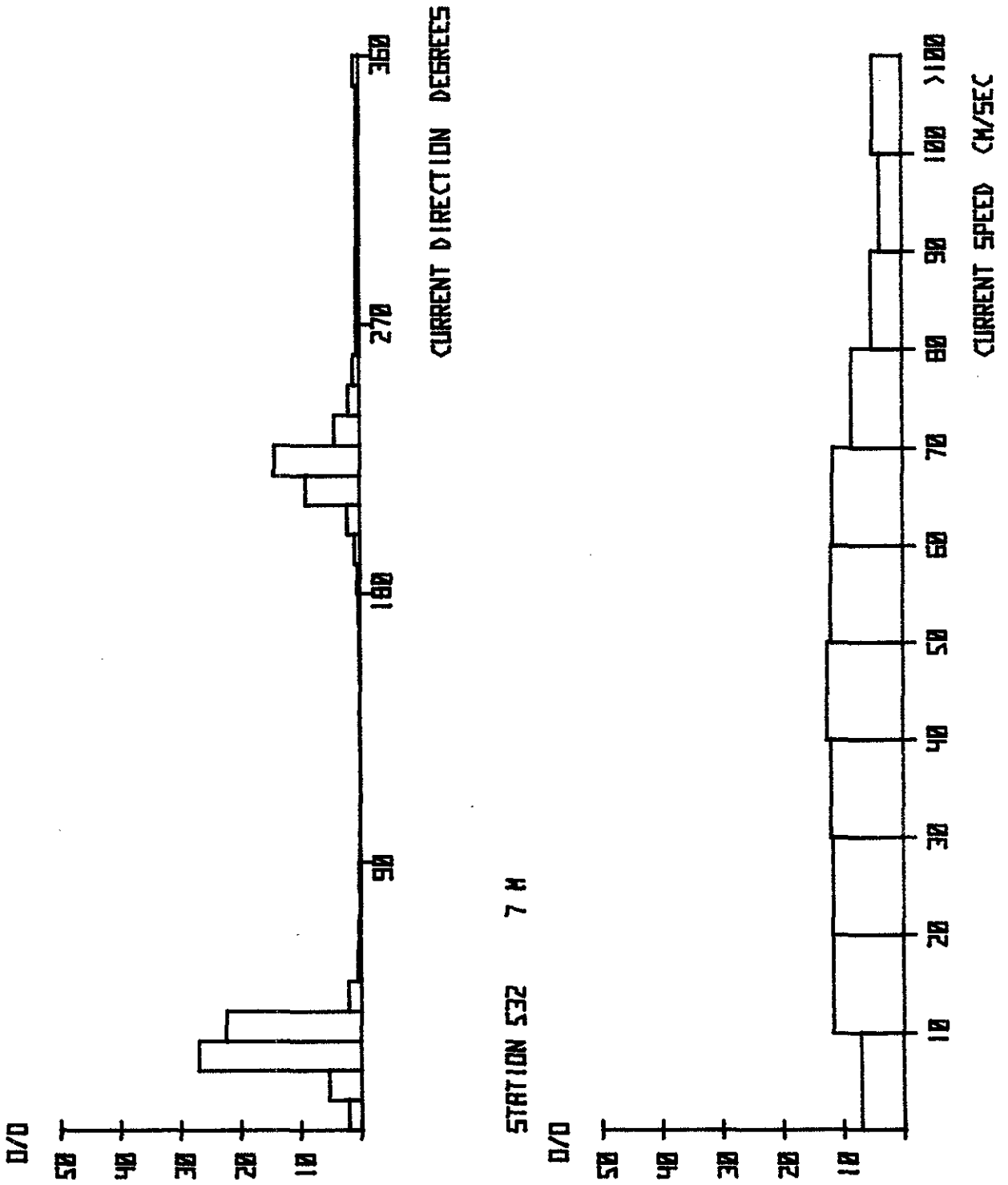


Fig 4.12

Distribution of hourly means of current speed and direction.

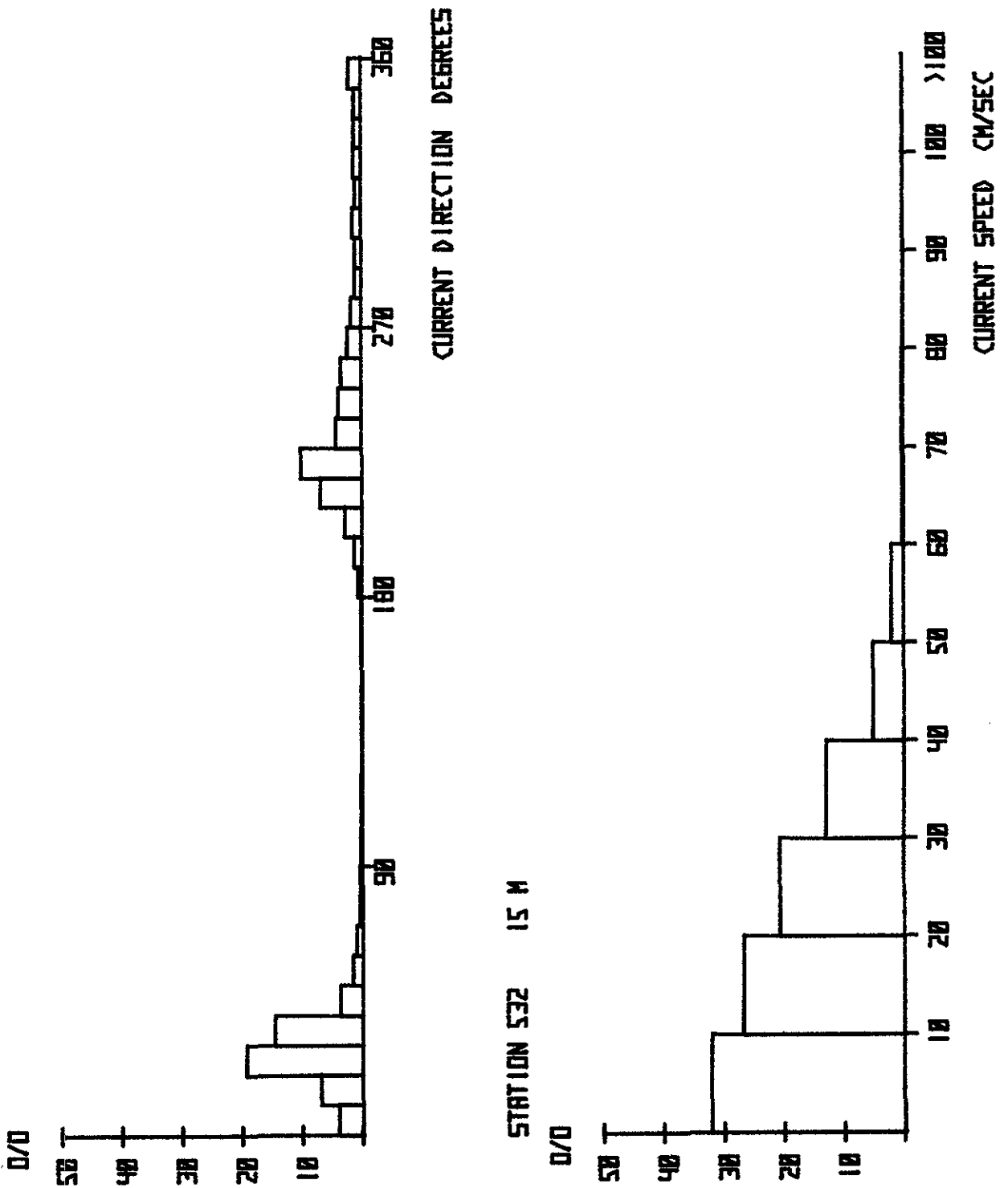


Fig 4.13

Distribution of hourly means of current speed and direction.

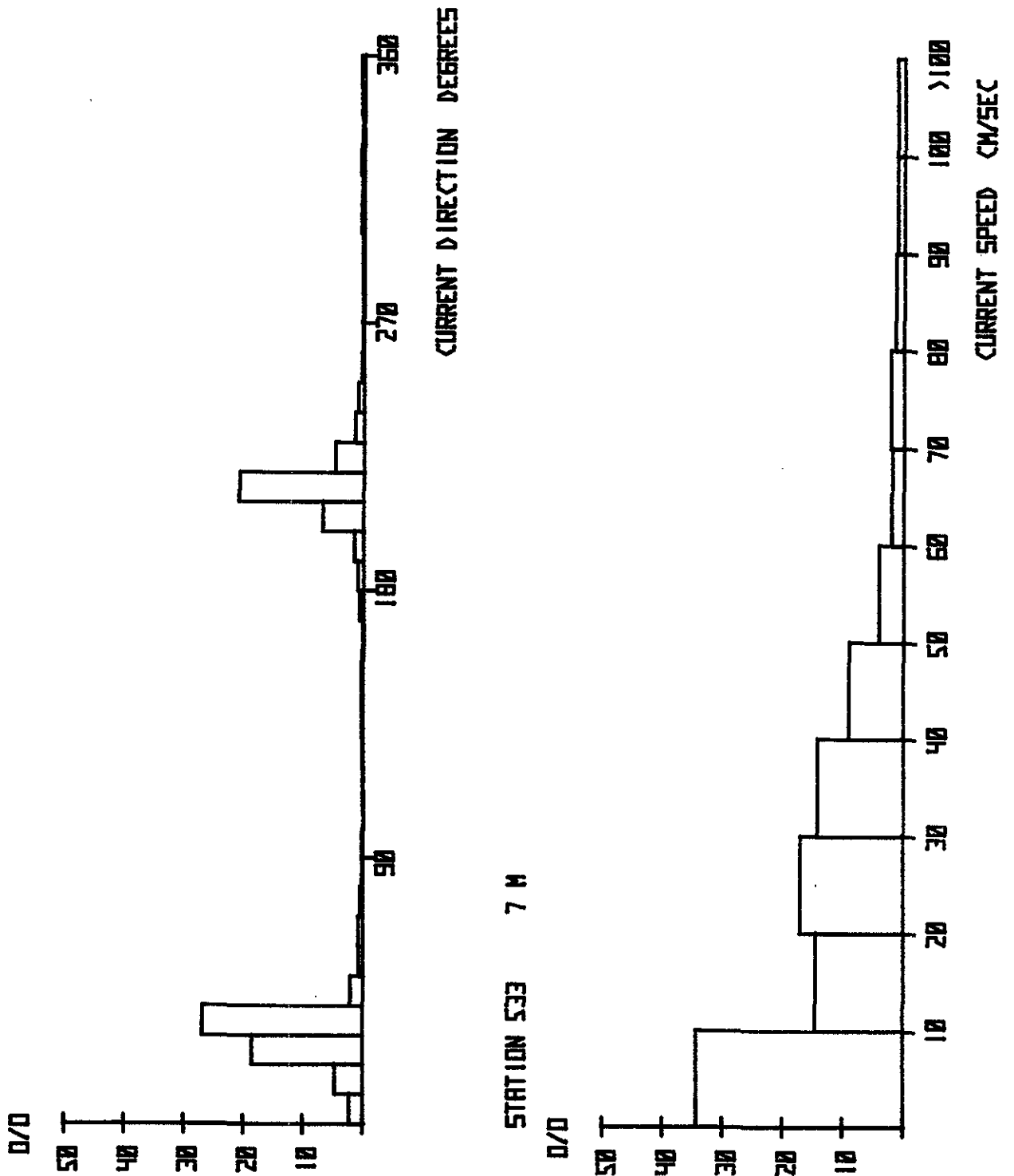
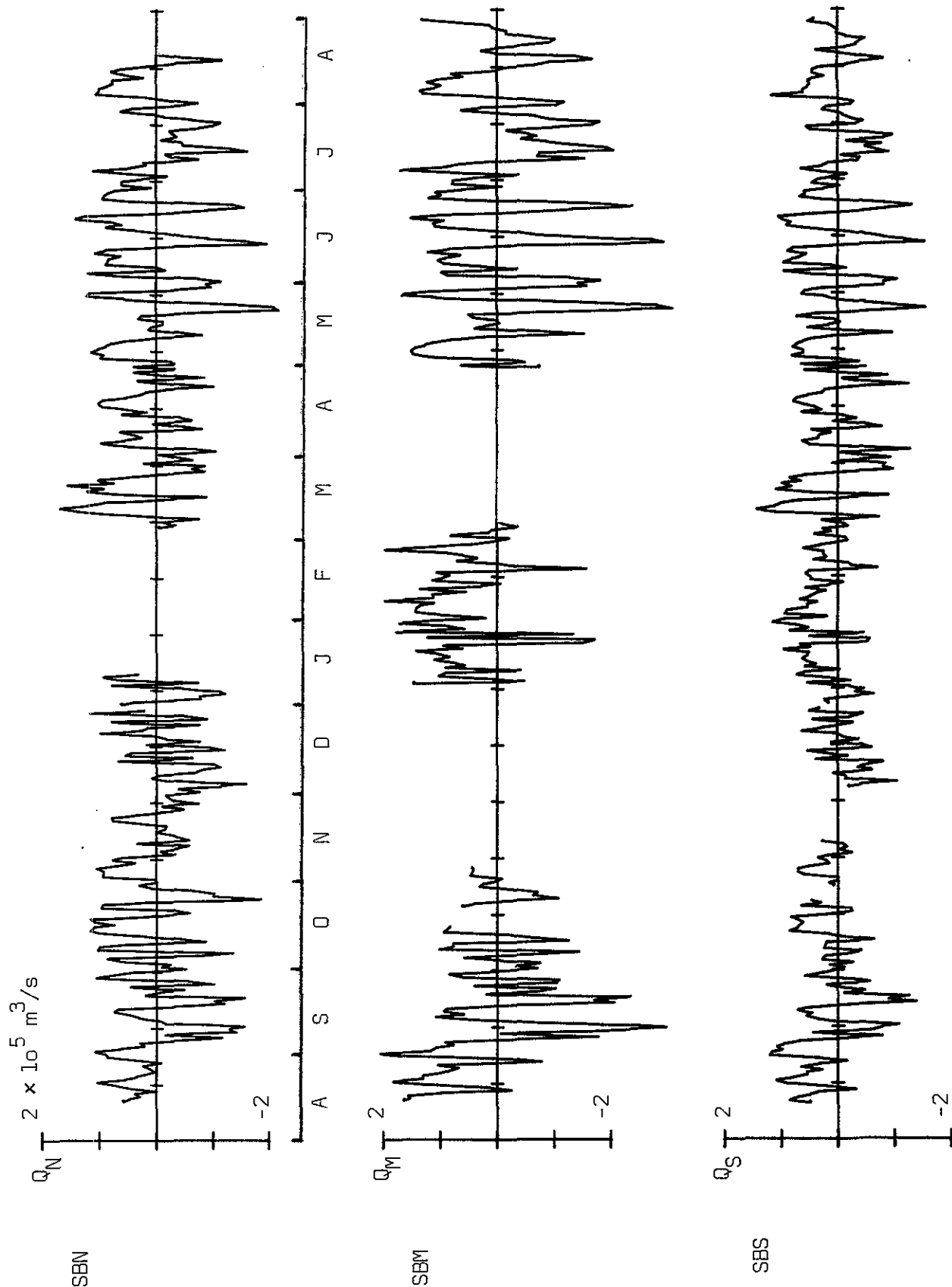


Fig 4.14

Distribution of hourly means of current speed and direction.

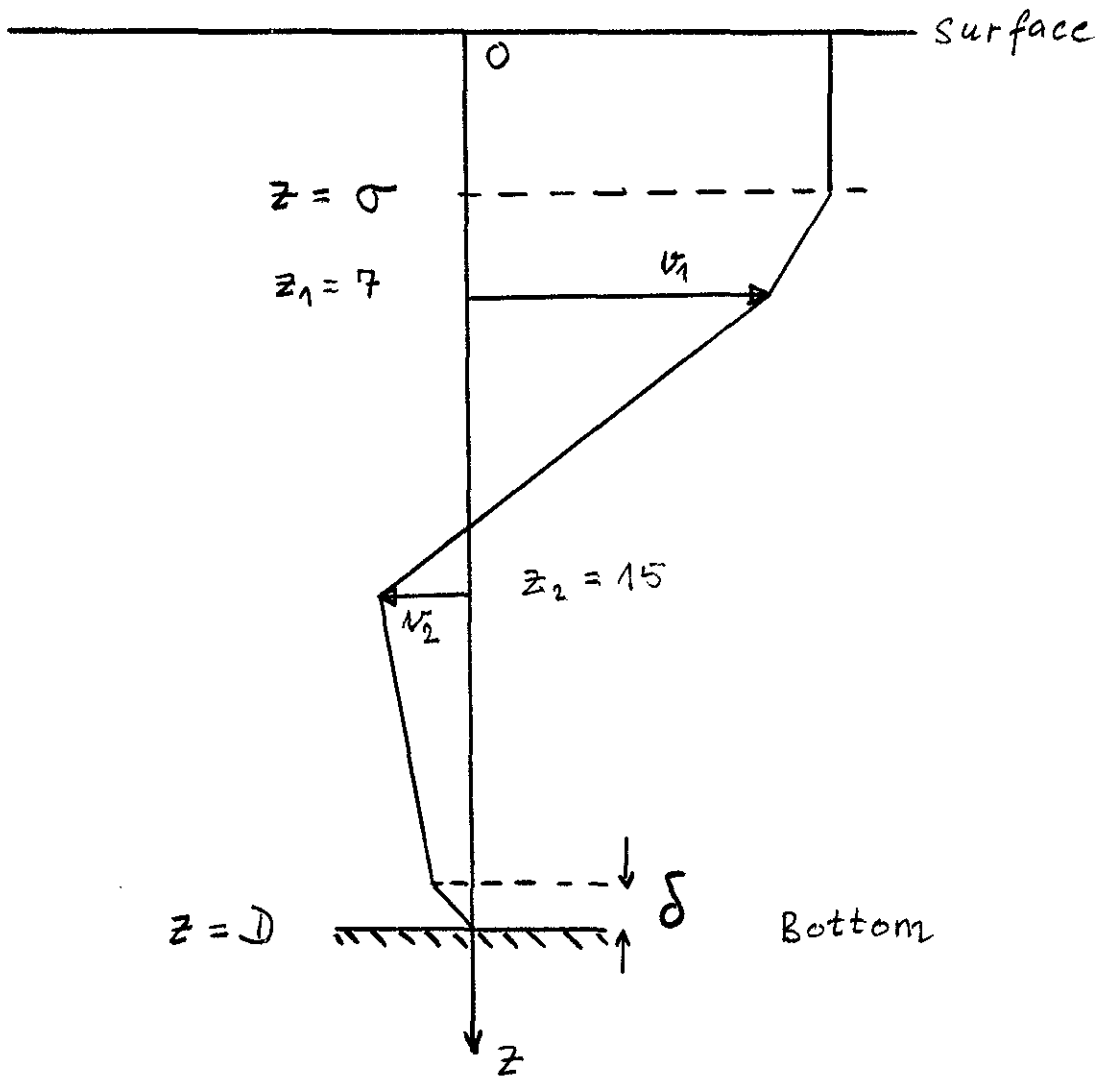
Transports to the North Sea are positive



Start 1.8.74 : 1 unit = 20 days

Fig 5.1

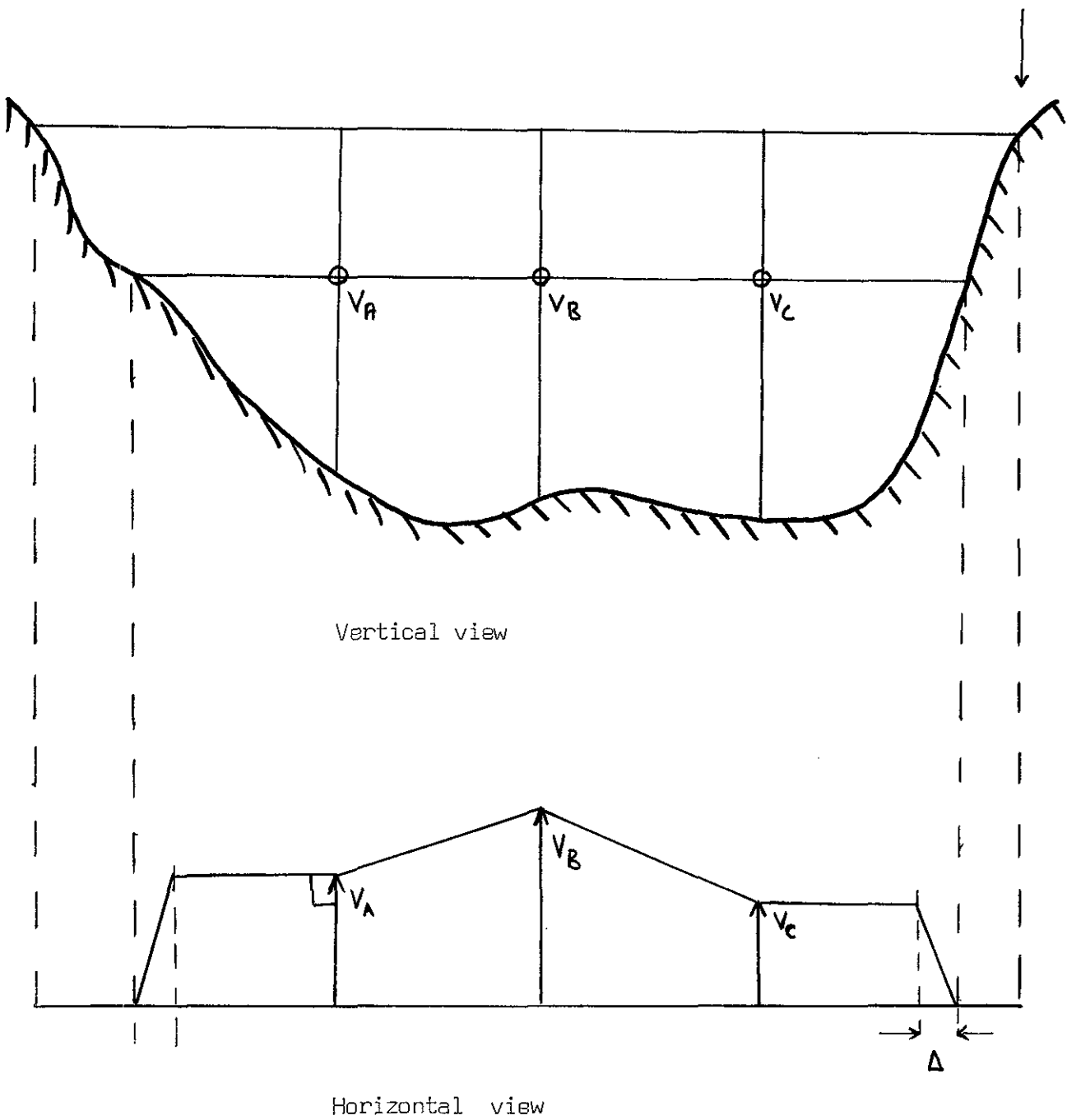
WATER TRANSPORT THROUGH STORE BELT 15.8.74 TO 1.9.75
DAILY MEAN-VALUES CALCULATED FOR 3 CROSS-SECTIONS



v_1 and v_2 known	Only v_1 known
$v(0) = v(\sigma)$ $v(\sigma) = v_1 \cdot \frac{D - \sigma}{D - z_1}$	
$v(D - \delta) = v_2 \cdot \frac{z_2}{D - \delta}$	$v(D - \delta) = v_1 \cdot \frac{z_1}{D - \delta}$
$v(D) = 0$	

Linear interpolation between computed points

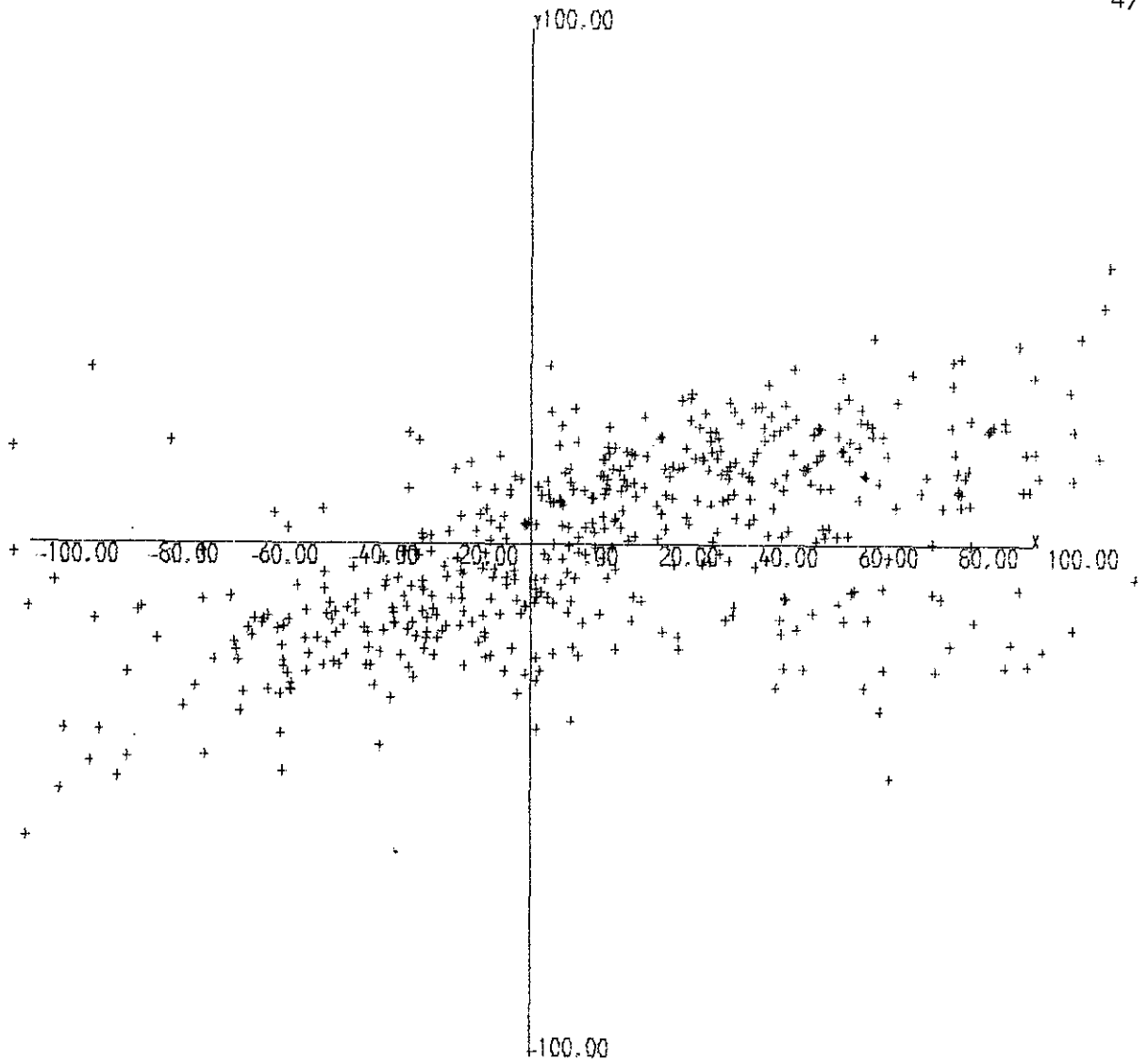
Fig 5.2



V_A , V_B , V_C are velocities normal to the vertical section
at some depth, found by means of fig. 5.2

Fig 5.3

Procedure for horizontal interpolation of velocities.



X-AXIS: CURRENT VELOCITY N-S COMPONENT CM/S. DEPTH: 7.00 M.
 GREAT BELT, NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1974:08:15:00:00:00 STOP: 1974:12:01:00:00:00 TIMEINT.: 3600 SEC.

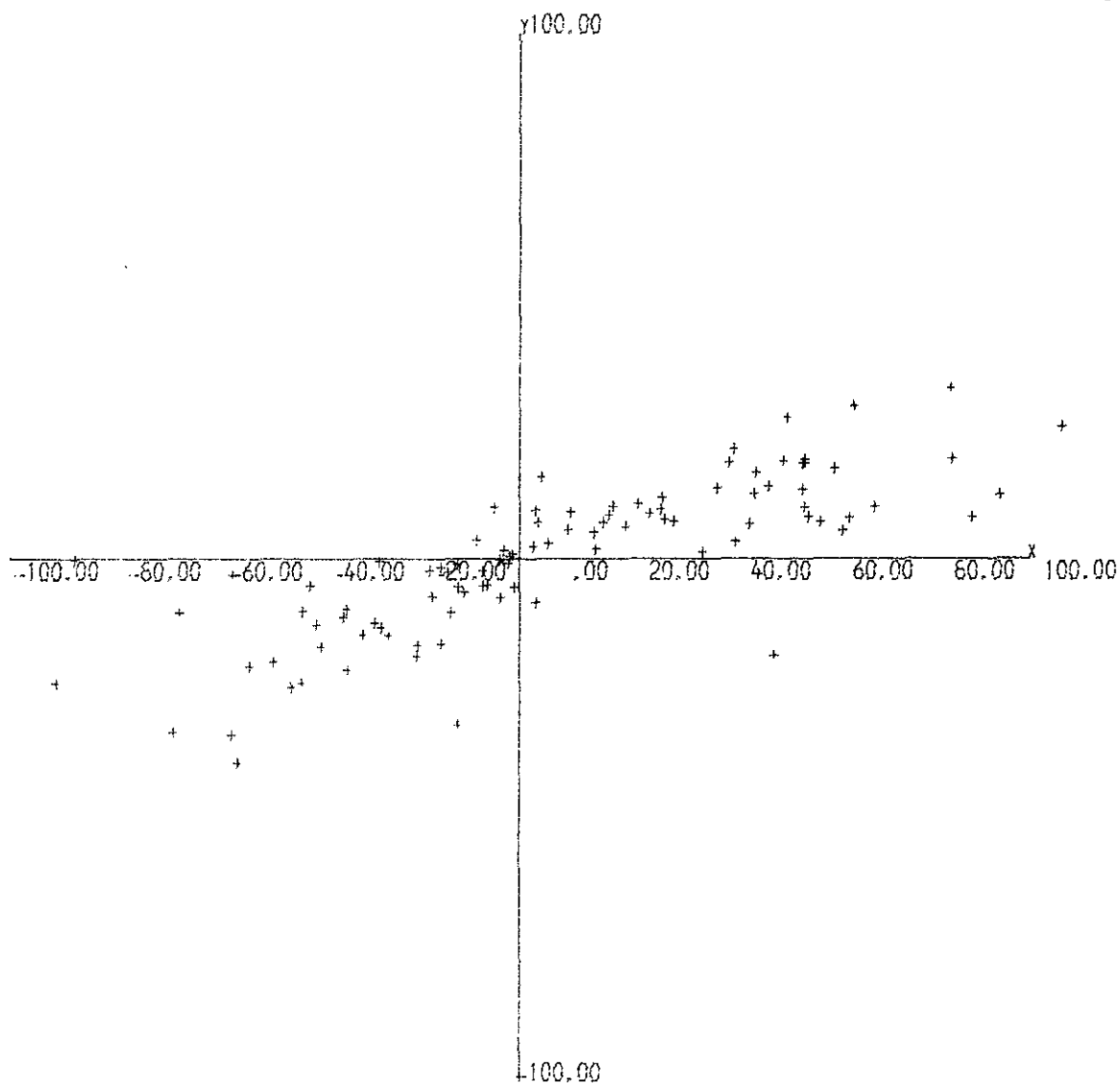
Y-AXIS: CURRENT VELOCITY N-S COMPONENT CM/S. DEPTH: 7.00 M.
 GREAT BELT, NORTH STATION: 535 5537.20 N 1043.10 E
 START: 1974:08:15:00:00:00 STOP: 1974:12:01:00:00:00 TIMEINT.: 3600 SEC.

MILJØSTYRELSENS BÆLTPROJEKT.

2.03
 19751203 17.56:45

Fig 6.1

Correlation of velocity-components, section SBN.
 Hourly means.



X-AXIS: CURRENT VELOCITY N-S COMPONENT CM/S. DEPTH. 7.00 M.
 GREAT BELT, NORTH STATION: 536 5537.70 N 1045.30 E
 START: 1974.08.01.11:00:00 STOP: 1974.12.04.09.20:00 TIMEINT.: 86400 SEC.

Y-AXIS: CURRENT VELOCITY N-S COMPONENT CM/S. DEPTH. 7.00 M.
 GREAT BELT, NORTH STATION: 535 5537.20 N 1043.10 E
 START: 1974.08.01.11:00:00 STOP: 1975.01.01.00.00:00 TIMEINT.: 86400 SEC.

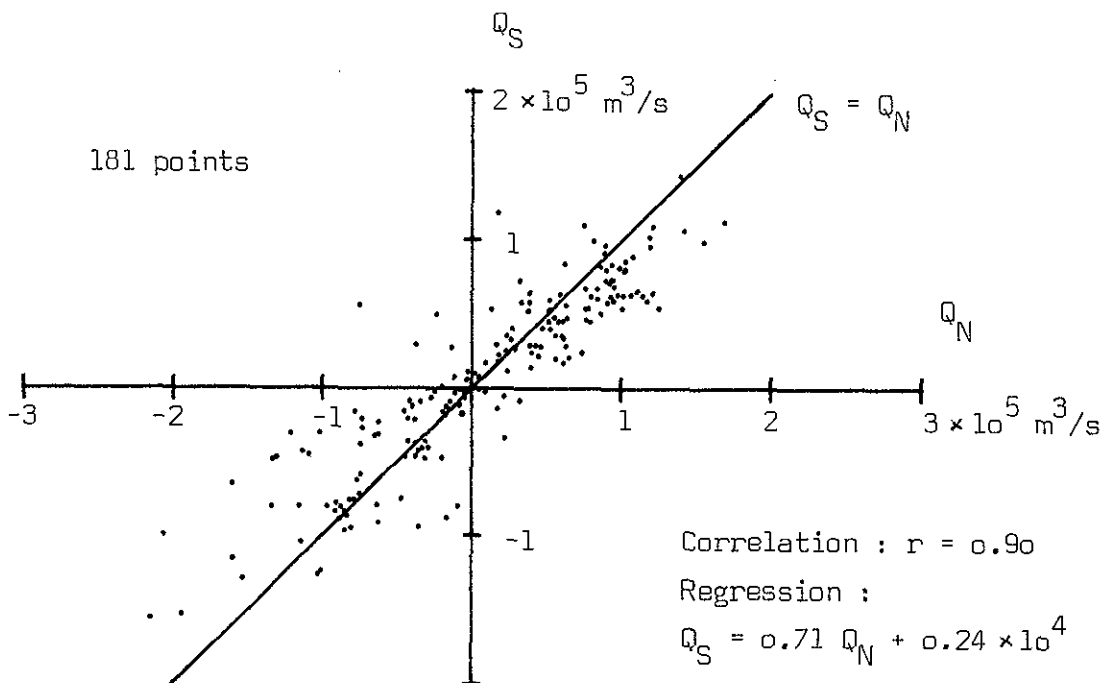
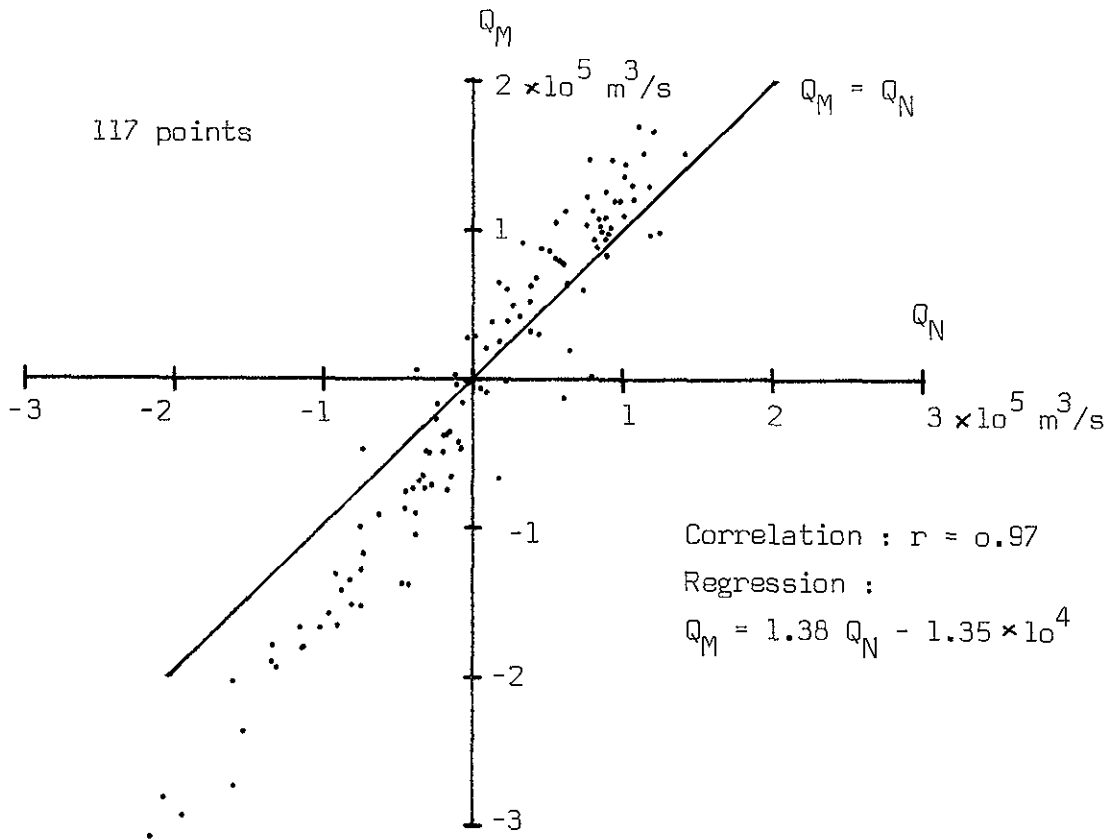


Fig 6.3

Correlation of transports Q_M (top) and Q_S (bottom) with Q_N .

Daily means 1/1-75 to 19/8-75.

Note that straight lines are not regression lines.

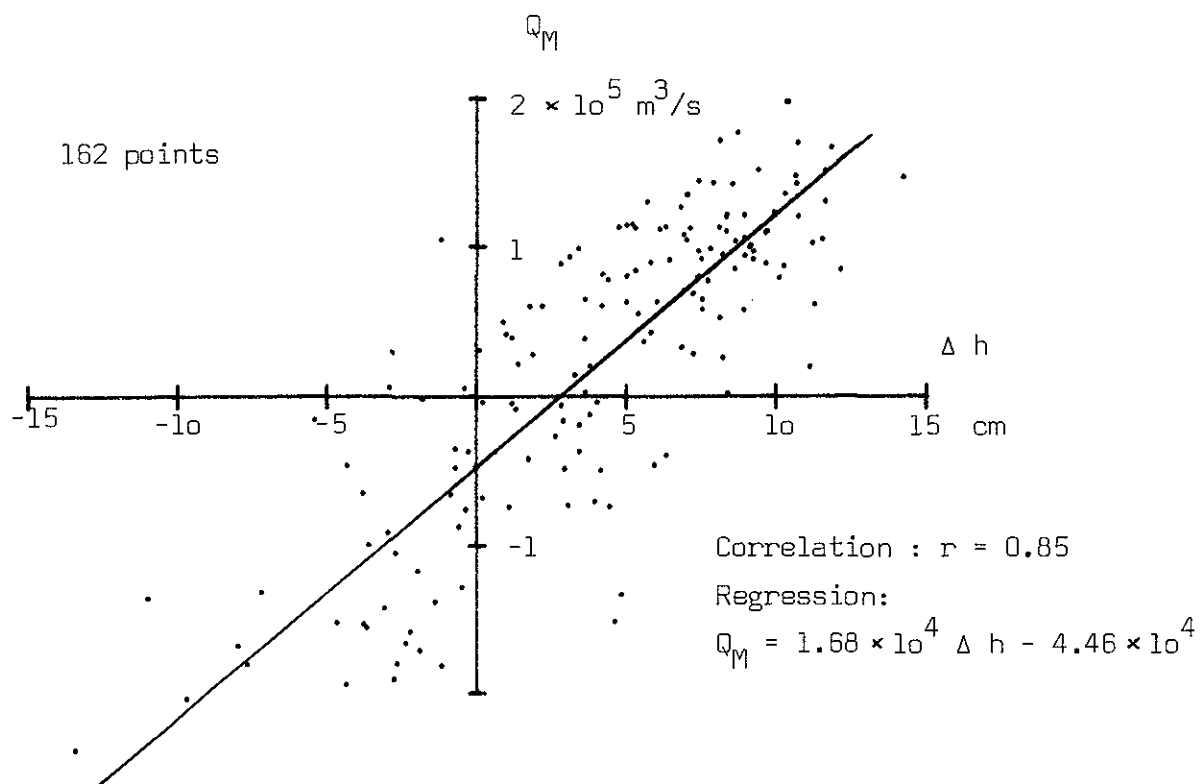
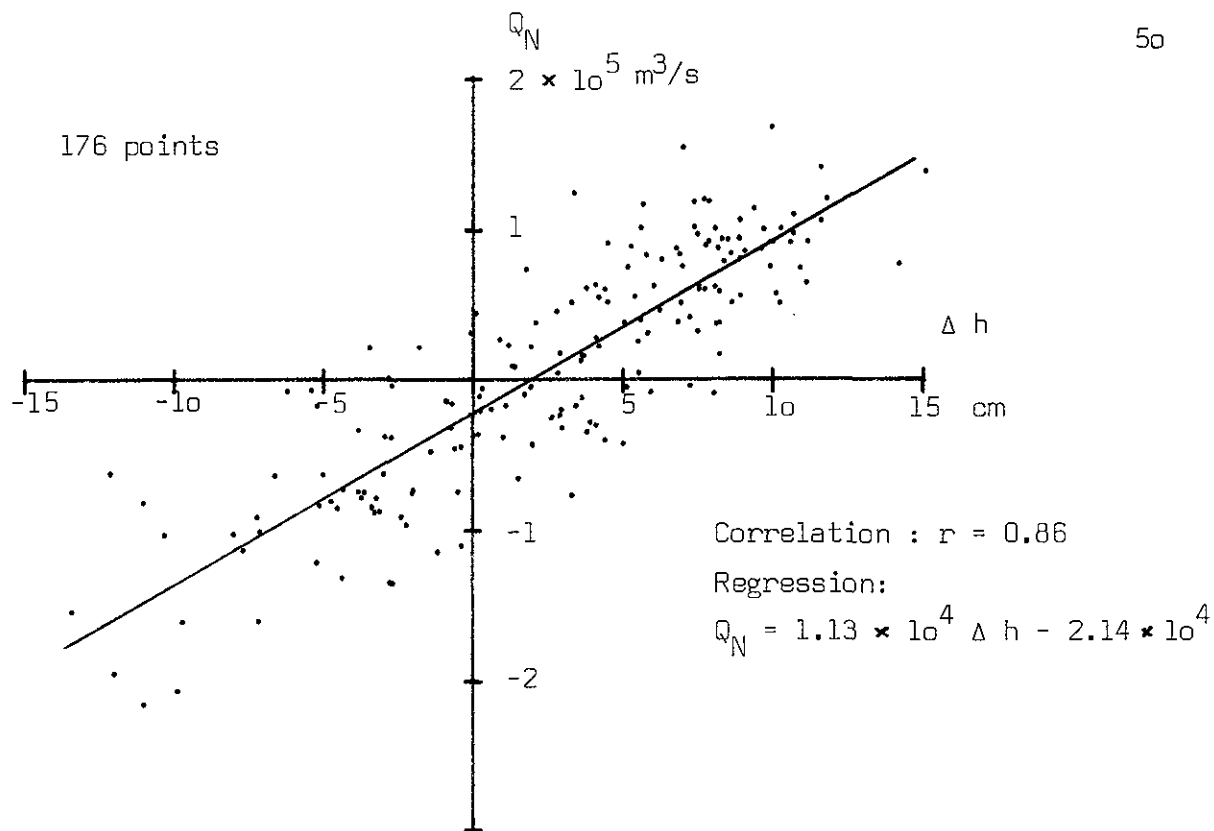


Fig 6.4

Correlation of transport Q_N and Q_M with the waterlevel-difference

$\Delta h = h_{\text{Korsør}} - h_{\text{Slipshavn}}$

Daily means 1/1-75 to 15/8-75

Figurer til kapitel 4

Undersøgelse af fordeling og transport
af partikulært stof i danske farvande
af

Bo Lundgreen, Miljøstyrelsen

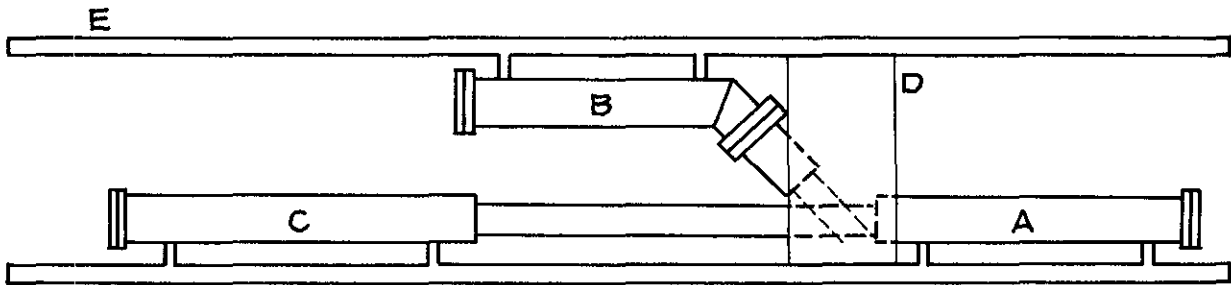


Fig. 4.1 Skitse af bcd-meter.

Lyssprednings- og lysdæmningsmåler (bcd; b=lysspredningskoefficient, c=lysdæmningskoefficient, d=dybde).

- A. Lyskilde. Optikken er en lysprojektor bestående af et hulspejl, en 6V/10W halogenpære (Atlas), en $f=20$ mm kollimatorlinse, en 1mm hulblende og en $f=85$ mm objektivlinse, hvilket giver en stråledivergens på ca. 0.7° i luft og 0.4° i vand. Strålens diameter er 25 mm. Huset indeholder også en transistor-omformer, som omvandler 100 VDC til +6 VDC, +5 VDC og +12 VDC elektronisk stabiliserede spændinger.
- B. Lysspredningsdetektor. Det optiske system består af en $f=85$ mm objektivlinse, i dens focus en 3 mm diameter og 100 mm lang fiberlysleder (for at føre lyset forbi rørknækket), et 650 nm glasfilter og som detektor en duMont fotomultiplier med S20-respons. Fotomultiplierens højspænding kommer fra en stabiliseret spændingsomvandler og fotosignalet forstærkes med en FET-forstærker.
- C. Lysdæmningsdetektor. Optisk system bestående af et $f=85$ mm objektiv, i dets focus en 2 mm hulblende, en filterveksler med tre filtre (UV ca. 380 nm, grøn ca. 520 nm og rød ca. 650 nm) og en UV-følsom selenfotocelle (Bruno Lange S50 UV-sensitised). Det elektroniske system omfatter en højstabil FET-forstærker for fotocellen samt en tryktransducer (Bell & Howell) med forstærker som dybdemåler.
- D. Aftagelig lysskærm.
- E. Ramme af gitterværk (et stykke trekantet antennemast).

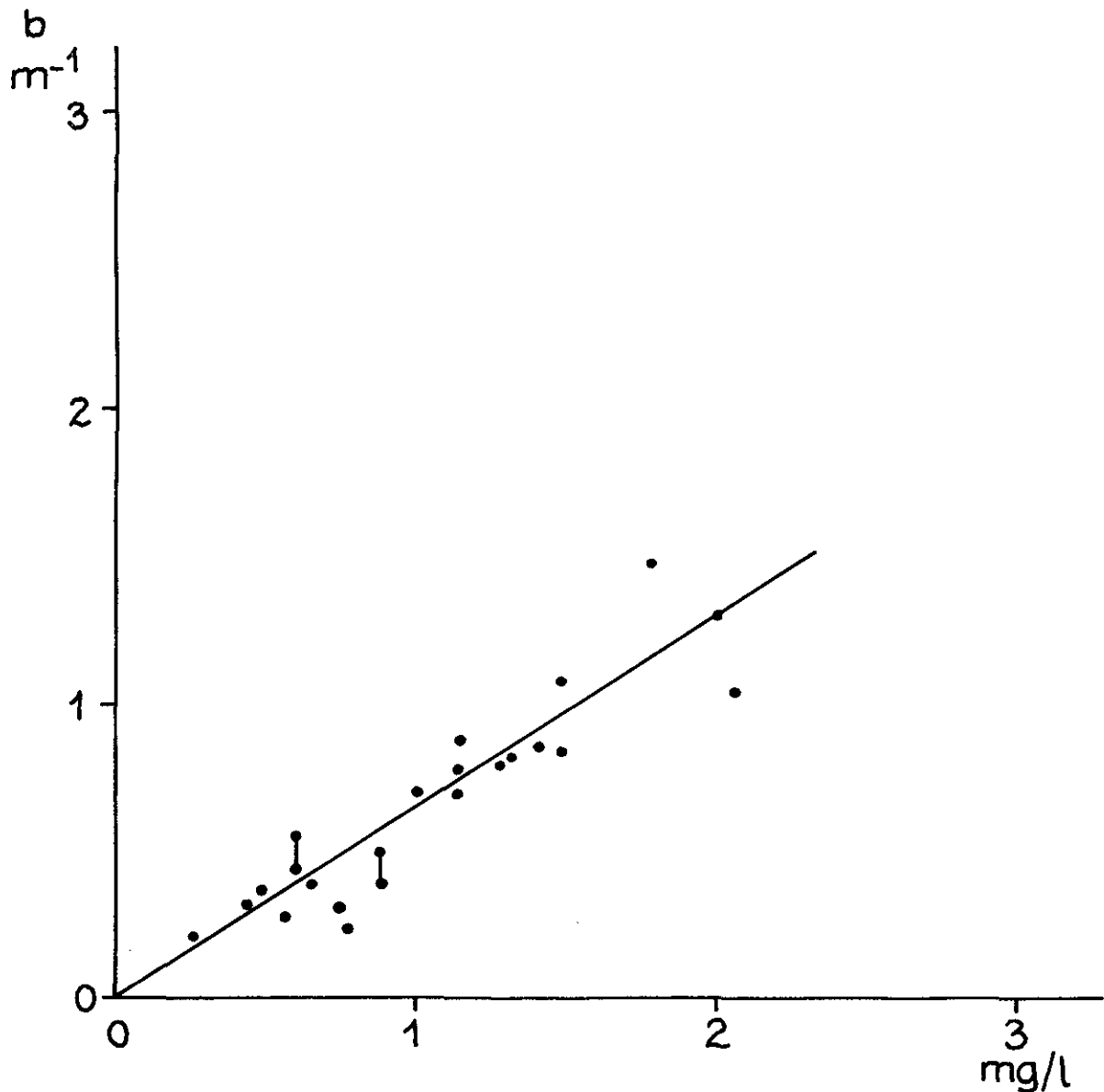
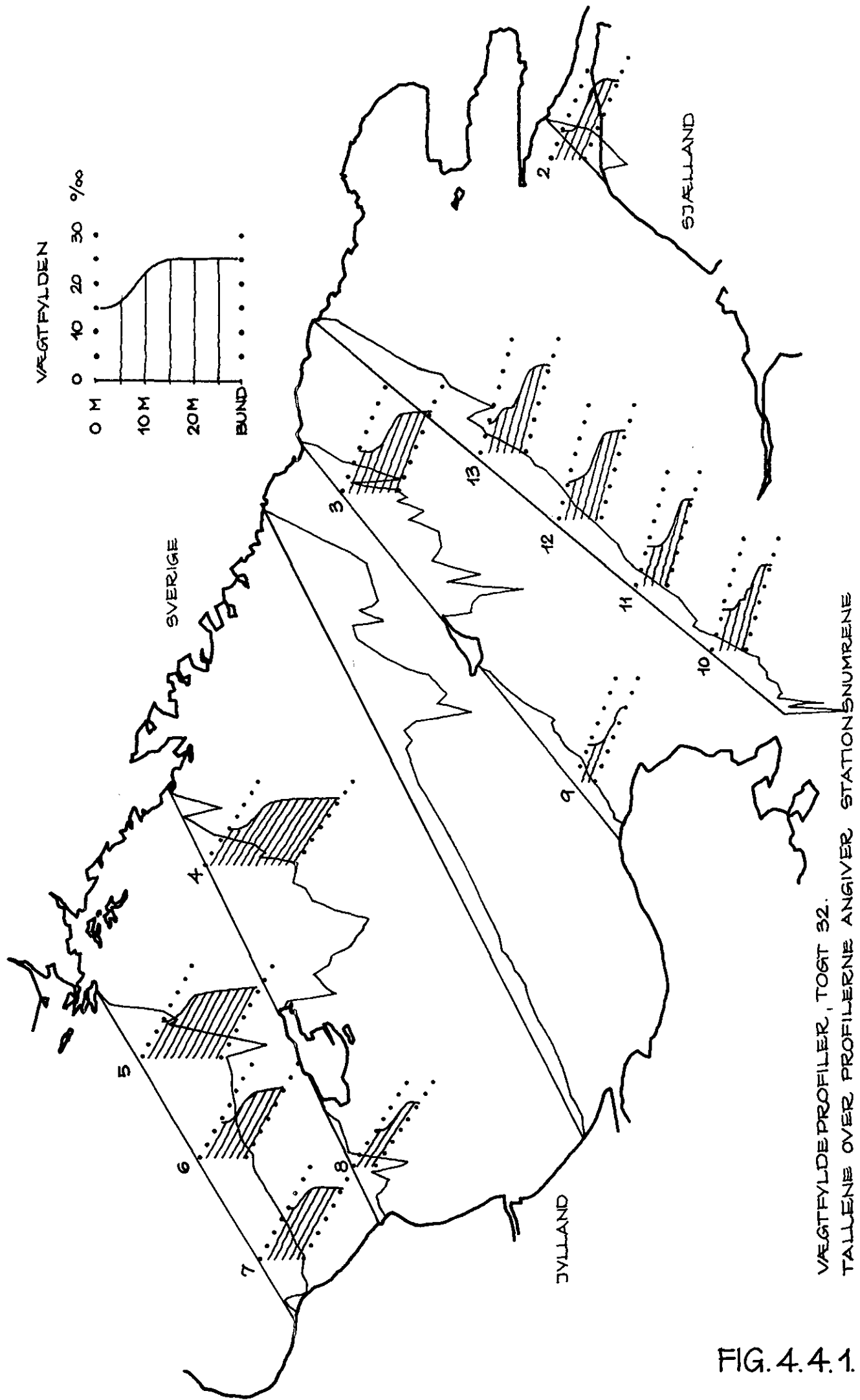


Fig. 4.2.1 Kalibreringskurve for lysspredningsmåler.

Kurven er beregnet udfra en sammenligning mellem værdier fra målte lysspredningsprofiler og værdier på partikelkoncentrationen i vandprøver taget i anslutning til profilerne. Bestemmelse af partikelkoncentrationerne udførtes under Togt 32 og 36 af M. Brown ved vacuumfiltrering af 1-5 l vand (hentet med Niskin-plastikvandhentere) gennem Whatman GF/C glasfiberfiltre, som var vejet før filtreringen.

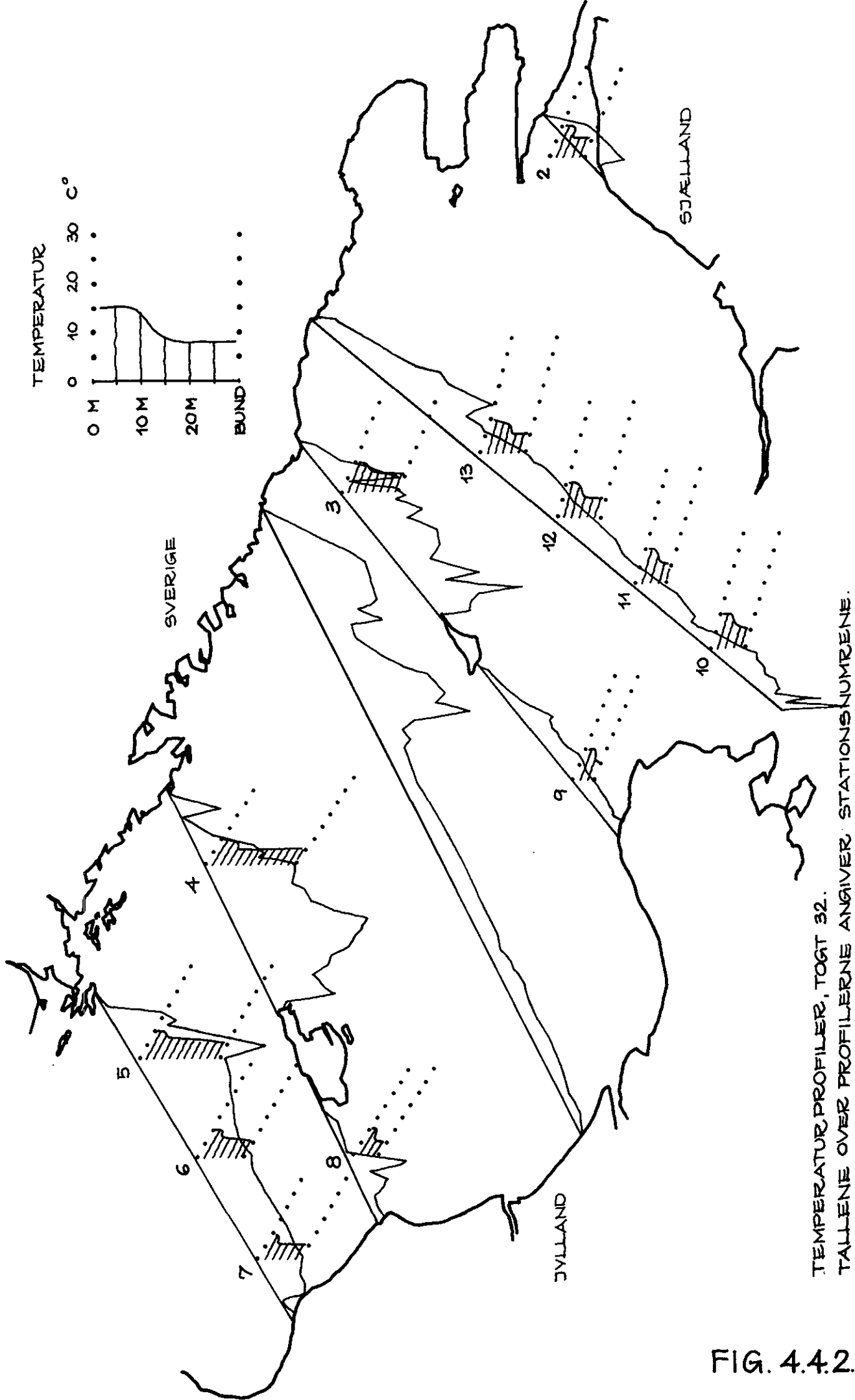
Efter at saltrester var skyllet væk (med afjoniseret vand filtreret gennem et Millipore Super-Q-anlæg) tørredes filtrene i ekssikator og vejedes igen efter togtet. Vægtdifferensen er taget som et mål på partikelmængden

i vandprøven. Fejlkilder er usikkerhed i dybdebestemmelsen for vandprøverne (p. gr. af skibets rulning og afdrift), tidsdifferencen mellem profilerne og vandprøvetagningen, passage af de mindste partikler gennem filtret og eventuel adsorption af opløst organisk stof på filtret, hvorimod variationer i luftfugtighed under vejningen ikke skulle give alvorlige fejl, da glasfiberfiltrene kun er lidt hygroskopiske.



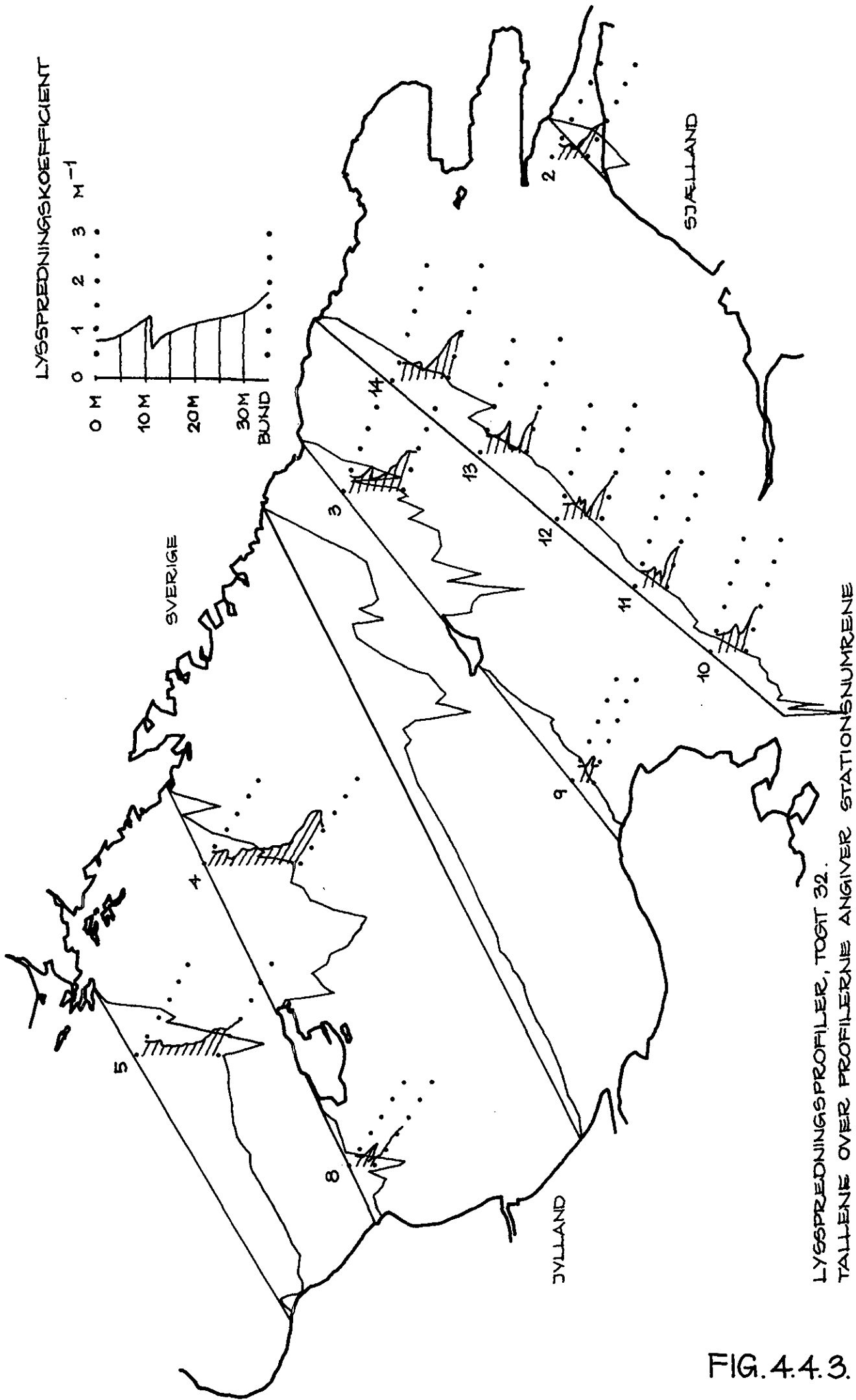
VÆGTFYLDE PROFILER, TOGT 32.
 TALLENE OVER PROFILERNE ANGIVER STATIONSNUMRENE

FIG. 4.4.1.



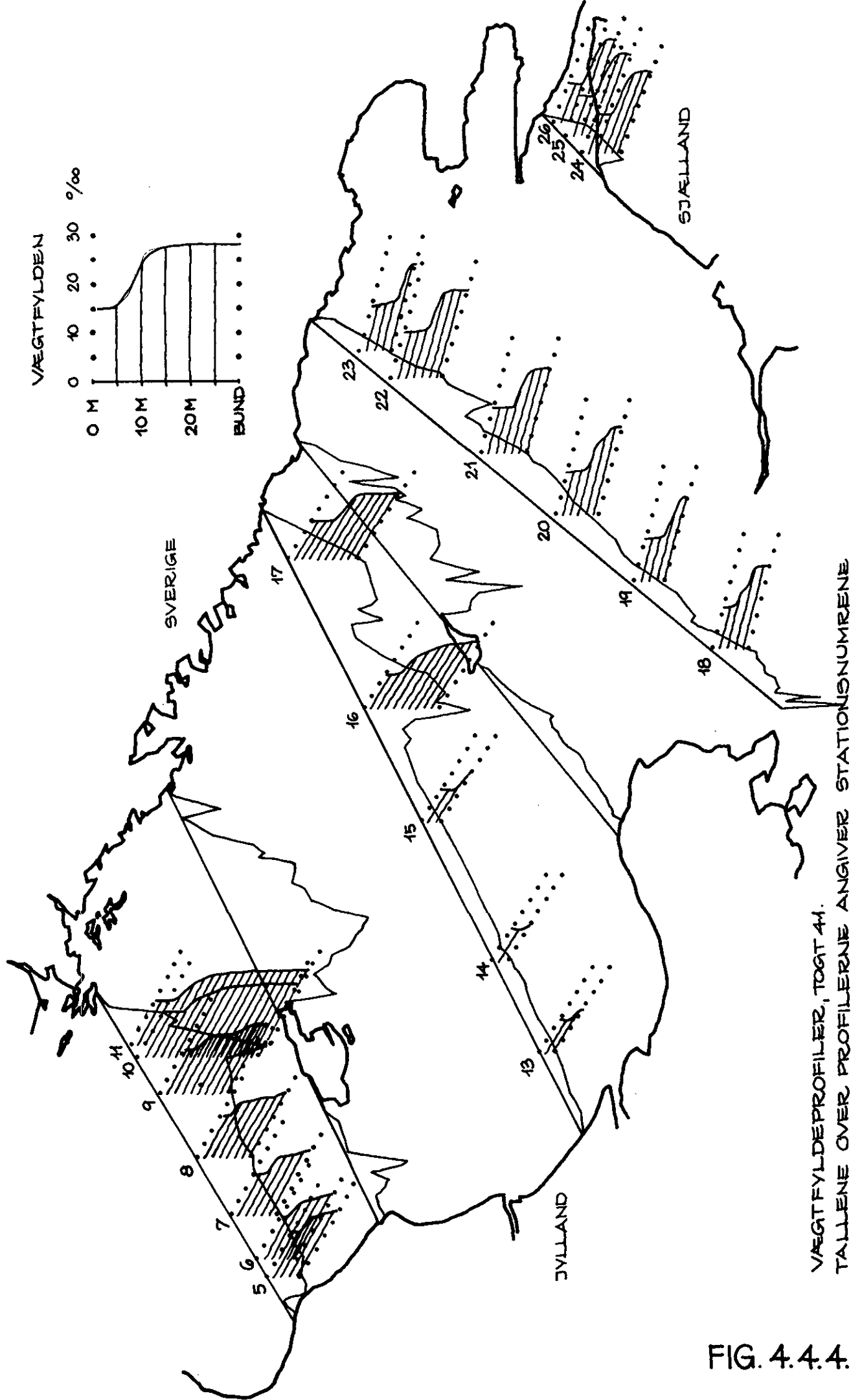
TEMPERATUR PROFILER, TOGT 32.
 TALLENE OVER PROFILERNE ANGIVER STATIONSNUMRENE.

FIG. 4.4.2.



LYSSPREDNINGSPROFILER, TOGT 32.
 TALLENE OVER PROFILERNE ANGIVER STATIONSNUMRENE

FIG. 4.4.3.



VÆGTFYLDPROFILER, TOGT 41.
TALLENE OVER PROFILERNE ANGIVER STATIONISNUMRENE

FIG. 4.4.4.

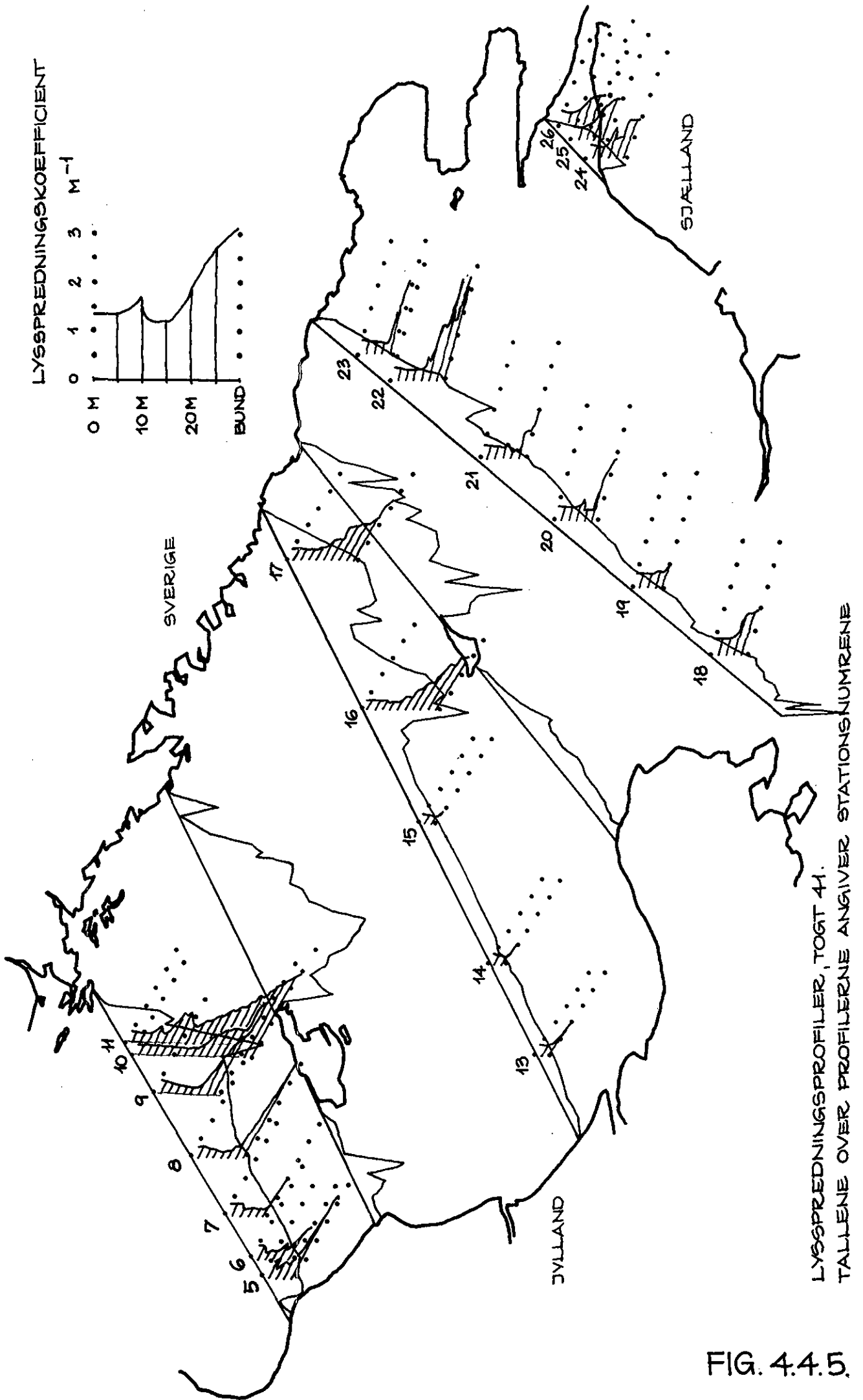


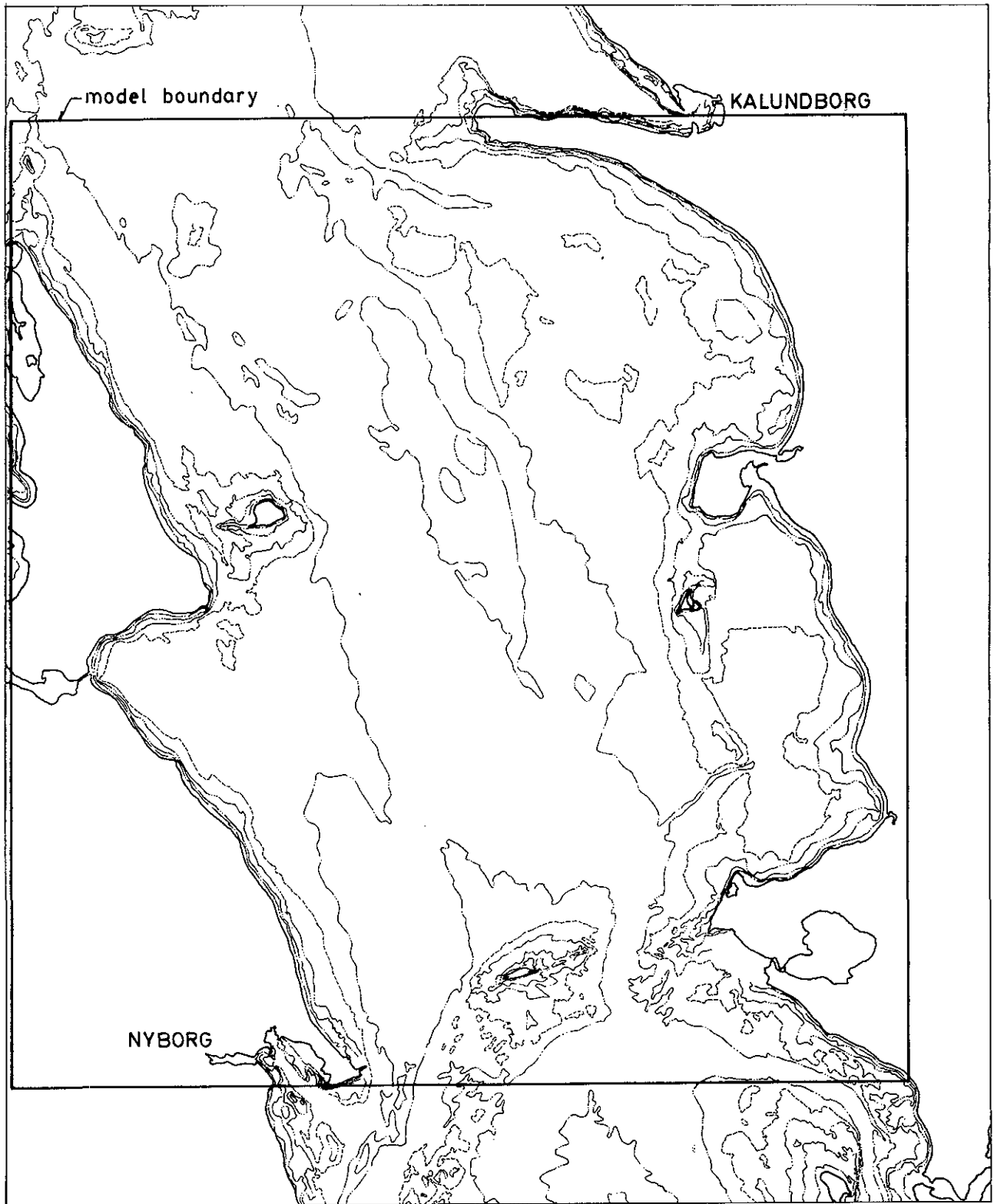
FIG. 4.4.5.


Figurer til kapitel 5

Applications of the Belt Model

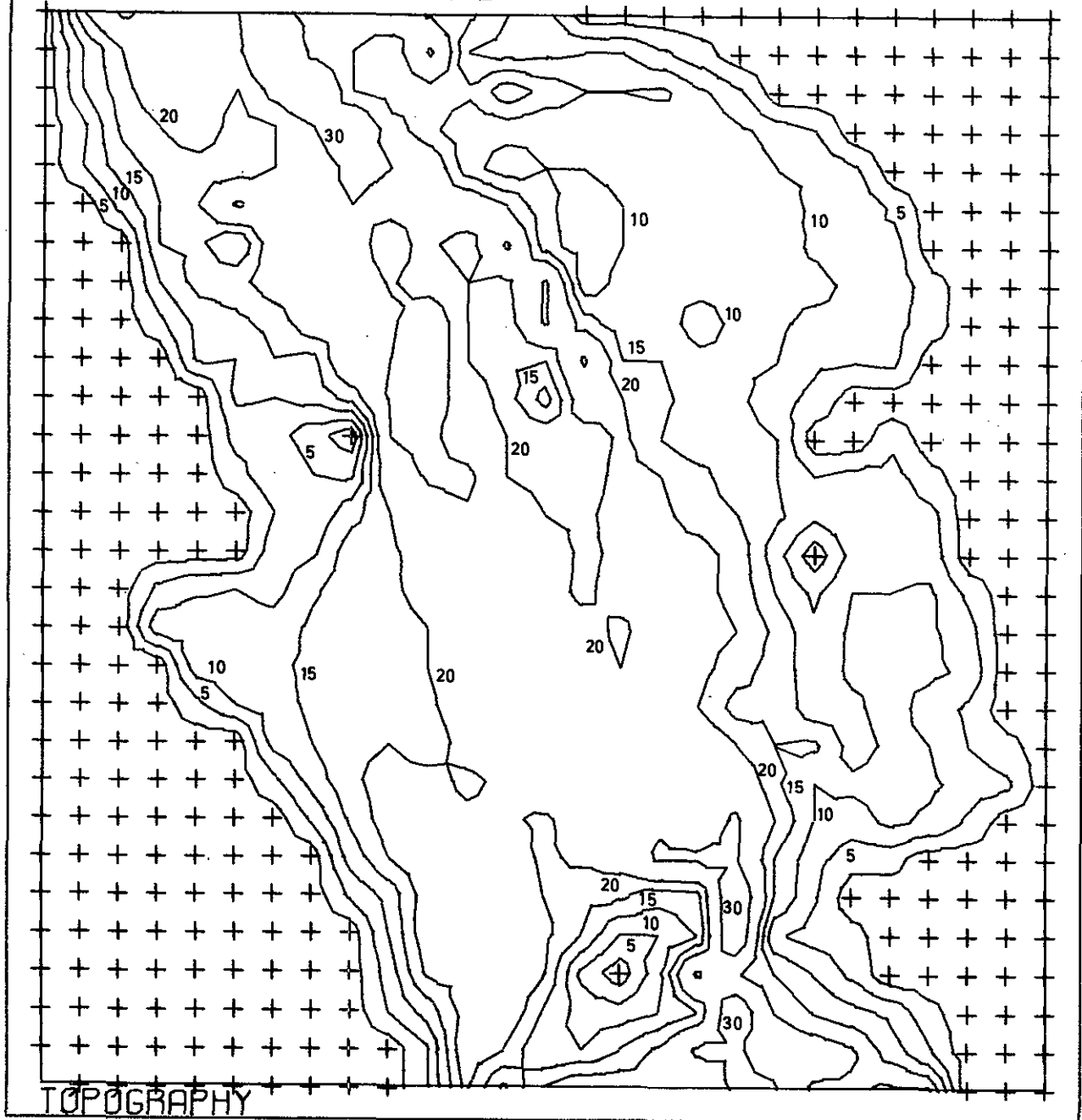
af

Michael Abbott og Ross Warren,
Dansk Hydraulisk Institut



	dansk hydraulisk institut	MILJØSTYRELSEN	
		BÆLT PROJEKTET	
sag. nr: 74-526	dato: 8-3-76	MATHEMATICAL MODEL OF THE NORTHERN SECTION OF STORE BÆLT	tegn. nr.
mål: 1:250 000	tegn: RW/ALJ		5.1

STØRE BÆLT - NØRD



DEPTHS IN METERS



dansk hydraulisk
institut

MILJØSTYRELSEN

BÆLTPROJEKTET

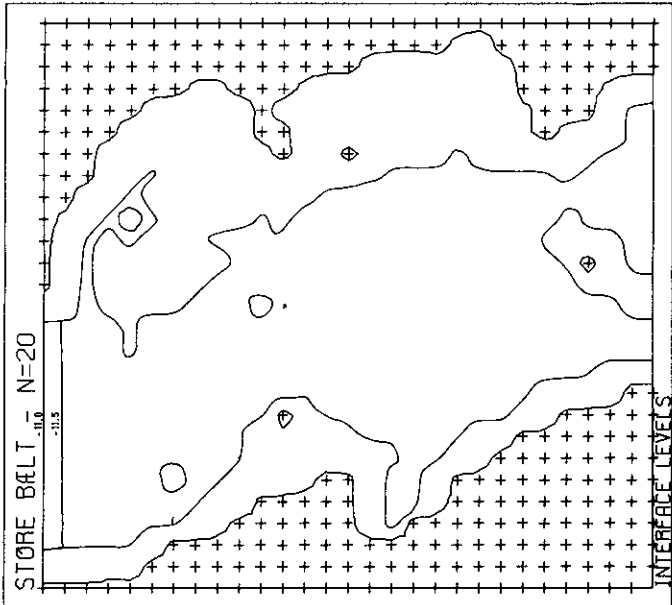
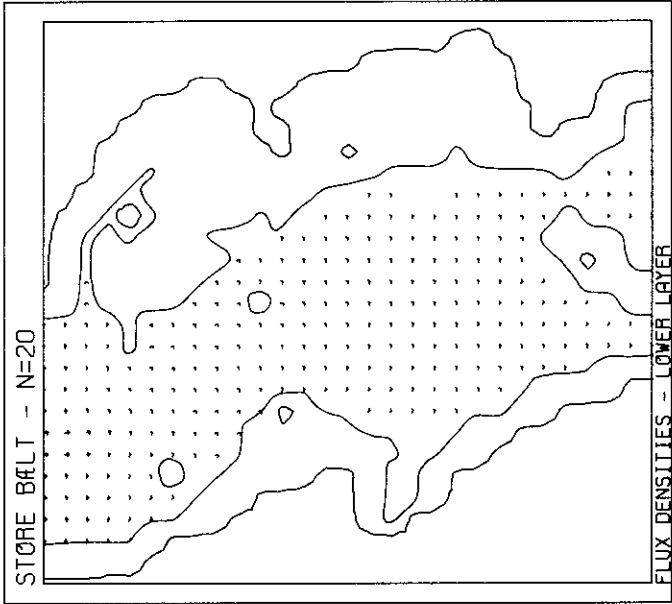
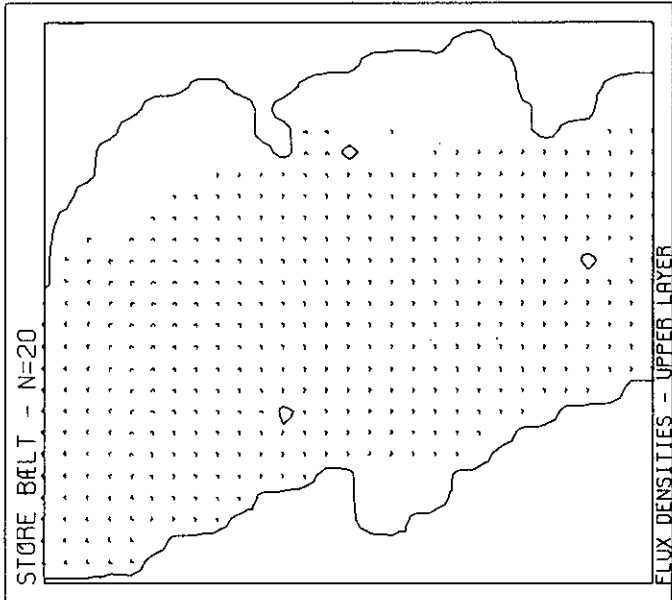
sag. nr: 74 - 526 dato: 8 - 3 - 76


mål: 1 : 250 000 tegn: RW / ALJ

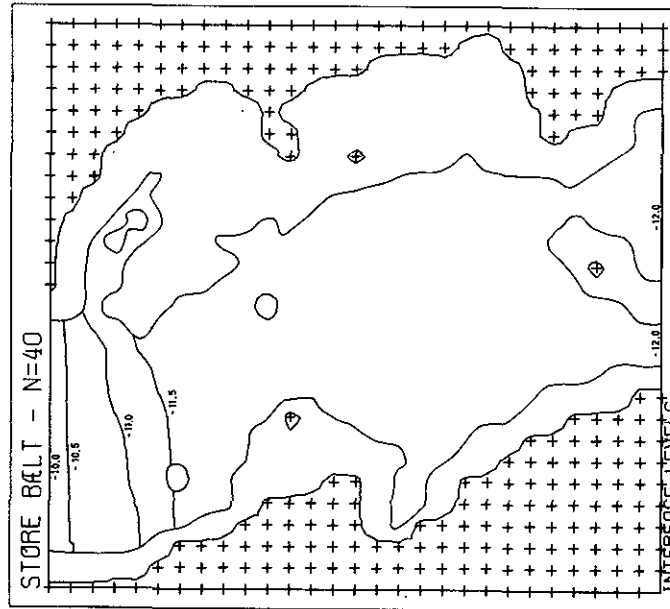
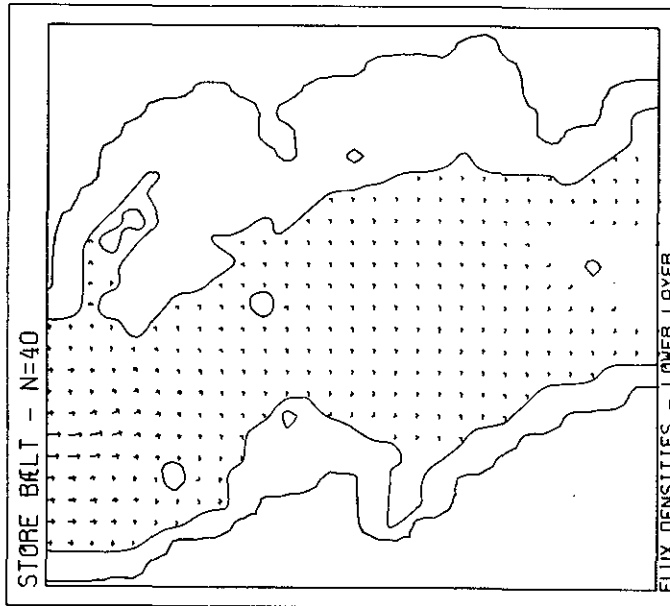
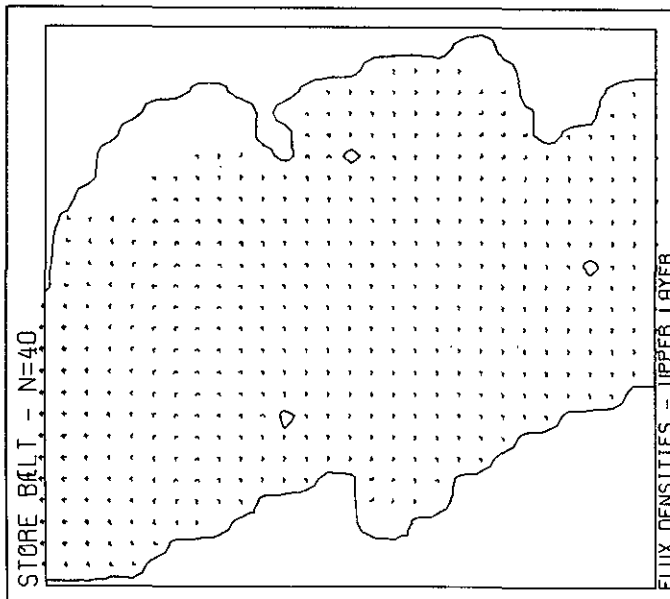
MODEL TOPOGRAPHY


tegn. nr.

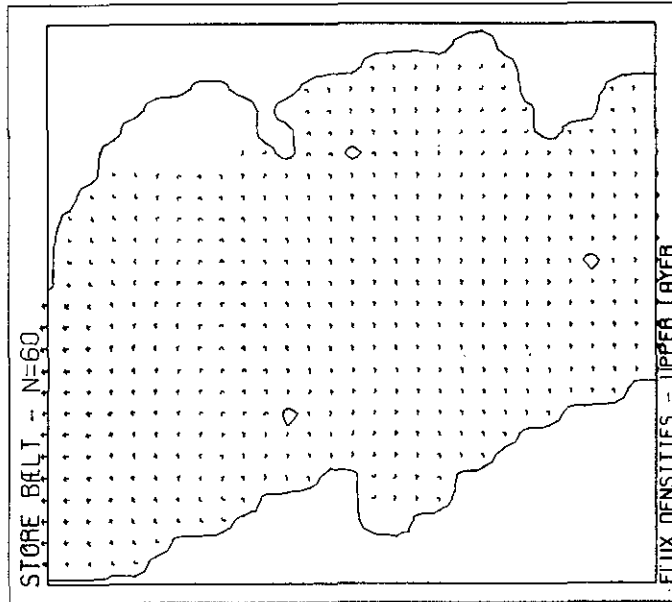
5. 2



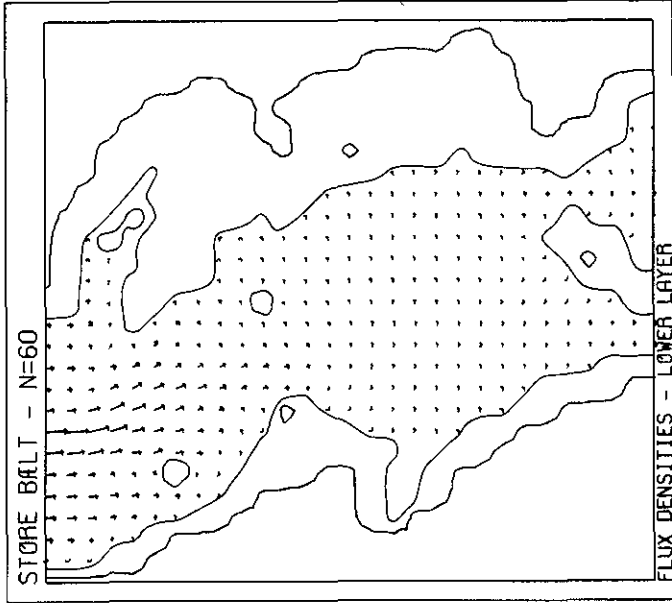
 dnrak hydroteknik Institut	MILJØSTYRELSEN	
	BÆLTPROJEKTET	
map nr: 74 - 526 skala: 1:250 000	fase: 8 - 3 - 75 type: RW/ALL	1988 m SYSTEM 22 MODEL OF GREAT BELT INVADING FRONT TEST 5.3 d



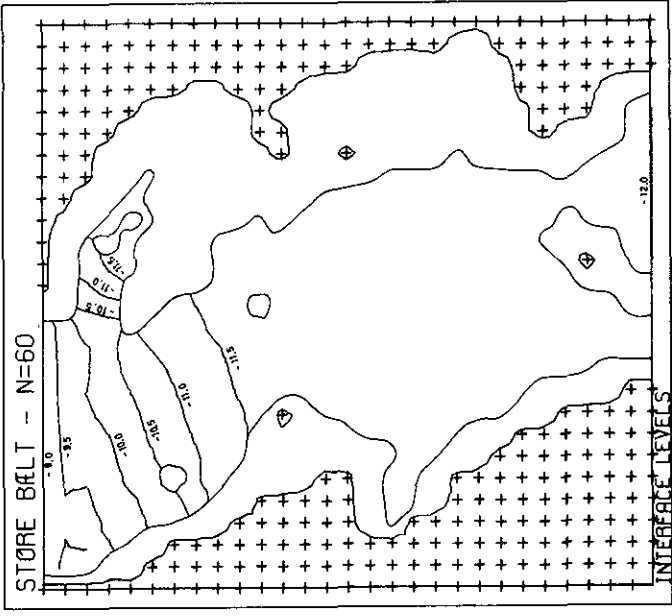
 Danish Hydraulic Institute	MILJØSTYRELSEN	
	BELTPROJEKTET	
No. nr.: 74-526 Dato: 8-3-76 Skala: 1:250 000	SYSTEM 22 MODEL OF GREAT BELT. INVADING FRONT TEST.	Udg. nr. 5.3 b




1 CM EQUALS 8.3333 Mm=3/5/M

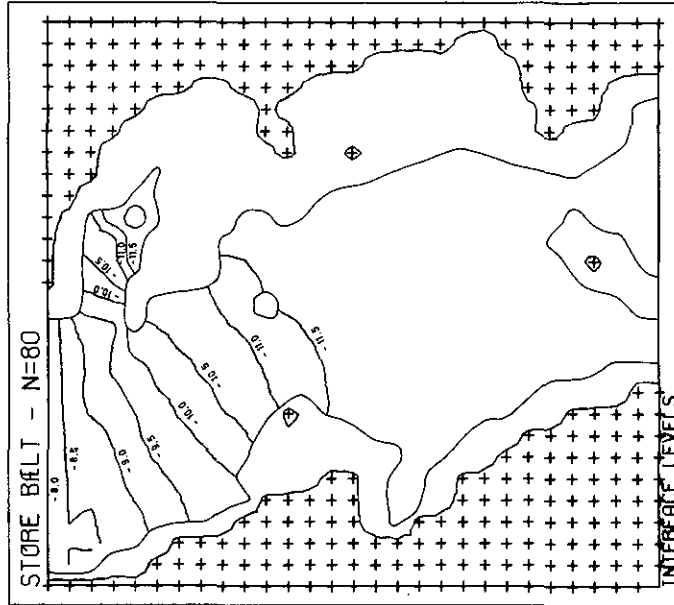
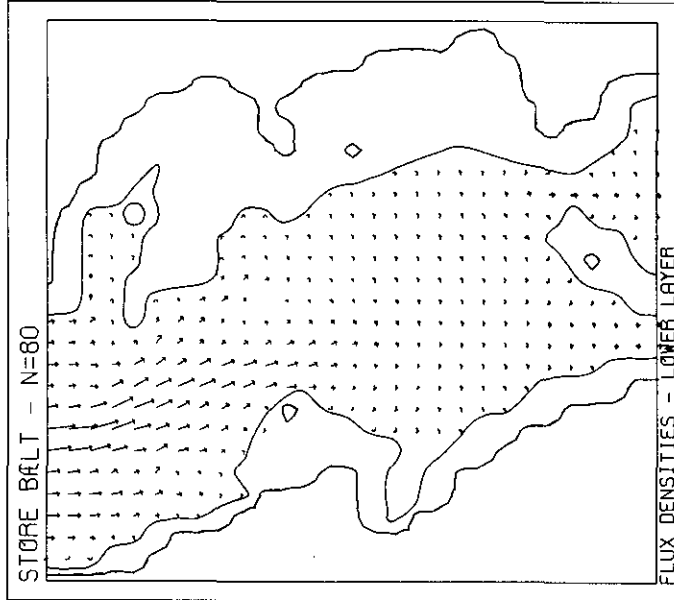
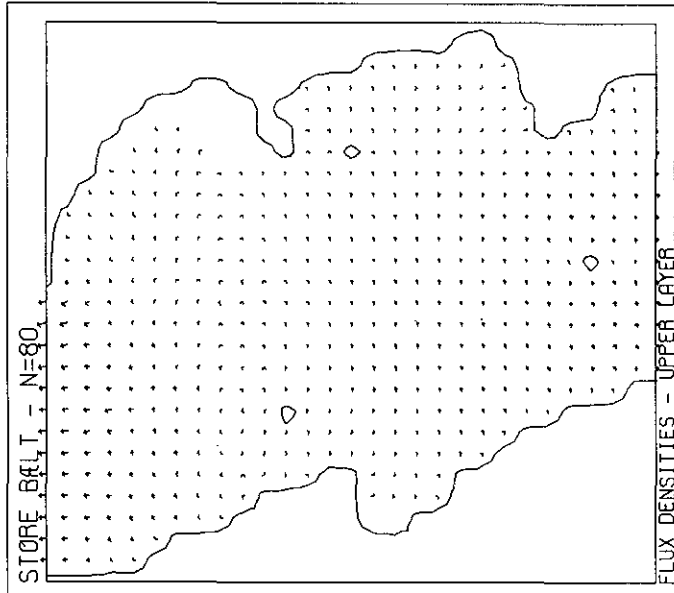



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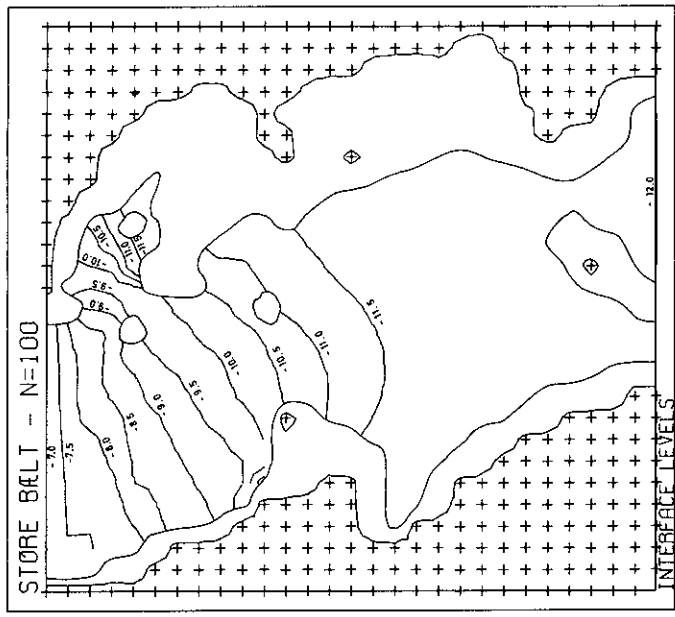
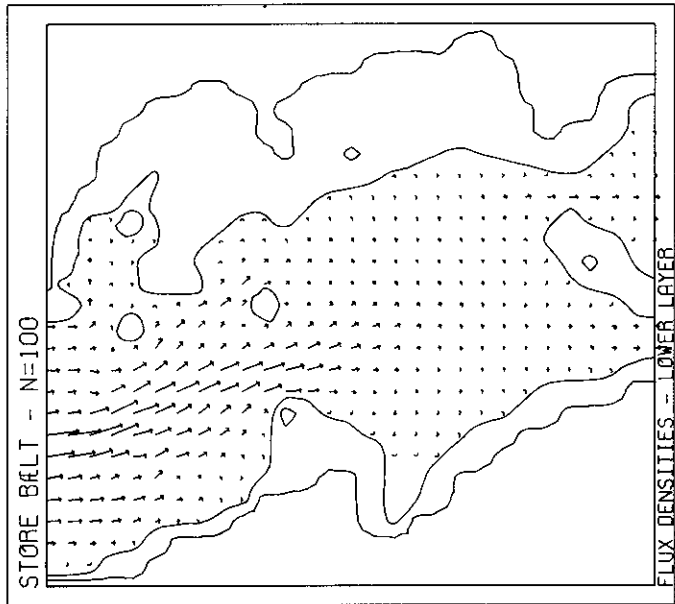
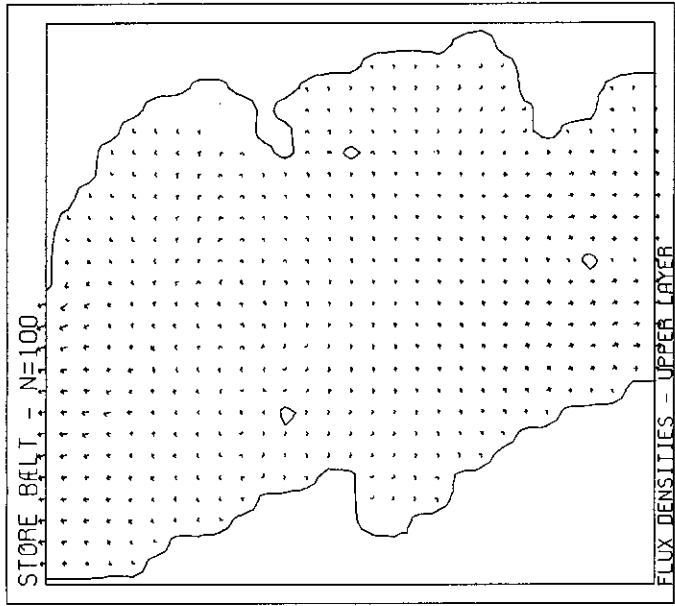



LEVELS IN METERS

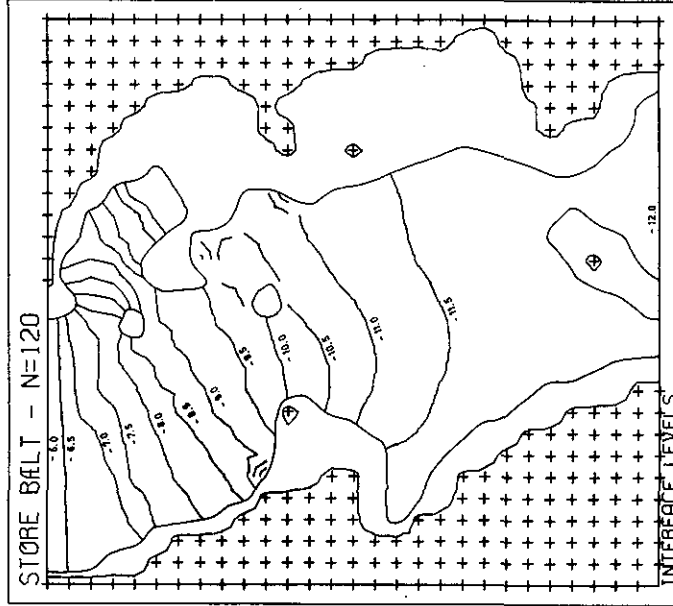
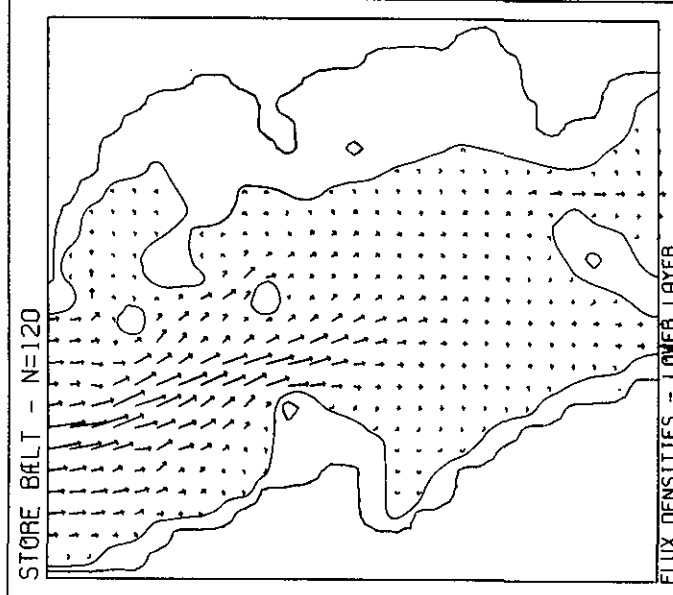
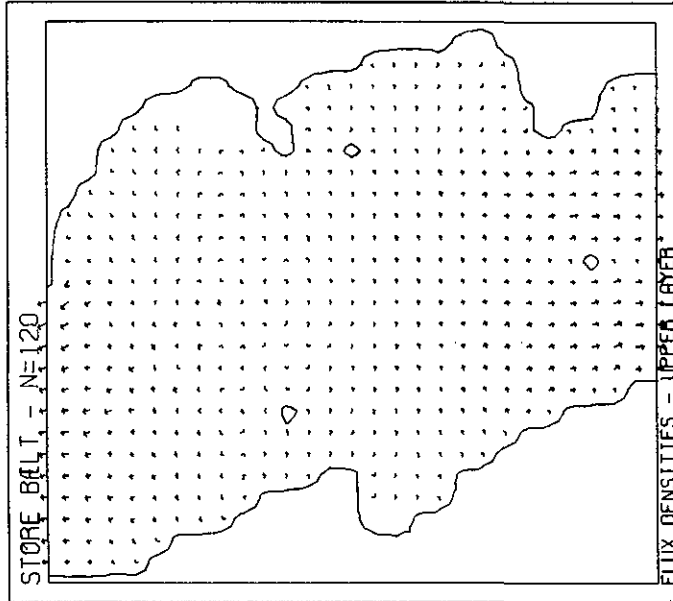
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	BÆLTPROJEKTET	
Dok. nr. 74-526 Ark. B-2-76 Sk. 1: 250 000	SYSTEM 22 MODEL OF GREAT BÆLT. INVADING FRONT TEST.	Side nr. 5.3 C




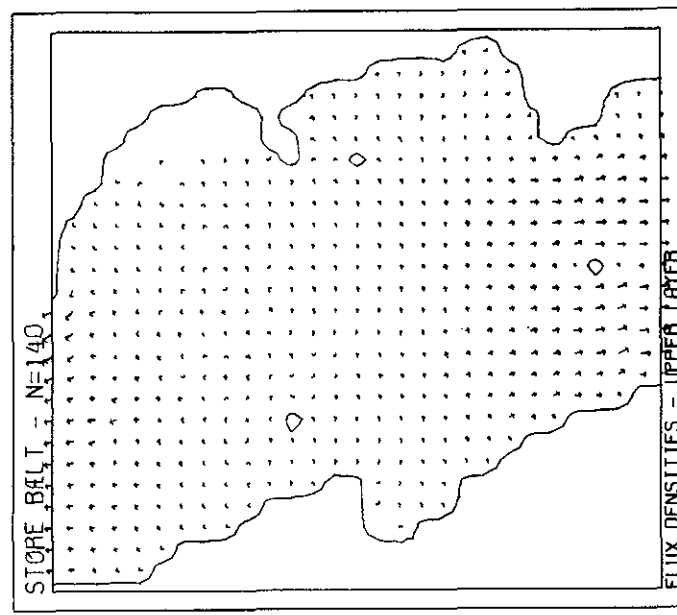
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		sags nr. 5.3 d



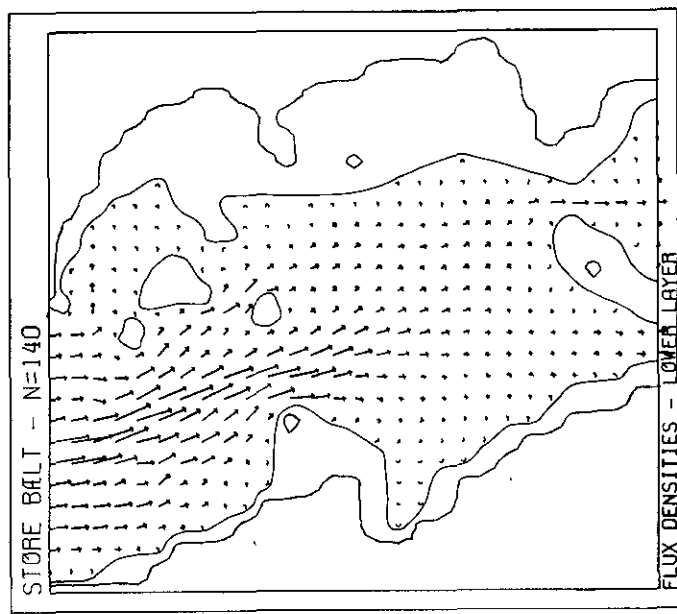
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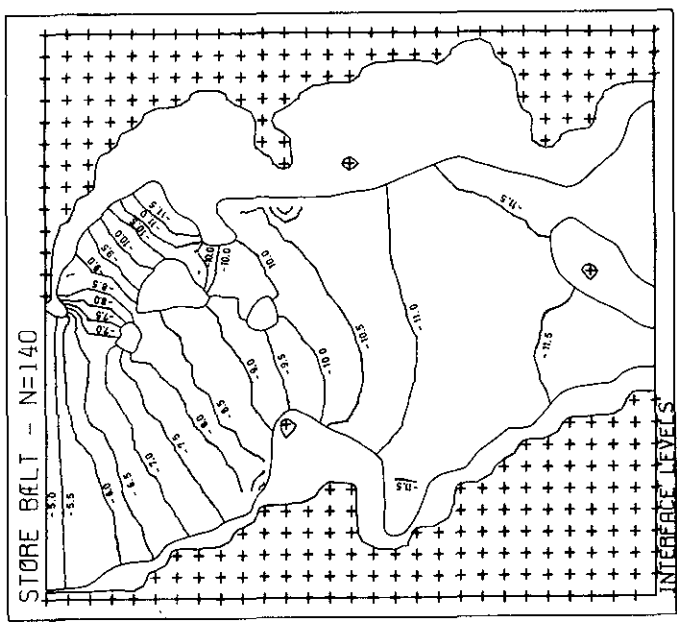
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	BÆLTPROJEKTET	
map nr.: 74-526 udg.: 8-3-76 skala: 1:250 000	ark.: 8-3-76 type: RW/ALJ	1988-01 5.3 f
SYSTEM 22 MODEL OF GREAT BELT		INVADING FRONT TEST




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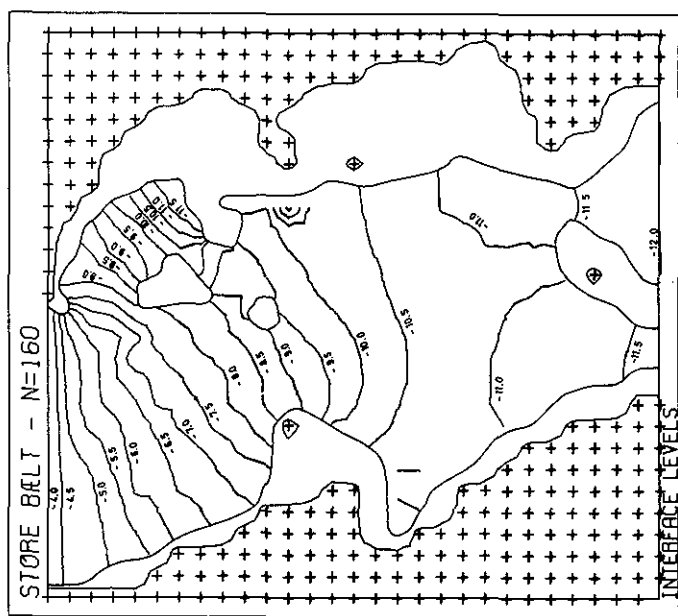
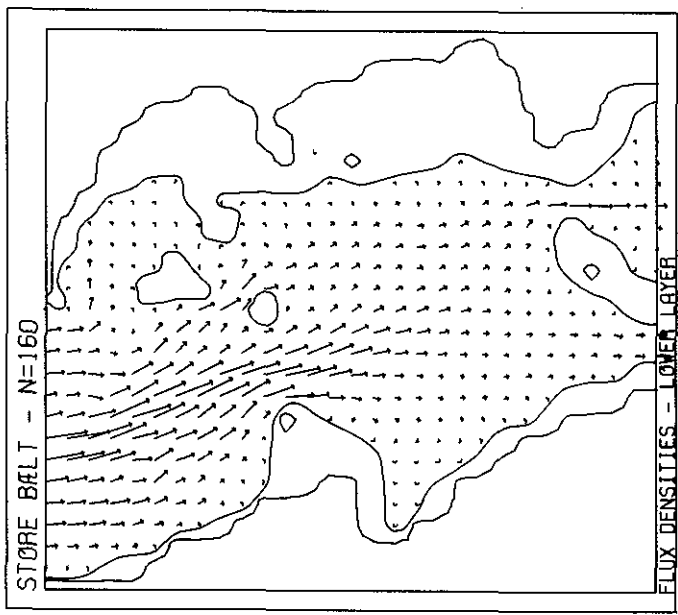
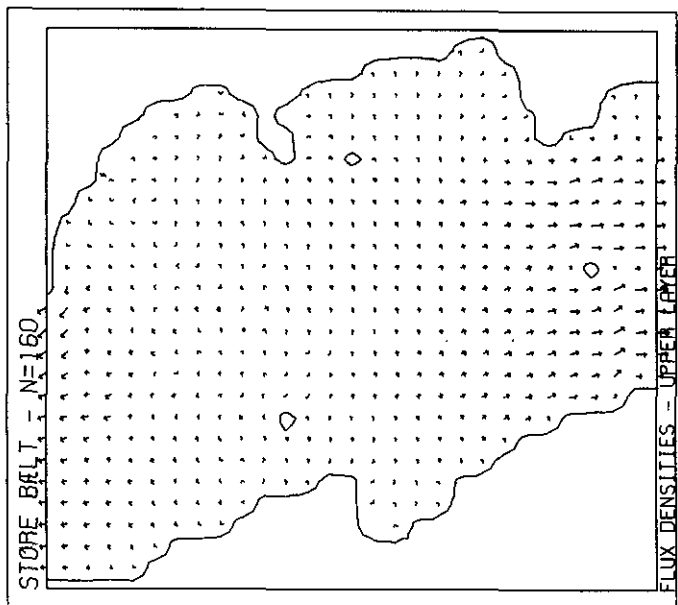



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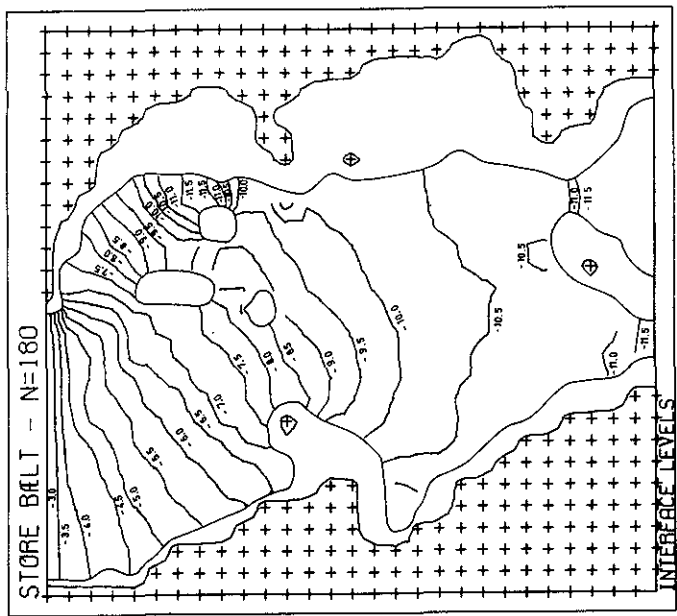
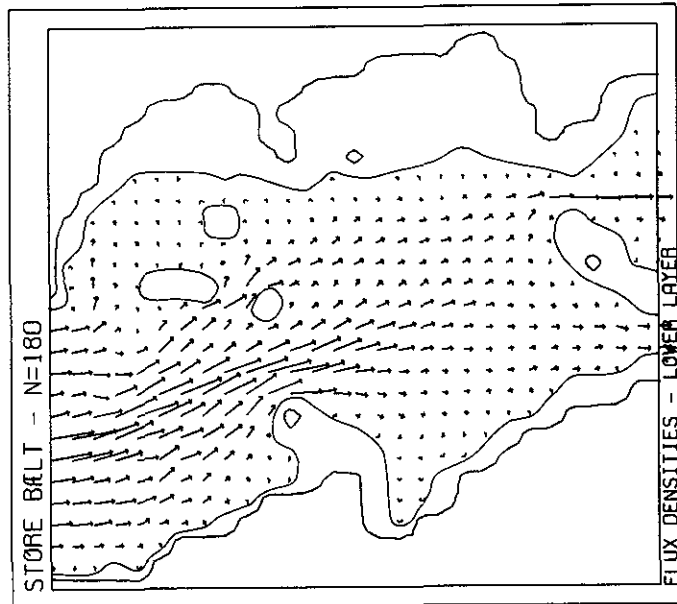
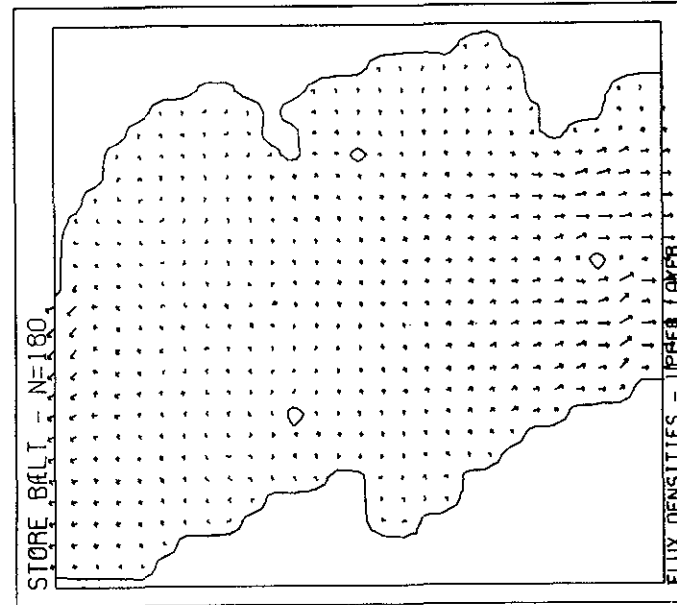



LEVELS IN METERS

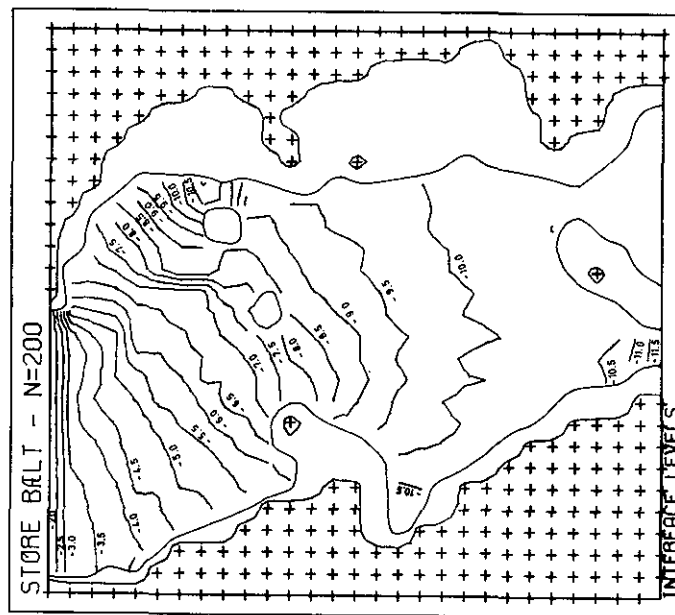
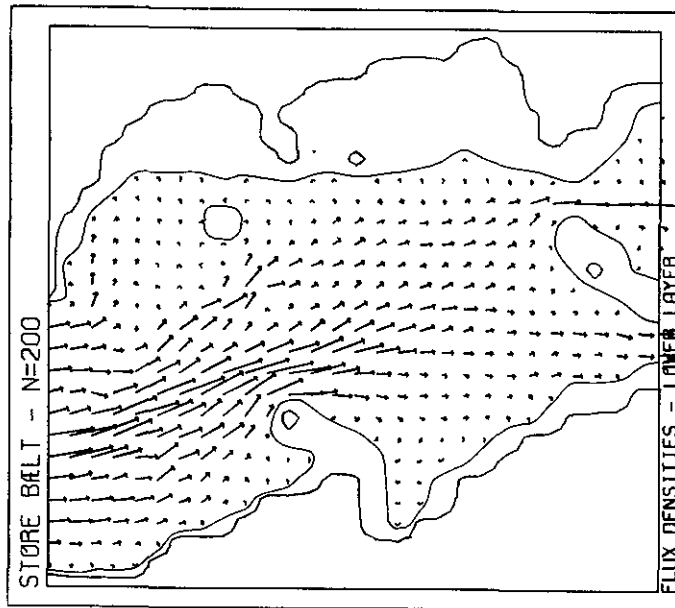
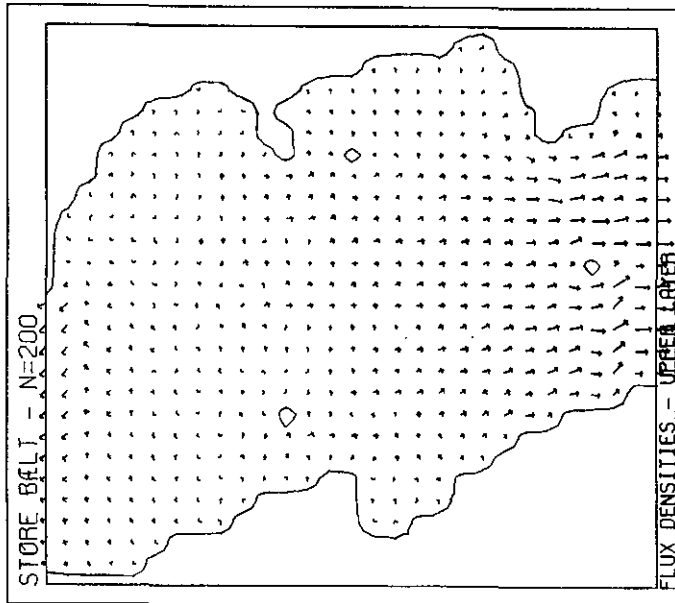
 Dansk Hydraulisk Institut	MILJØSTYRELSEN	
	BÆLT PROJEKTET	
map nr. 74 - 526 dato: 8 - 3 - 76 sk. 1: 250 000	SYSTEM 22 MODEL OF GREAT BELT INVADING FRONT TEST	1000 1/1 5.3 g




 Danish Hydraulic Institute	MILJØSTYRELSEN BÆLTPROJEKTET	
	No. 74-526 Date: 8-3-76 Scale: 1:250 000	SYSTEM 22 MODEL OF GREAT BELT. INVADING FRONT TEST.
		Scale: 5.3 h



 denak hydraulisk institut		MILJØSTYRELSEN BÆLT PROJEKTET	
map no: 74-526	sheet: 8-3-76	SYSTEM 22 MODEL OF GREAT BELT. INVADING FRONT TEST.	
scale: 1:250 000	type: RW/ALJ	date: 1988.07	sheet no: 5.3 i



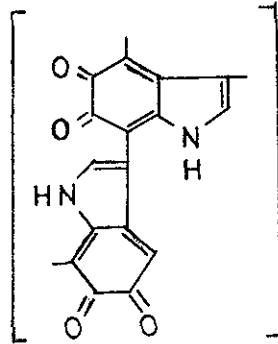
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	BELTPROJEKTET	
map no: 74-526 map no: 8-3-76 map no: 1:250 000	SYSTEM 22 MODEL OF GREAT BELT. INVADING FRONT TEST.	map no: 5.3 j

Figurer til kapitel 7

Fluorescence in the
Baltic-Kattegat Region

af

Nils Jerlov, Institut for Fysisk Oceanografi



MELANIN

Fig. 1. Basic structure of melanin (DUURSMA, 1974)

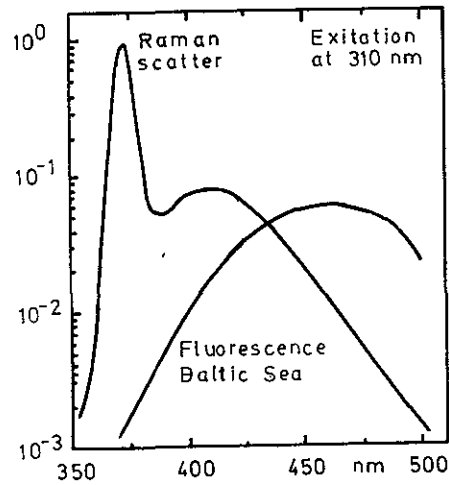


Fig. 2. Recorded as well as corrected fluorescence emission spectra (BROWN, 1973)

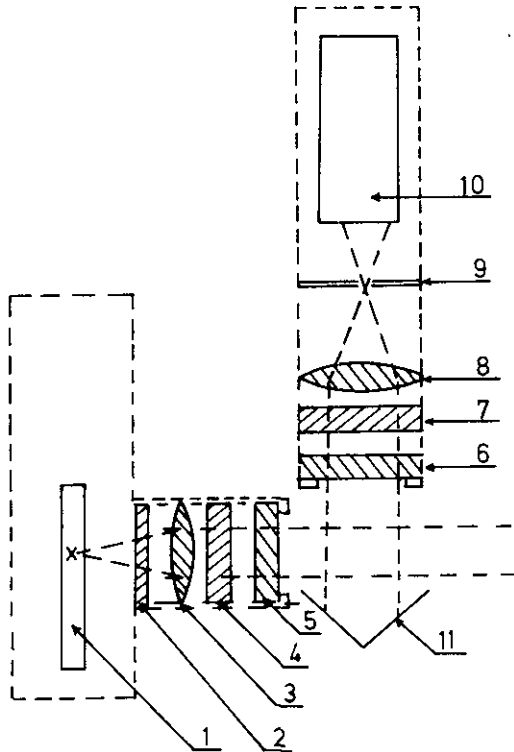
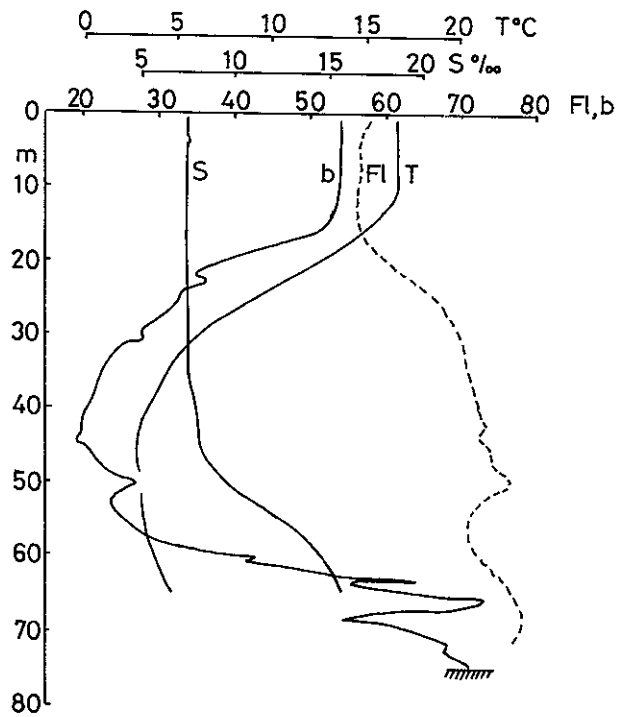


Fig. 3. In situ fluorimeter.
 1) High pressure Hg-lamp (Philips KPk 125), 2) Heat absorbing filter (Schott and Gen. HG 3) 3, 8) Lens, 4, 7) Interference filters, 5, 6) Window, 9) Pin-hole, 2 mm, 10) Photomultiplier tube, Du Mont 6467 (S 11 response) or KM 2485 (S 20 response), 11) Light trap. (KULLENBERG and NYGÅRD, 1971)

Fig. 4. Vertical profiles of temperature (T), salinity (S), total scattering (b), and fluorescence (F) at the Baltic Station 53°36'N, 16°08'E. (KULLENBERG and NYGÅRD, 1971)



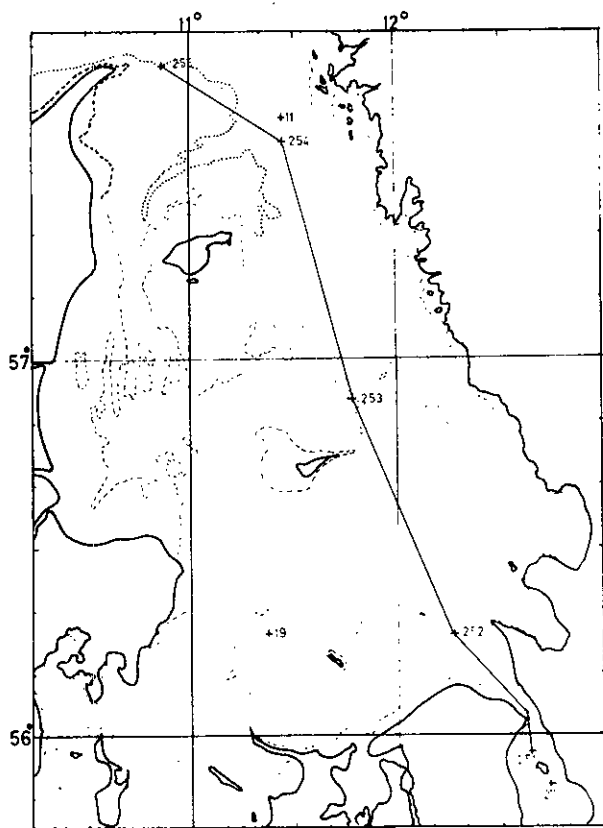


Fig. 5. Stations in the Sound and the Kattegat.

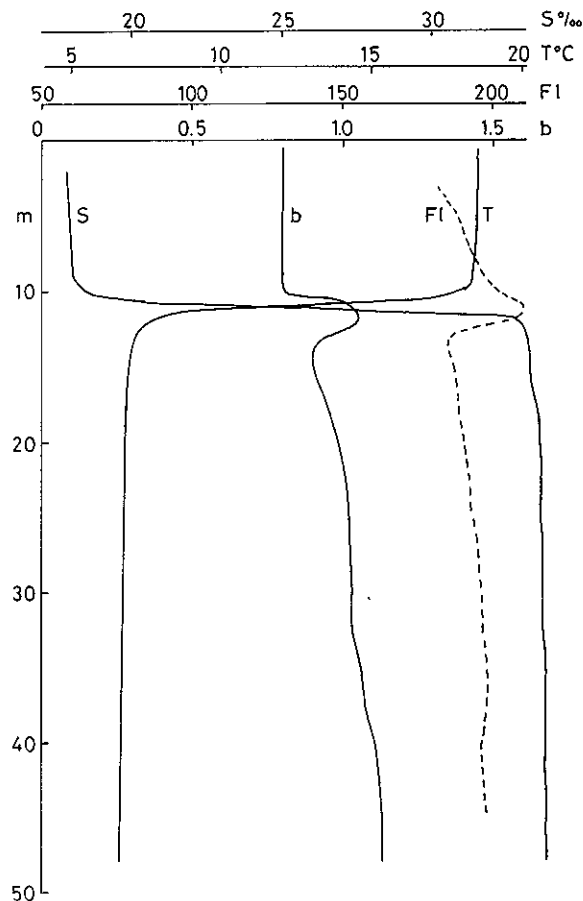


Fig. 6. Vertical profiles of temperature (T), salinity (S), total scattering (b), and fluorescence (F) at St. 27 in the Sound (NYGÅRD)

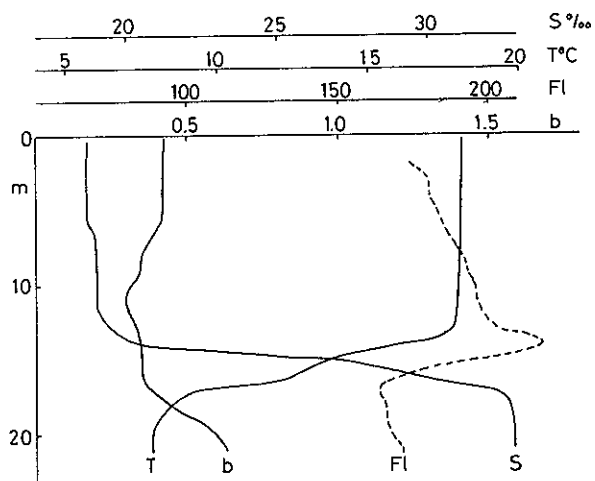


Fig. 7. Vertical profiles of temperature (T), salinity (S), total scattering (b), and fluorescence (F) at St. 19 in the Kattegat (NYGÅRD).

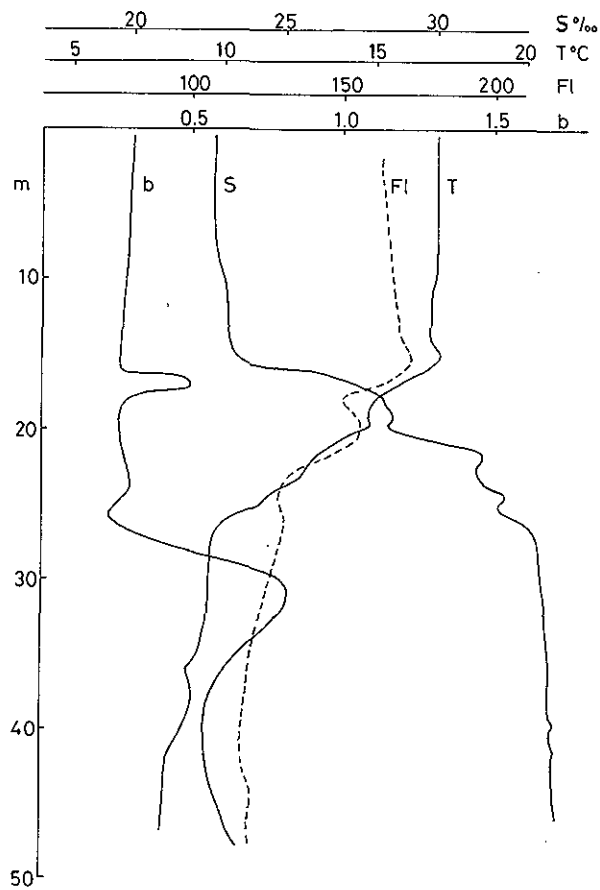


Fig. 8. Vertical profiles of temperature (T), salinity (S), total scattering (b), and fluorescence (F) at St. 11 in the Kattegat (NYGÅRD)

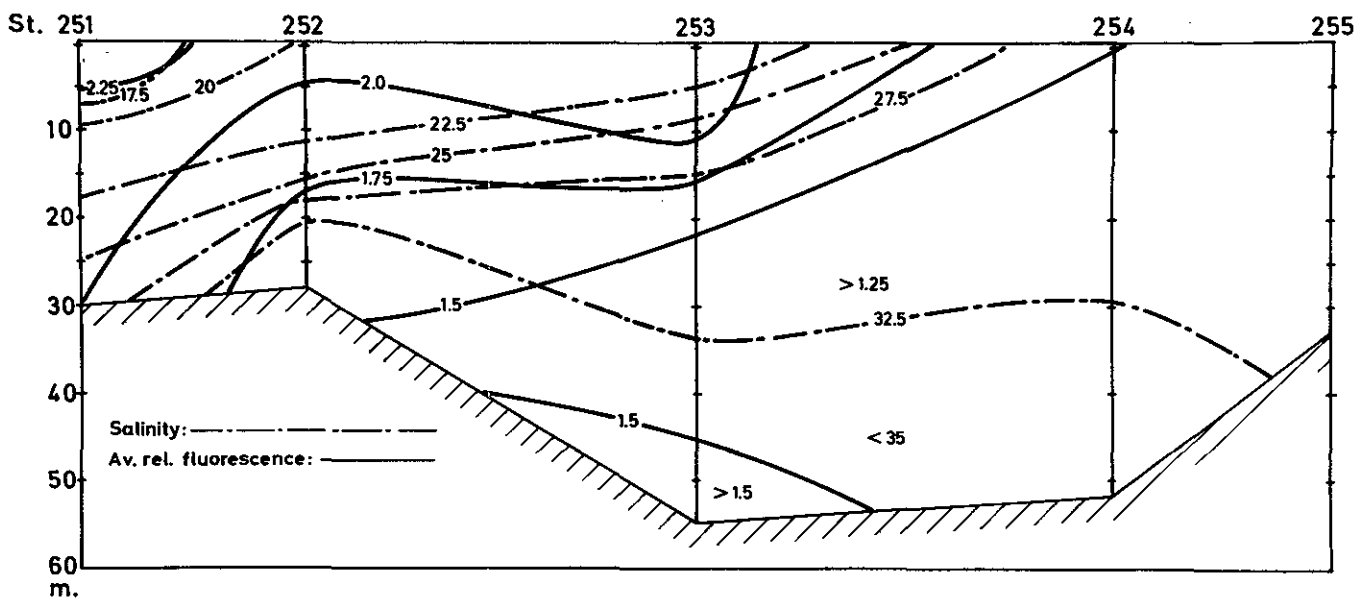


Fig. 9. Salinity and fluorescence distribution in the vertical section Ven-Ska-gen (HØJERSLEV, 1971).

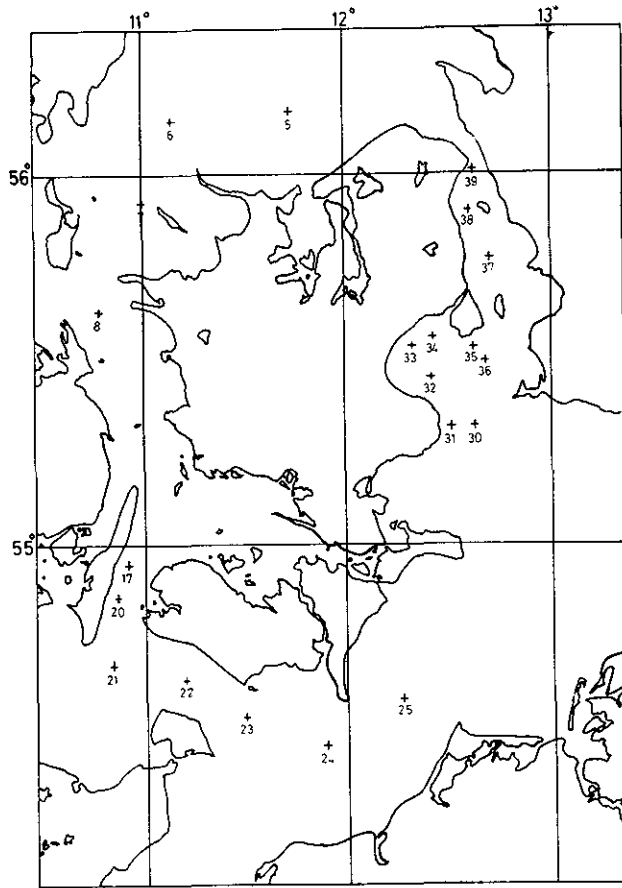


Fig. 10. Stations 28 - 31 October, 1974

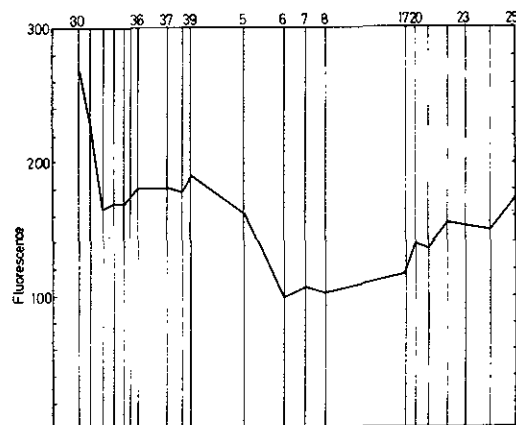


Fig. 11. Horizontal distribution of fluorescence (Fig. 10) (NYGÅRD).

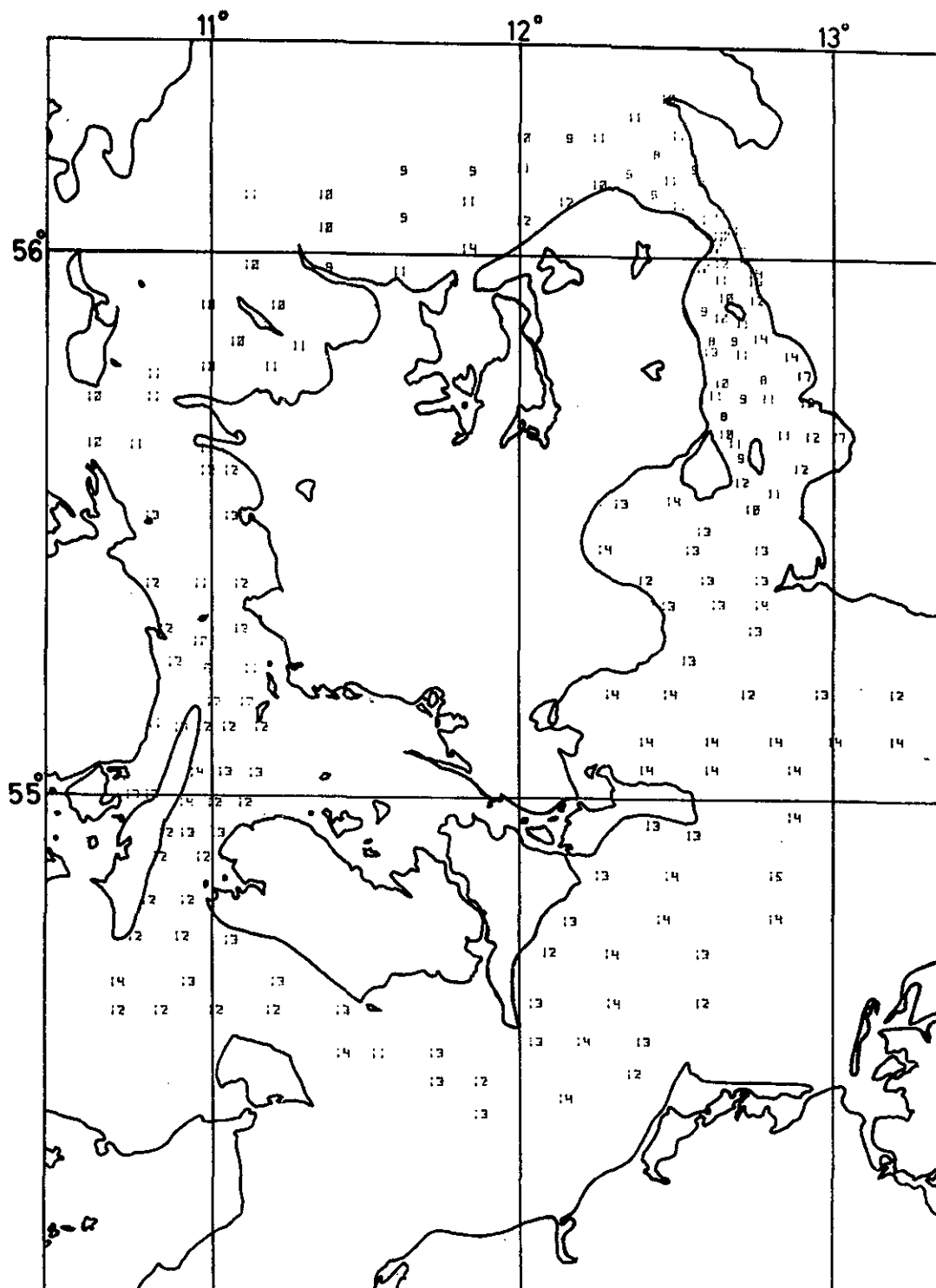


Fig. 12a. Horizontal distribution of fluorescence 27 - 31 January, 1975; (LUNDGREN)

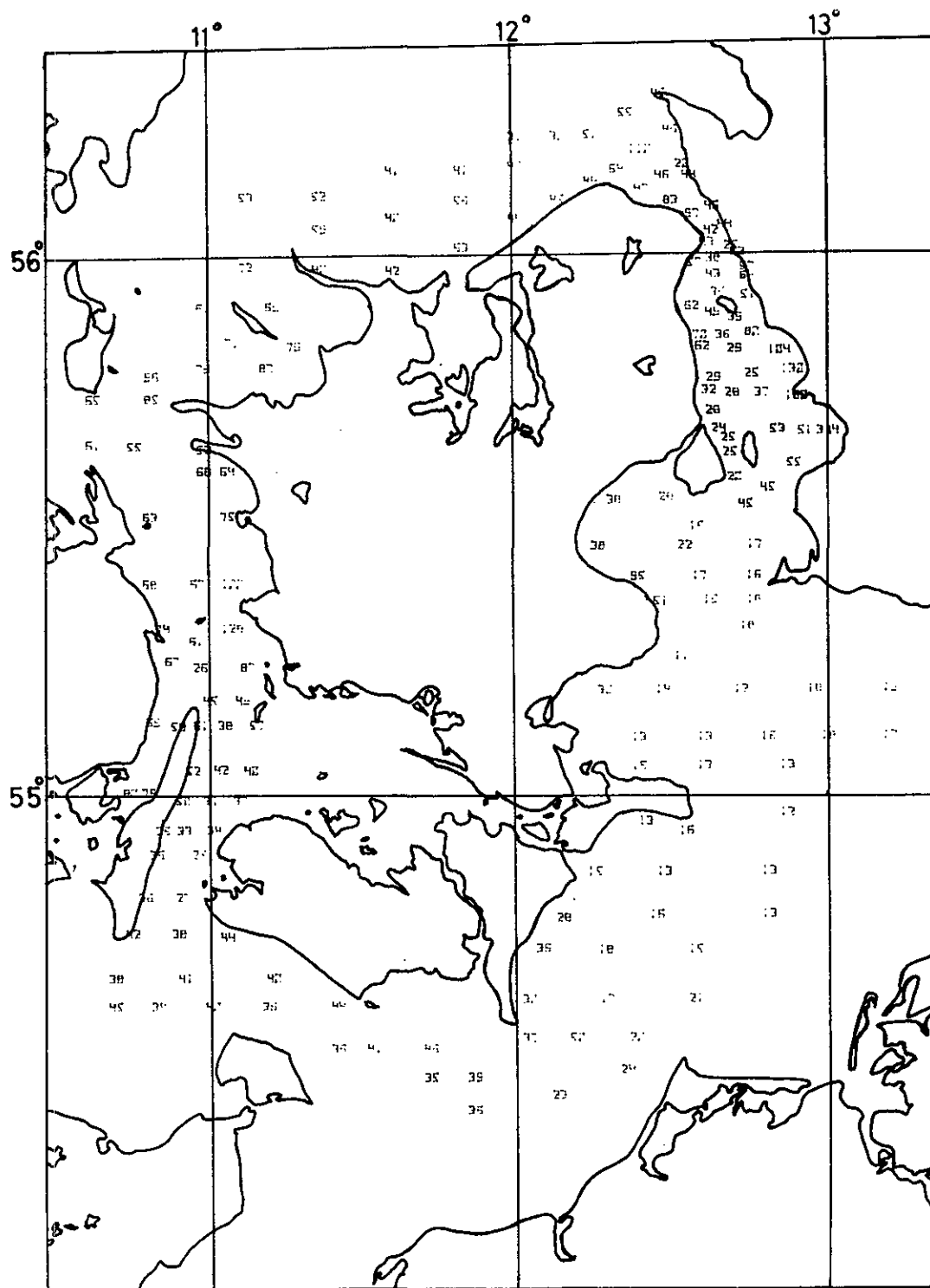


Fig. 12b. Horizontal distribution of particles 27 - 31 January, 1975, (LUNDGREN).

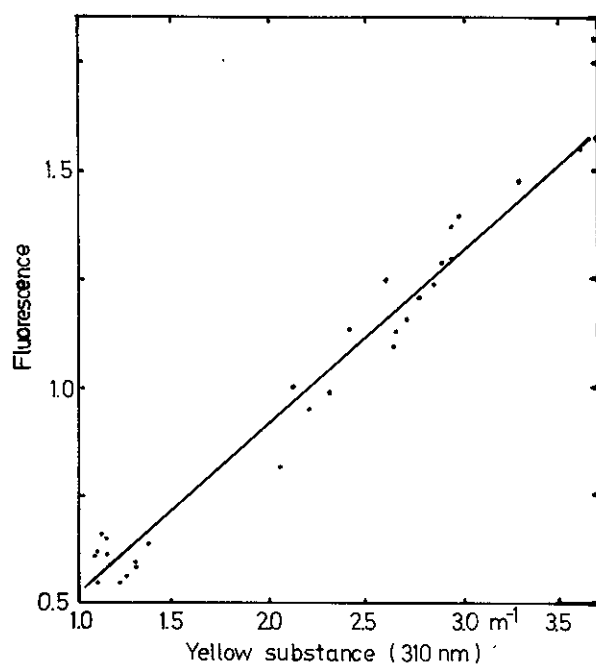


Fig. 13. Relationship between fluorescence and yellow substance (absorption coefficient at 310 nm) in the Transition Area (BROWN)

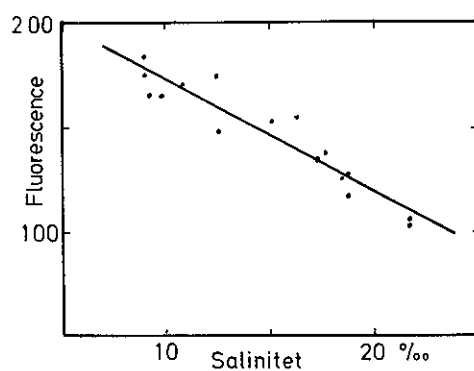


Fig. 14. Relationship between fluorescence and salinity in the Transition Area (NYGÅRD).

Figurer til kapitel 8

Optiske målinger i danske farvande

af

Niels K. Højerslev
Institut for Fysisk Oceanografi

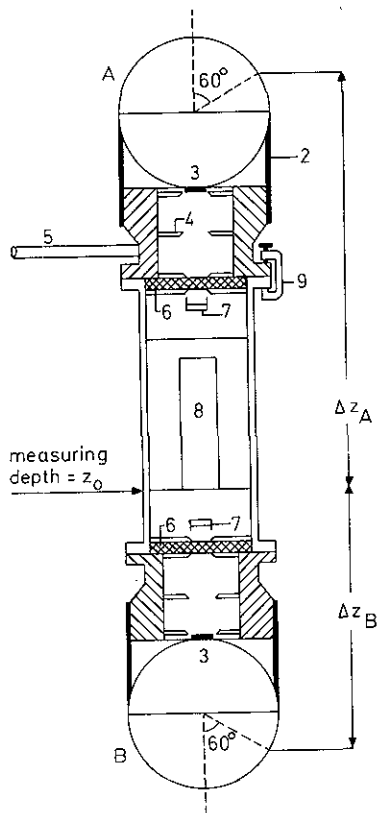
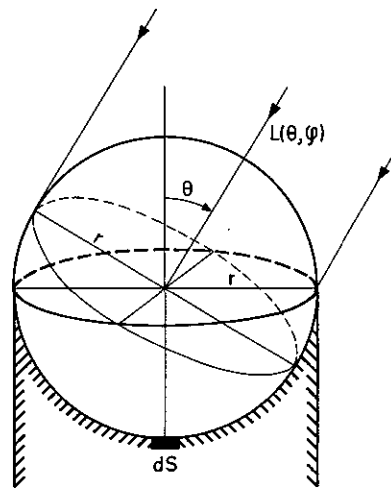


Fig. 1. a-meter.



$$dF = \frac{1}{2} \pi r^2 L(\theta, \varphi) d\omega + \frac{1}{2} \pi r^2 \cos\theta L(\theta, \varphi) d\omega$$

$$F = \frac{1}{2} \pi r^2 \int_0^{2\pi} \int_0^\pi (L + L \cos\theta) d\omega$$

$$= \frac{1}{2} \pi r^2 (E_0 + E)$$

Fig. 2. Teorien for dagslyscollectorens virkemåde.

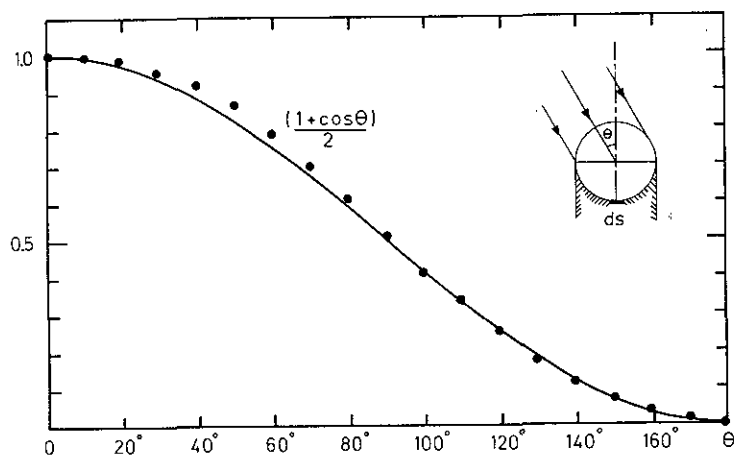


Fig. 3. Collectorens collectorkurve målt i vand.

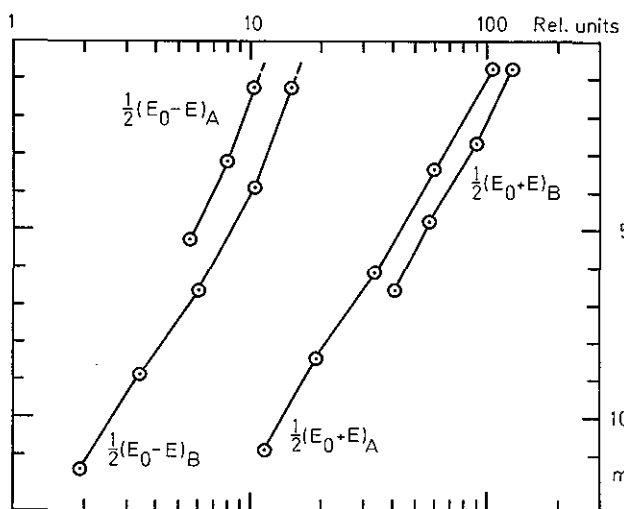


Fig. 4. Eksempel på en måling syd for Ven. "A" og "B" refererer til a-meterens to collectorer. Det skal i øvrigt anføres, at alle følgende måleresultater, som præsenteres her, er opnået på denne position.

The spectral distribution of $E_0(z)$ and $E(z)$
in normalized values of $E_0(2m)$

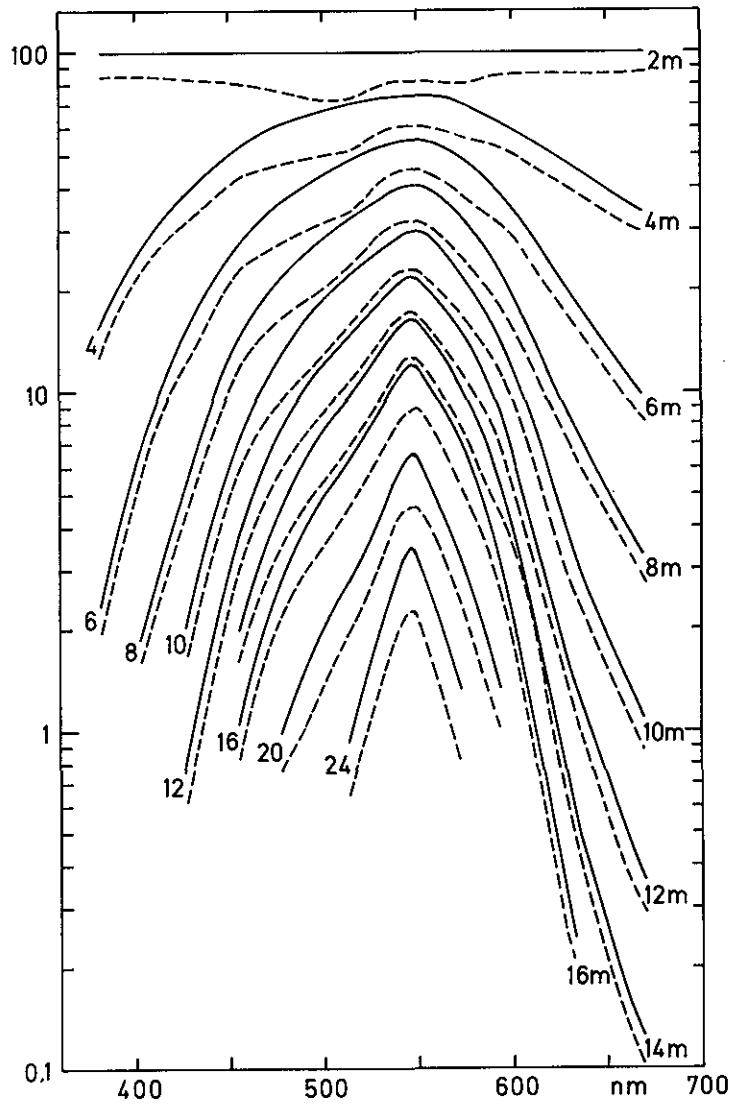


Fig. 5.

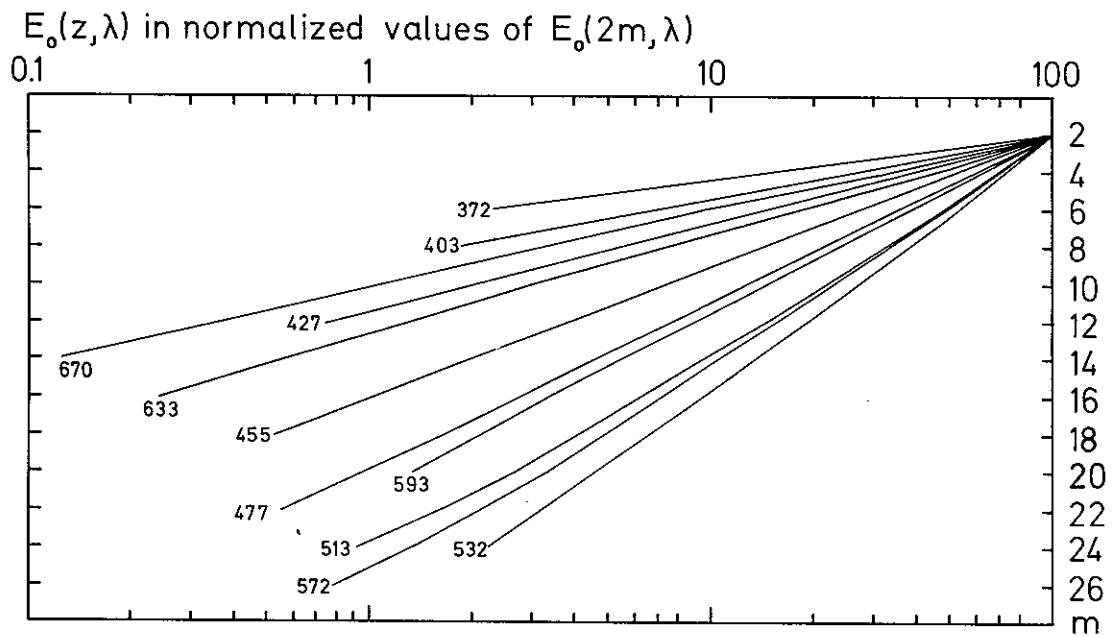


Fig. 6.

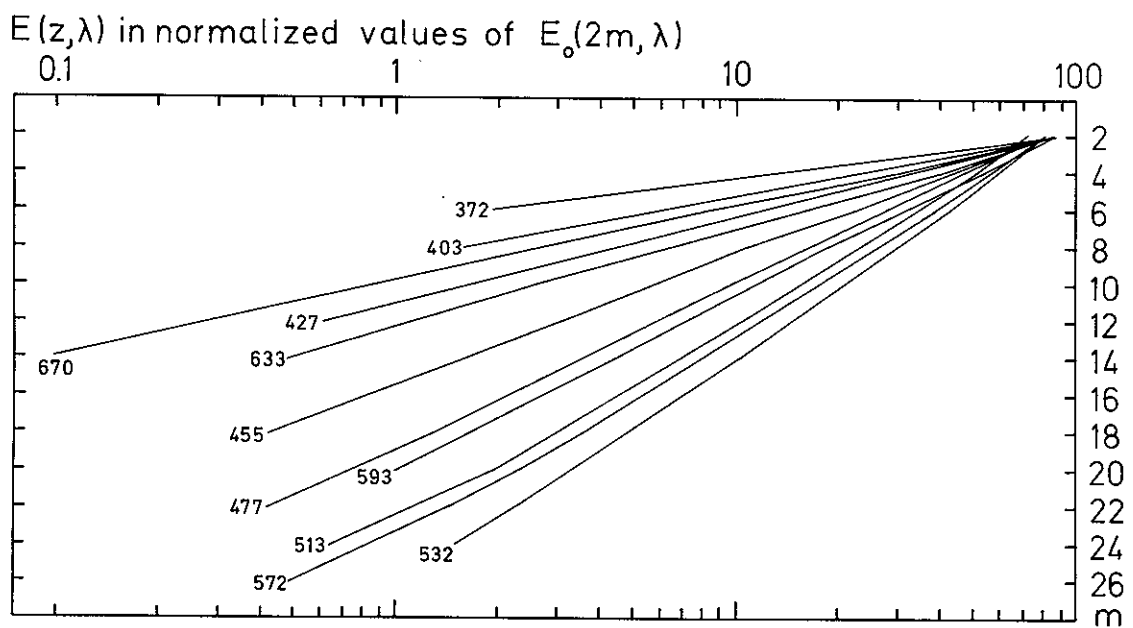


Fig. 7.

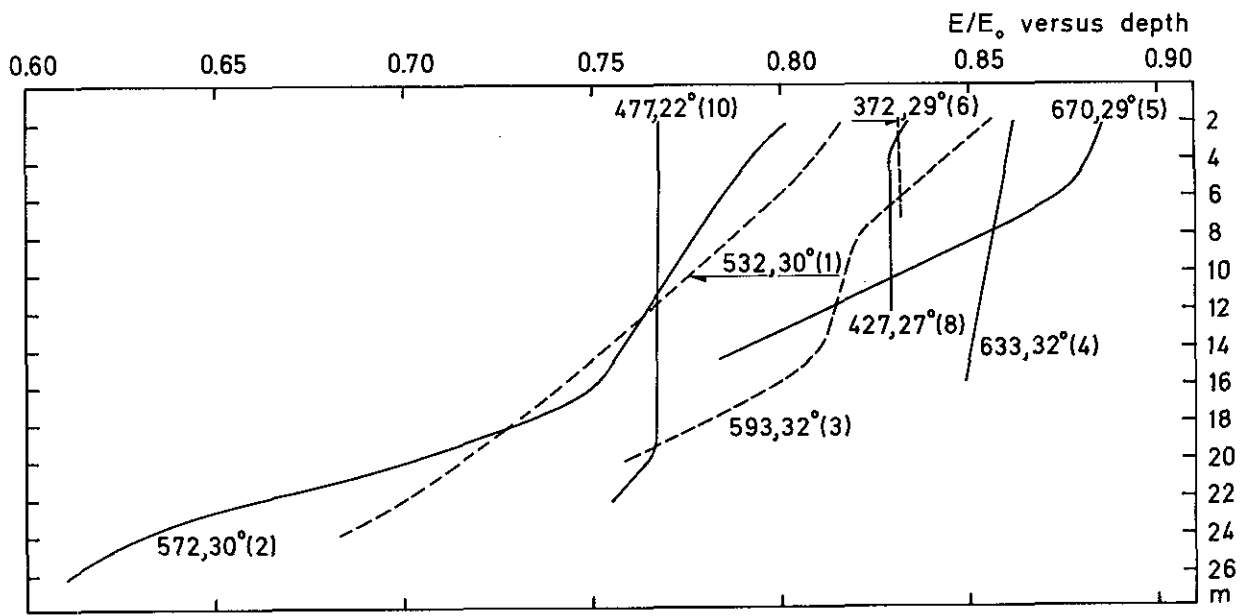


Fig. 8. "Average cosine" E/E_0 som en funktion af dybden, bølgelængden og solhøjden. Gradangivelsen refererer til solhøjden i luft, medens de ubenævnte tal henviser til bølgelængden i nm.

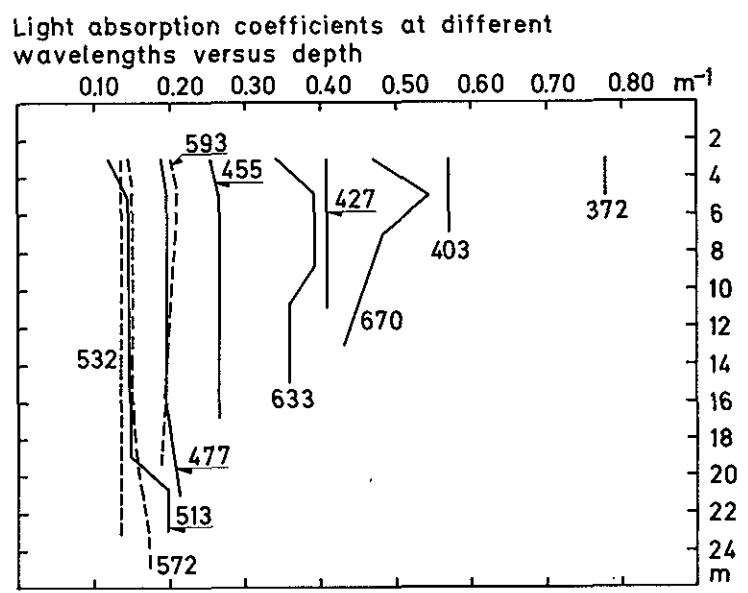


Fig. 9. Lysabsorptionskoefficienter som en funktion af bølgelængden og dybden.

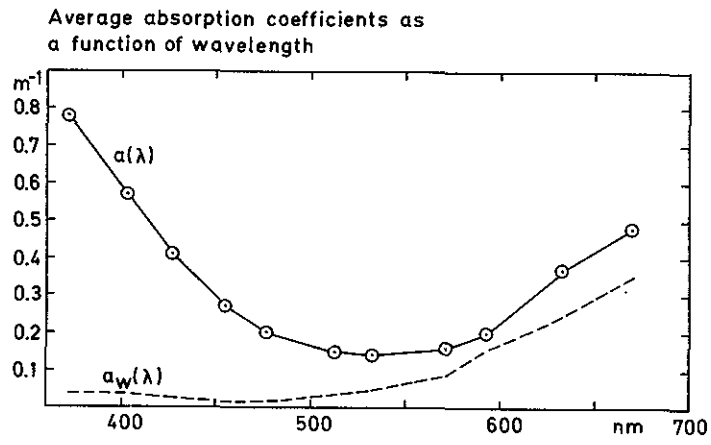


Fig. 10.

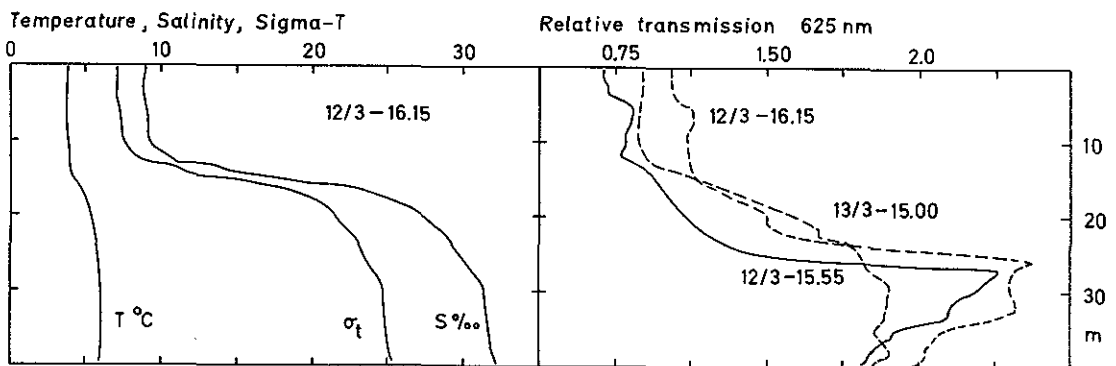


Fig. 11.

