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Norway-U.K. Study of Variability in the Norwegian Sea: 1967

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A Norway-U.K. study of variability was carried out in the Norwegian Sea during April-May 1967 by the Geophysical Institute of the University of Bergen and the Fisheries Laboratory, Lowestoft. The experiment was carried out along the 66°N parallel between 6°E and 2°W longitude. Anchored buoys carrying Andraa recording current meters were placed in the following positions during 1-5 April by the Research Vessel H. U. SWERDRUP.

<u>Station</u>	<u>Position</u>	<u>Sounding</u> (Metres)	<u>Observation</u> <u>Depth</u> (Metres)
A	66°03'N, 5°20'E	750	200
B	65°59'N, 4°18'E	1300	200
C	66°01'N, 2°04'E	1980	200 and 350
D	66°00'N, 1°35'E	2500	350

They were lifted for servicing on 21-22 April and were finally recovered by the Research Vessel HELLAND HANSEN on 20-22 May. The Current meters recorded current speed over 30 minute intervals and current direction and temperature at the beginning and end of each interval.

The hydrographic stations were worked at intervals of 10 n.mi. along a section 190 n.mi. long between 6°E and 2°W longitude by the Research Vessels ERNEST HOLT and HELLAND HANSEN. Temperature and salinity were sampled at 0, 50, 100, 150, 200, 300, 400, 500, 600, 700, 800 and 1000 m. In all, 17 crossings of the section were made as follows:-

<u>No.</u>	<u>Ship</u>	<u>Dates</u>
1	ERNEST HOLT	4-7 April
2	" "	7-9 April
3	" "	9-11 April
4	" "	12-14 April
5	HELLAND HANSEN	17-19 April
6	" "	19-22 April
7	" "	22-24 April
8	ERNEST HOLT	29 April-2 May
9	" "	2-4 May
10	" "	4-5 May
11	" "	5-7 May
12	HELLAND HANSEN	10-11 May
13	" "	11-12 May
14	" "	13-14 May
15	" "	14-15 May
16	" "	16-17 May
17	" "	17-18 May

During crossings Nos. 2 and 4 GEM was used. On all crossings made by the Research Vessel ERNEST HOLT a sea surface thermograph was run and at all stations on these crossings a bathythermograph was lowered to 275 m. On crossing No. 3 a temperature-depth recorder was lowered to 1000 m at stations midway between each pair of normal hydrographic stations, in order to study the spatial variability in more detail.

This recorder was also lowered at 1 hour intervals over a period of 24 hours alongside Station A on 7-8 May, in order to investigate the temporal variability. Meteorological observations were made at hourly intervals whenever a research vessel was in the vicinity of the section.

The section ran through the position of Ocean Weather Station MIKE. This was occupied by the Weather Ships POLARFRONT I and POLARFRONT II and, in addition to carrying out their normal programme of meteorological observations, these ships made temperature and salinity observations at standard depths as follows:-

POLARFRONT I

<u>Date</u>	<u>Station Number</u>	<u>Station Type</u>
1/4	1033	1
18/4	1034	2
19/4	1035	3
22/4	1036	1
24/4	1038	2
27/4	1039	3

Total 6 stations

POLARFRONT II

<u>Date</u>	<u>Station Number</u>	<u>Station Type</u>
3/4	249	2
4/4	250	3
6/4	251	1
7/4	252	3
8/4	253	3
10/4	254	2
11/4	255	3
12/4	256	3
13/4	257	1
14/4	258	3
2/5	259	3
3/5	260	1
5/5	261	3
6/5	262	3
8/5	263	2
9/5	264	3
10/5	265	3
11/5	266	1
17/5	267	3
13/5	268	3
16/5	269	3
18/5	270	1

Total 22 stations

Observation depths (metres)

<u>Station Type 1</u>	<u>Station Type 2</u>	<u>Station Type 3</u>
0	0	0
10	10	50
25	25	150
50	50	300
75	75	400
100	100	600
150	150	1000
200		
300		
400		
500		
600		
800		
1000		
1200		
1500		
1800		
Bottom		