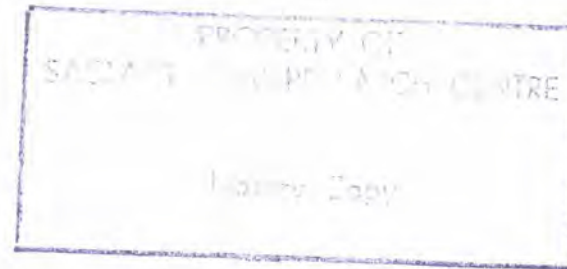


Supplement to SACLANTCEN Technical Report No. 8

SACLANT ASW
RESEARCH CENTER



THE TEMPERATURE STRUCTURE IN THE UPPER LAYERS OF THE
LIGURIAN SEA AND ITS SEASONAL VARIATIONS

by
Dr. A. Dahme

1 APRIL 1964

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VIALE SAN BARTOLOMEO, 92
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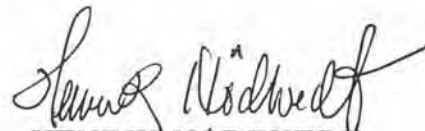
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Abstract

Water temperature measurements, down to depths of 150 meters, and meteorological data connected with these measurements carried out in the Ligurian Sea in May and November 1962, are presented in the form of graphs and tables.

The Centre's survey of the Ligurian Sea,

which aimed at studying the thermal behaviour of the upper water layers down to a depth of 150 m, was continued during May and November 1962. The results of this survey are collected in this report.

The parameters of interest were measured under the same conditions and with the same accuracy as described in the Centre's Technical Report No. 8.

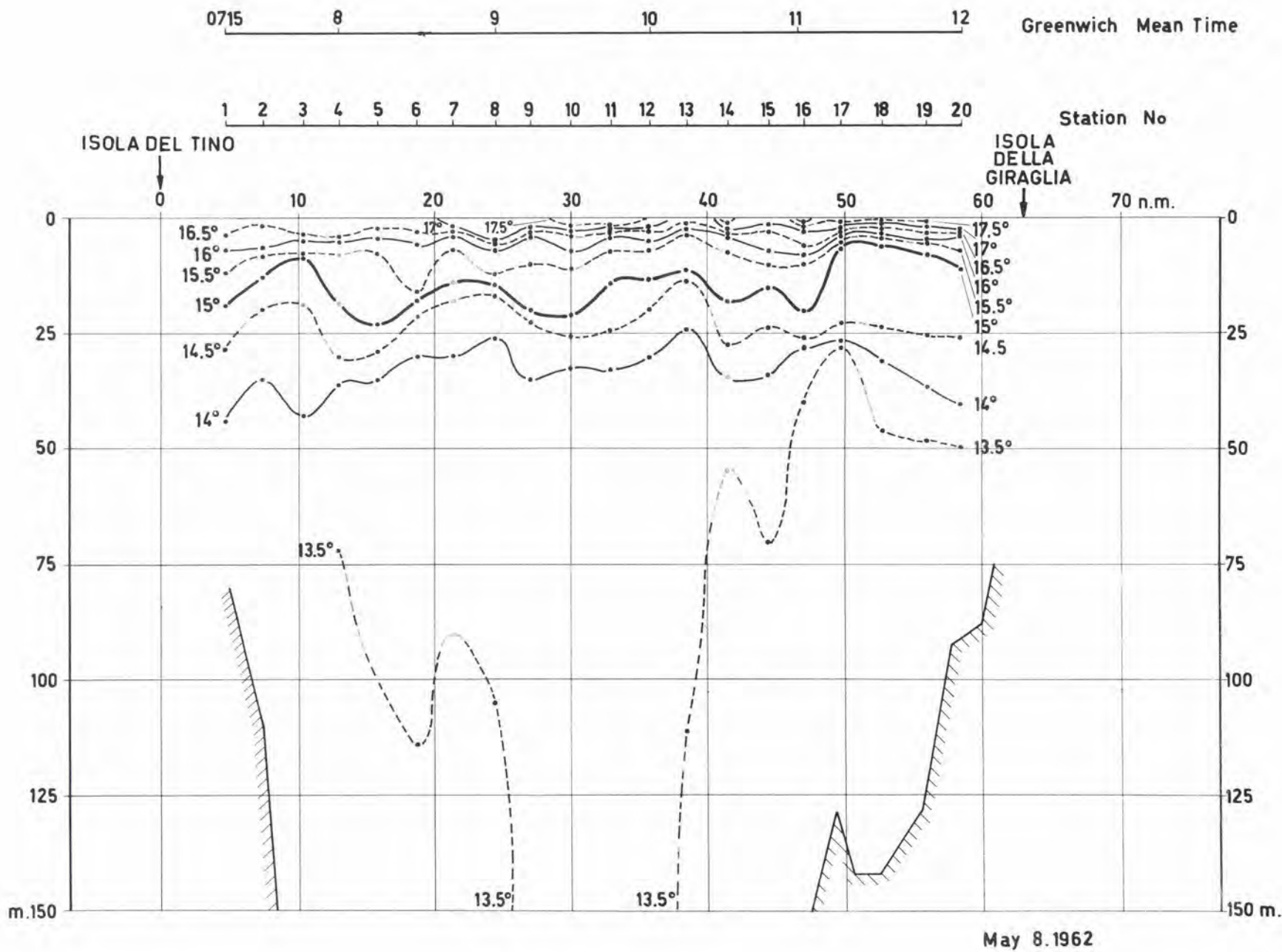
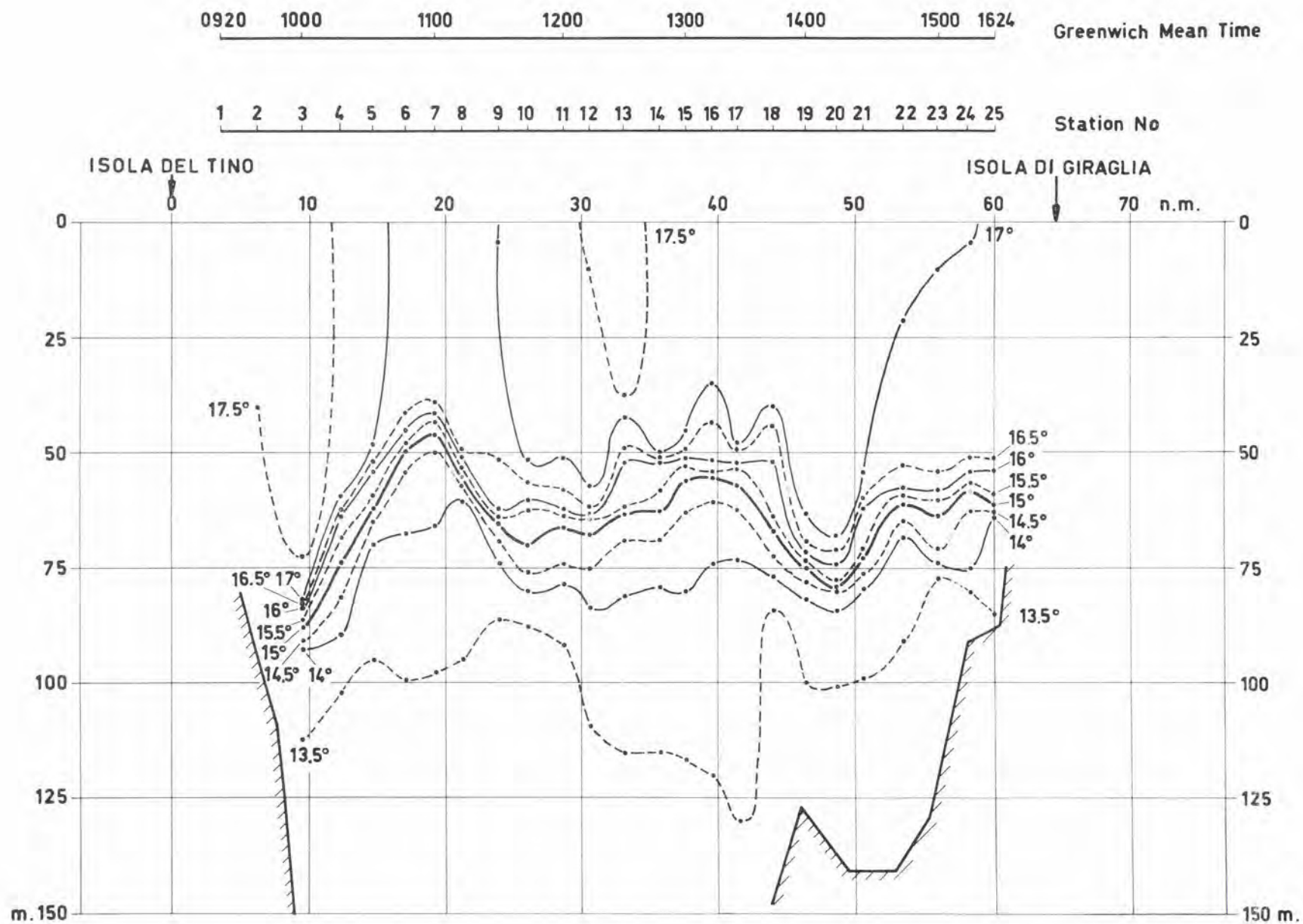


Fig. 1



November 17, 1962

Fig. 2

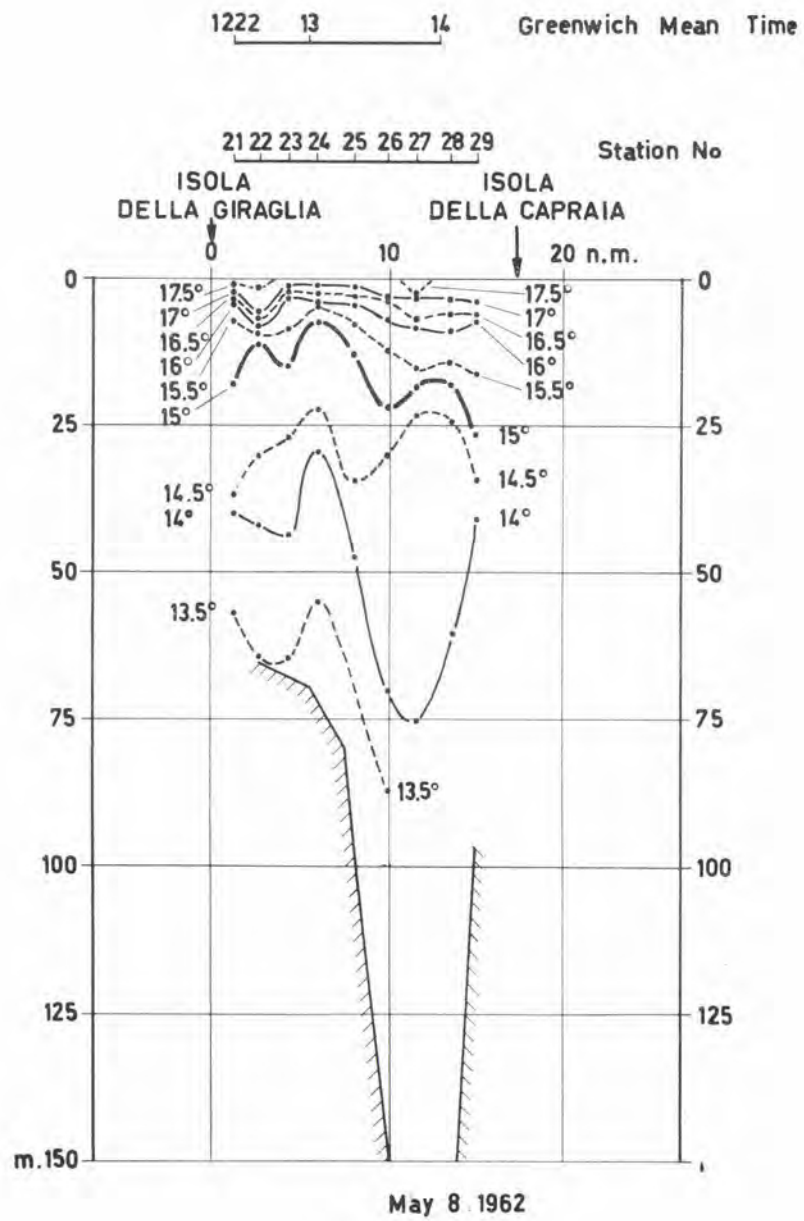


Fig. 3

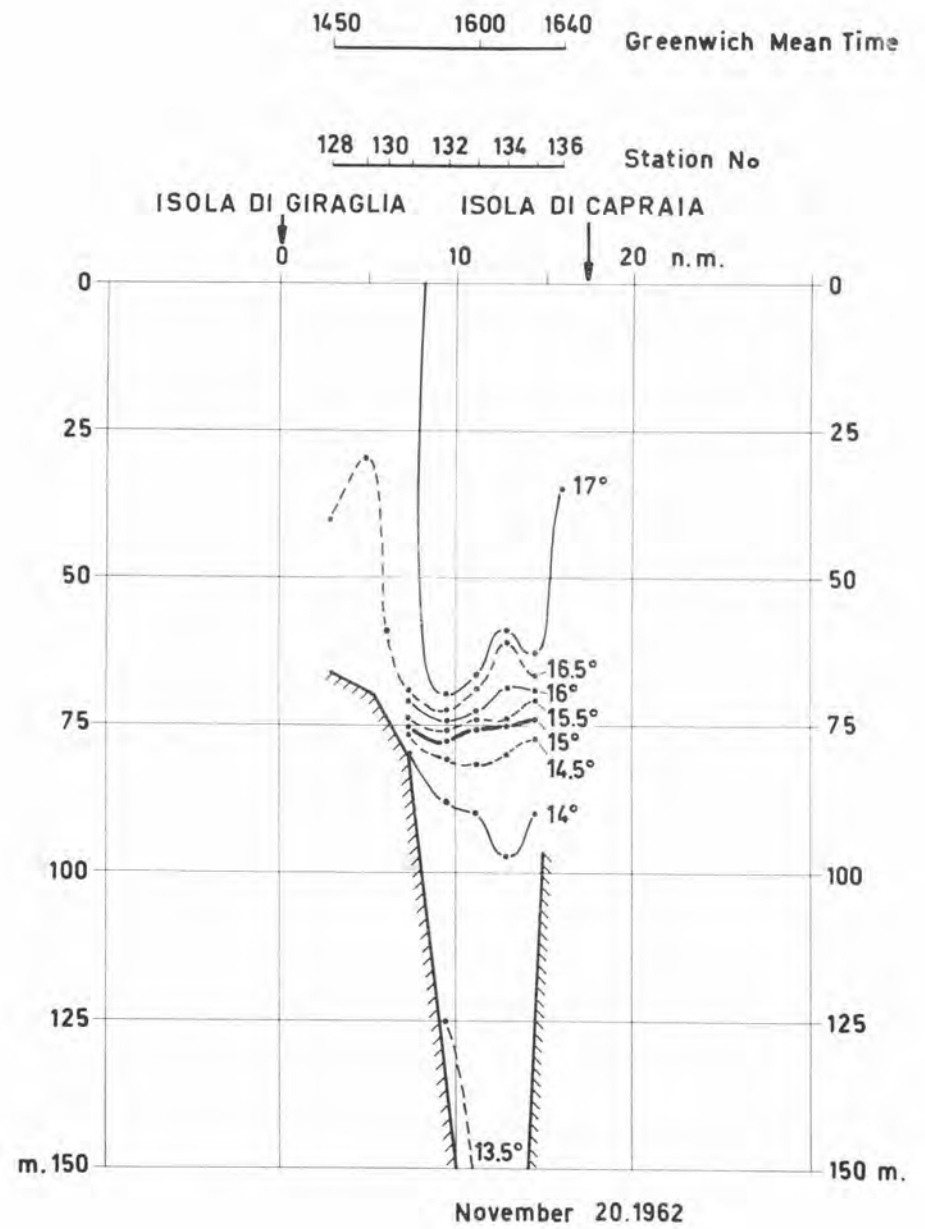


Fig. 4

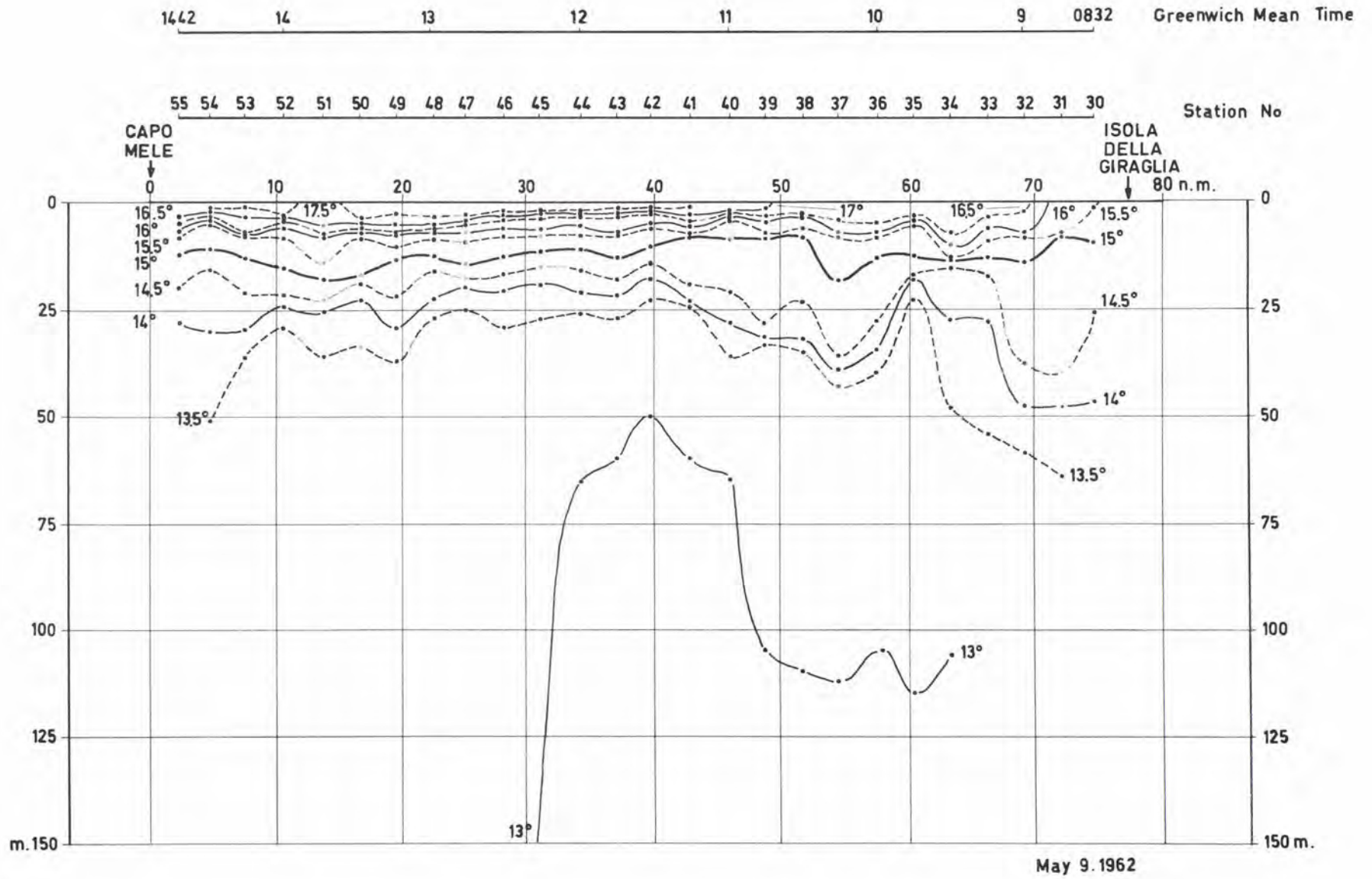


Fig. 5

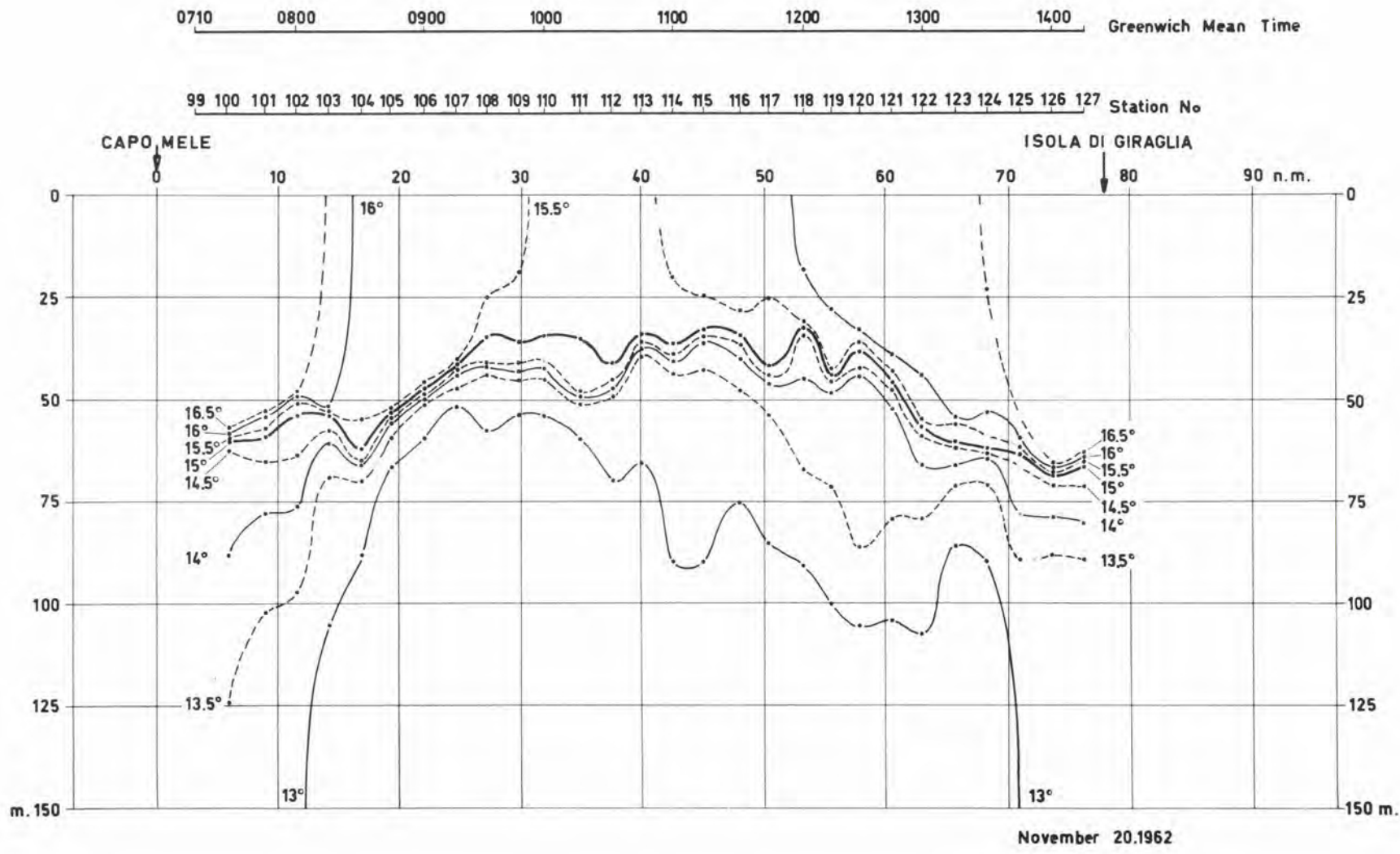


Fig. 6

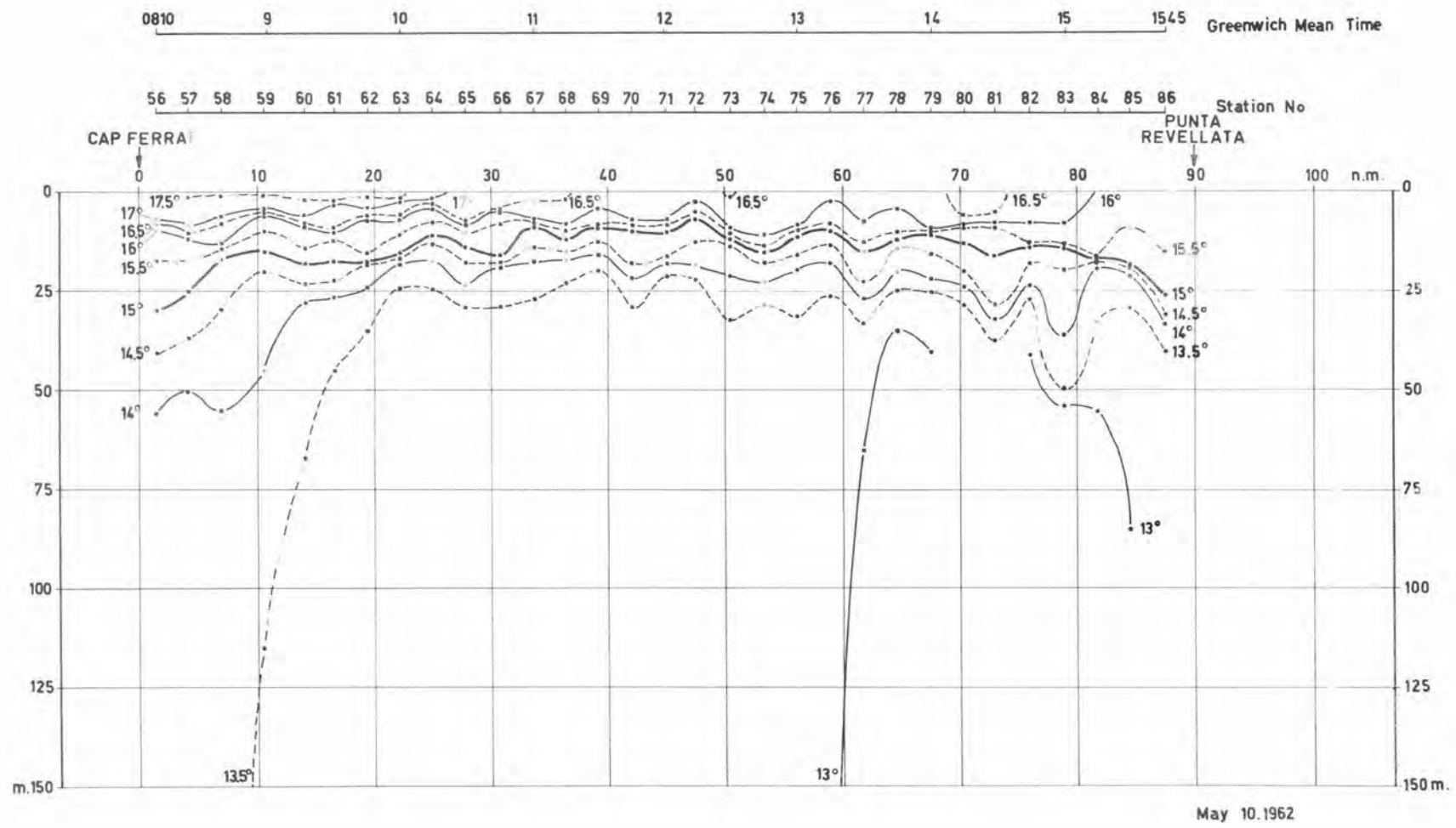


Fig 7

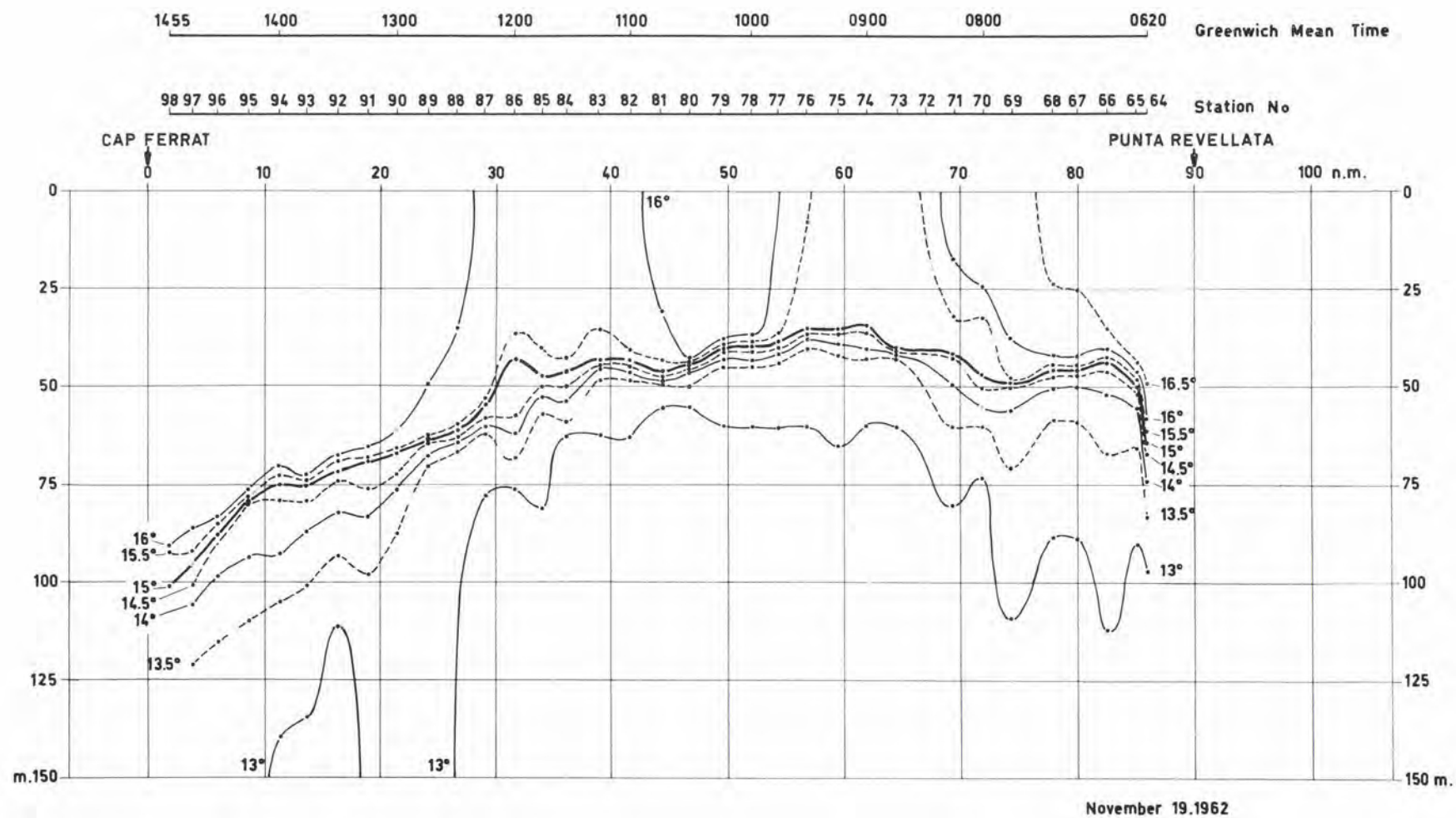


Fig. 8

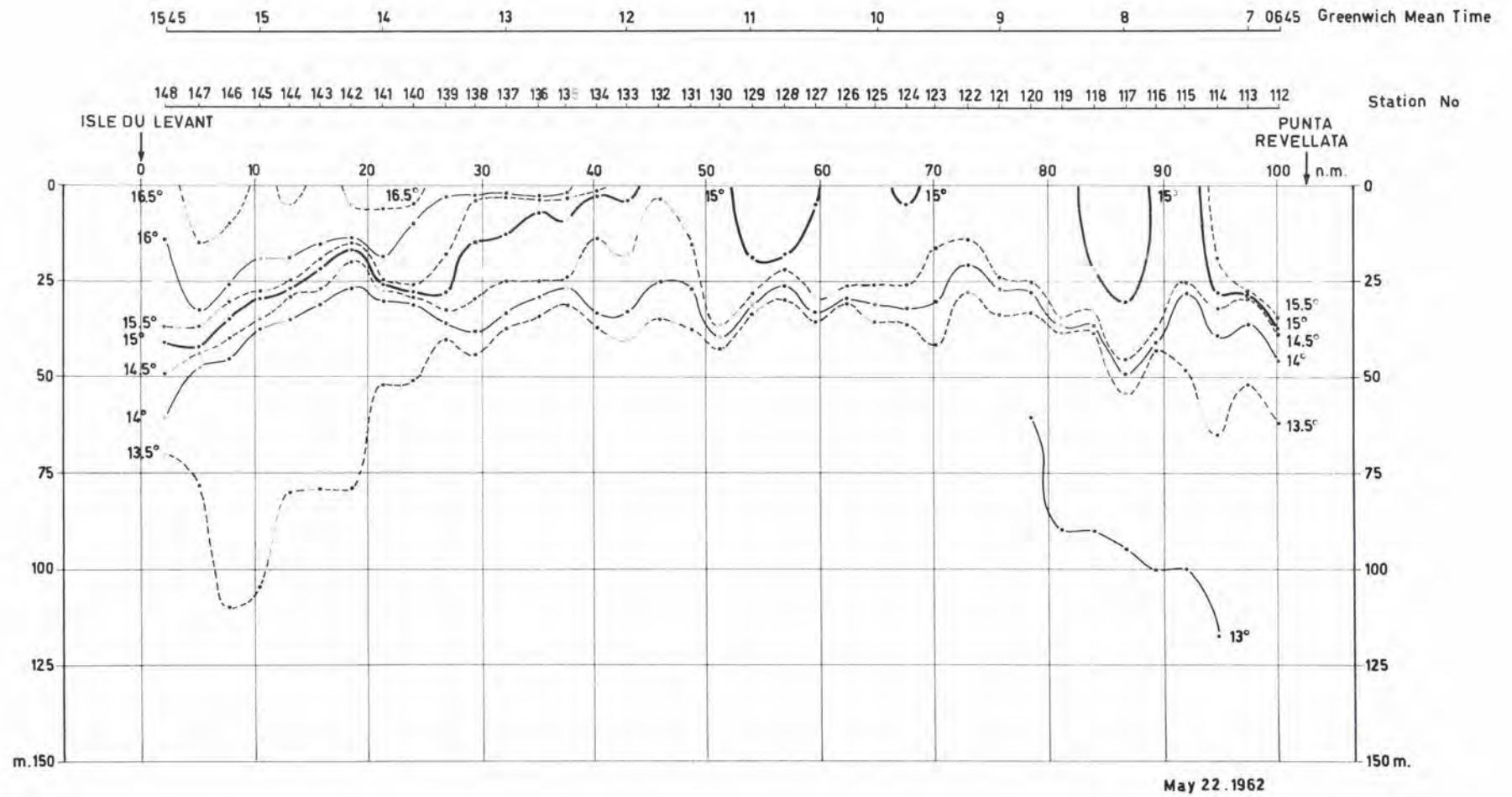


Fig. 9

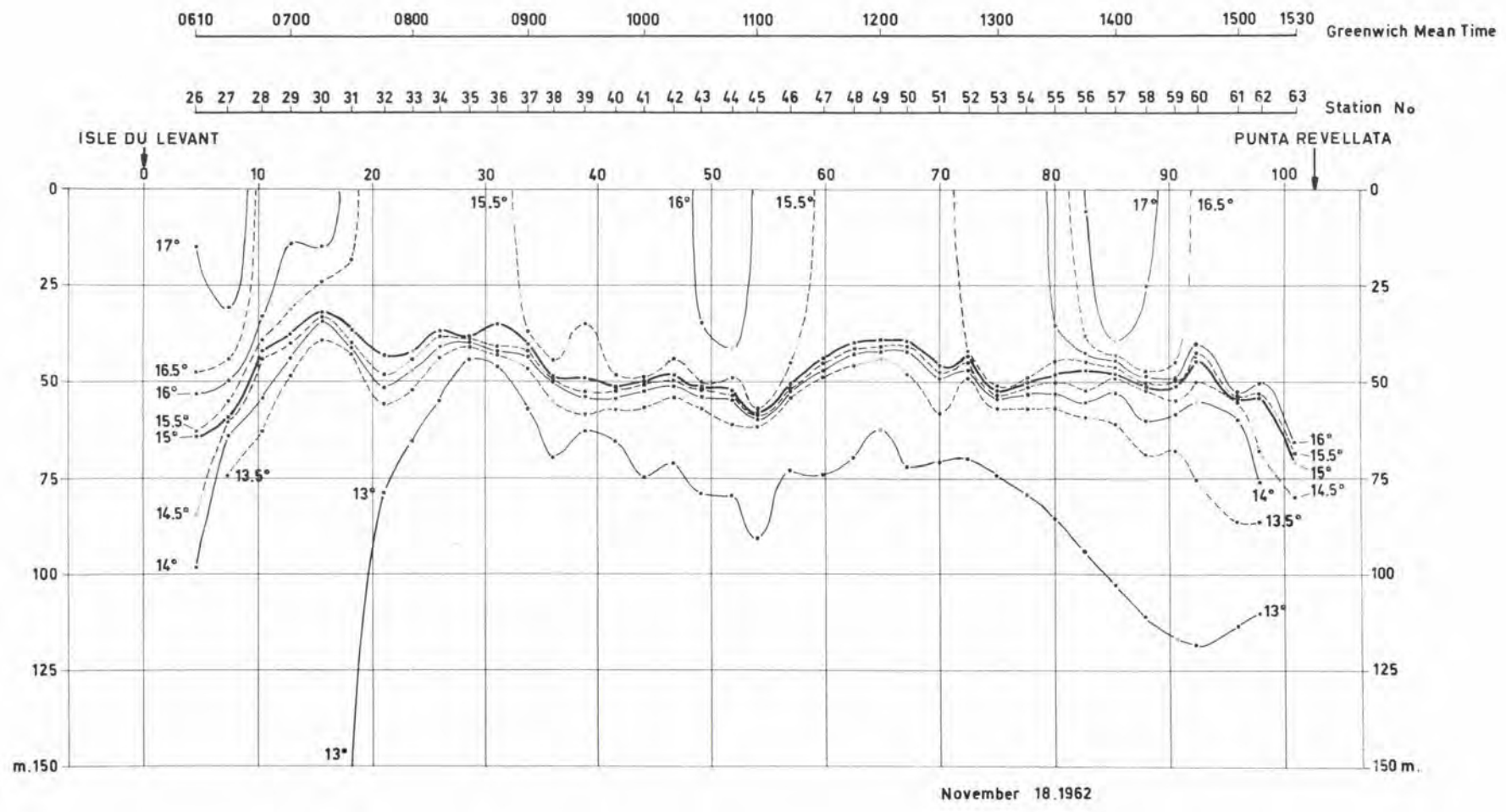


Fig. 10

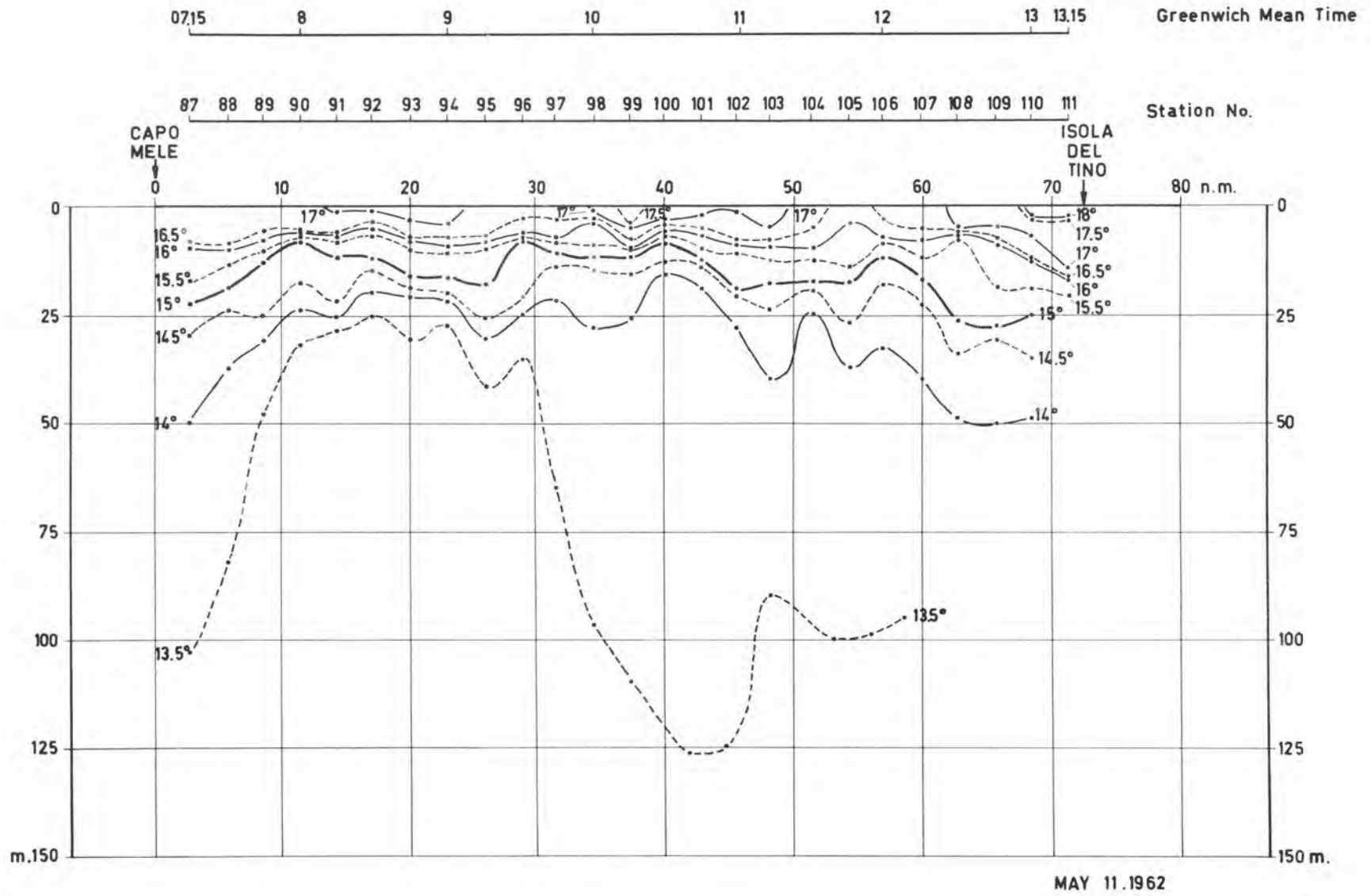


Fig. 11

TABLE I
 Meteorological Data for the Period
 May 8 - May 22, 1962

Station No.	Year	Month	Day	Hour GMT	Air Temperature		Barometer mb	Wind		Sea State
					dry bulb °C	wet bulb °C		dir	speed knots	
4	1962	May	8	0800	17.5	15.7	1018	-	0	1
8	"	"	"	0900	19.0	16.2	-	-	0	1
12	"	"	"	1000	19.5	16.6	-	13	05	1
20	"	"	"	1200	19.9	17.0	-	16	10	1
24	"	"	"	1300	20.0	17.0	-	14	09	1
28	"	"	"	1400	20.4	17.2	-	27	12	1
32	1962	May	9	0900	17.8	15.5	1015	11	13	2
36	"	"	"	1000	16.9	15.5	-	11	12	2
45	"	"	"	1230	19.7	16.7	-	-	0	1
48	"	"	"	1300	18.9	16.6	-	-	0	1
52	"	"	"	1400	20.2	16.9	1014	14	03	1
55	"	"	"	1500	18.3	16.1	-	09	07	1
56	1962	May	10	0800	19.1	16.6	1011	11	02	1
59	"	"	"	0900	18.4	16.0	-	16	02	1
63	"	"	"	1000	18.9	16.1	-	29	02	2
72	"	"	"	1200	17.8	14.7	-	24	29	3
75	"	"	"	1300	17.6	14.0	-	25	21	4

Station No.	Year	Month	Day	Hour GMT	Air Temperature		Barometer mb	Wind		Sea State
					dry bulb °C	wet bulb °C		dir	speed knots	
79	1962	May	10	1400	17.8	14.2	-	23	29	4
83	'	"	"	1500	16.9	14.2	-	25	20	4
86	'	'	"	1600	17.2	13.6	1012	22	37	4
87	1962	May	11	0700	16.6	14.2	1010	02	02	1
90	'	"	"	0800	17.3	15.0	-	10	13	1
94	'	"	"	0900	17.8	15.0	-	08	08	1
98	"	"	"	1000	18.3	15.5	1010	07	09	1
108		"	"	1230	17.2	14.2	-	13	14	1
110		"	"	1300	17.8	14.4	-	09	12	1
1 2	1962	May	22	0700	17.8	14.7	1016	18	11	3
117	'	"	"	0800	16.8	15.0	-	18	11	3
121	"	"	"	0900	16.6	14.7	-	19	10	3
25	"	"	"	1000	16.9	14.4	-	21	07	3
134		'	"	1200	18.3	15.0	-	13	03	3
137		"	"	1300	18.9	16.1	-	13	05	3
141	'	"	"	1400	19.1	15.5	1015	28	20	3
145	'	"	"	1500	18.3	15.0	-	27	23	3
148	"	"	'	1545	18.3	15.0	-	26	17	3

TABLE II
 Meteorological Data for the Period
 November 17 - November 20 1962

Station No.	Year	Month	Day	Hour GMT	Air Temperature		Barometer mb	Wind		Sea State
					dry bulb °C	wet bulb °C		dir	speed knots	
1	1962	Nov	17	0930	10.7	06.1	1012	18	27	2
4	"	"	"	1030	10.4	07.1	-	19	23	3
9	"	"	"	1130	10.4	08.2	-	18	27	3
13	"	"	"	1230	11.1	08.4	-	17	25	3
17	"	"	"	1330	11.7	09.9	-	17	27	3
21	"	"	"	1430	10.1	09.	009	17	26	3-4
25	"	"	"	1530	10.0	09.0	-	17	23	3-4
26	1962	Nov	18	0615	11.1	07.8	1000	14	08	4
30	"	"	"	0715	11.4	07.9	-	19	12	4-5
34	"	"	"	0815	12.2	08.6	-	12	11	4-5
38	"	"	"	0915	11.9	08.8	-	13	12	4-5
42	"	"	"	1015	13.4	09.7	-	13	08	4-5
46	"	"	"	1115	13.4	09.7	-	13	03	4-5
50	"	"	"	1215	13.3	09.4	-	24	10	4-5
54	"	"	"	1315	13.3	09.4	-	21	15	4-5
58	"	"	"	1415	13.3	09.4	-	19	14	4-5
62	"	"	"	1515	13.1	09.2	1001	14	07	4-5

Station No.	Year	Month	Day	Hour GMT	Air Temperature		Barometer mb	Wind		Sea State
					dry bulb °C	wet bulb °C		dir	speed knots	
64	1962	Nov	19	0630	09.4	07.2	1000	23	11	3
68	"	"	"	0730	16.6	07.7	-	10	10	
72	"	"	"	0830	11.2	08.3	-	10	10	3
76	"	"	"	0930	11.7	07.8	-	05	15	3
80	"	"	"	1030	11.9	08.3	-	19	20	2
84	"	"	"	1130	2.2	08.1	-	19	23	2
88	"	"	"	1230	11.7	07.8	-	18	17	2
92	"	"	"	1330	11.9	06.1	-	17	18	2
97	"	"	"	1430	12.5	05.	1000	16	16	2
99	1962	Nov	20	0715	11.1	04.4	1004	07	10	2
103	"	"	"	0815	11.4	06.1	-	08	13	2
107	"	"	"	0915	11.4	06.7	-	09	12	2
111	"	"	"	1015	12.2	05.8	-	13	1	2
115	"	"	"	1115	12.2	06.4	-	13	11	2
119	"	"	"	1215	12.5	06.9	1006	13	09	2
123	"	"	"	1315	12.2	07.2	-	13	10	2
127	"	"	"	1415	12.3	08.4	-	13	10	2
130	"	"	"	1515	12.3	05.8	-	14	10	2
14	"	"	"	1615	12.2	07.8	1006	18	14	2





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