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Danish Research Report, 1957

B. Hydrographic Conditions in the Eastern Part of Labrador Sea and  
Davis Strait 1957

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During July and the beginning of August the sections shown  
in Figure 1 were worked by the Danish R/V "DANA".

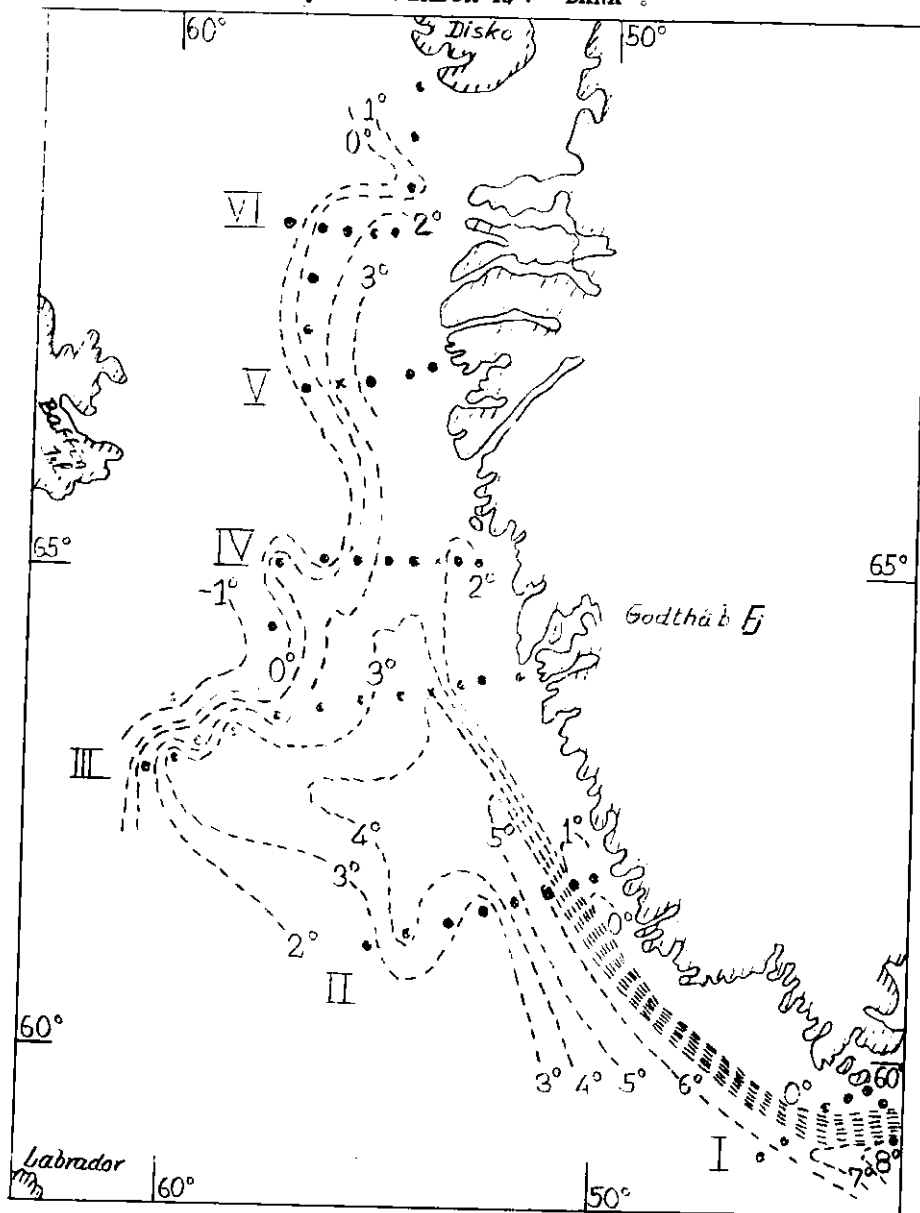


Figure 1. Location of sections (I-VI), taken from R/V "Dana"; July-August, 1957, and distribution of temperature at 50 metres.

The ice conditions were favourable off West Greenland and practically no "storis" was met. The temperature distribution at 50 metres is shown in Figure 1. The sharp front between the arctic and the atlantic component of the West Greenland Current is clearly seen especially off the southern part of West Greenland. Off Fyllas Bank a branch of the West Greenland Current turns westwards where it meets the cold water masses of the Labrador Current. The temperatures were about normal at 50 metres, probably a trifle below normal in the southernmost and northernmost part of the area.

The hydrographic conditions are further illustrated by the Sections I to VI (Figures 2 to 7). The sections show that the arctic component of the West Greenland Current was weak except in the Cape Farewell section and the warm atlantic component of this current was well developed, especially in the area south of Fylla Bank.

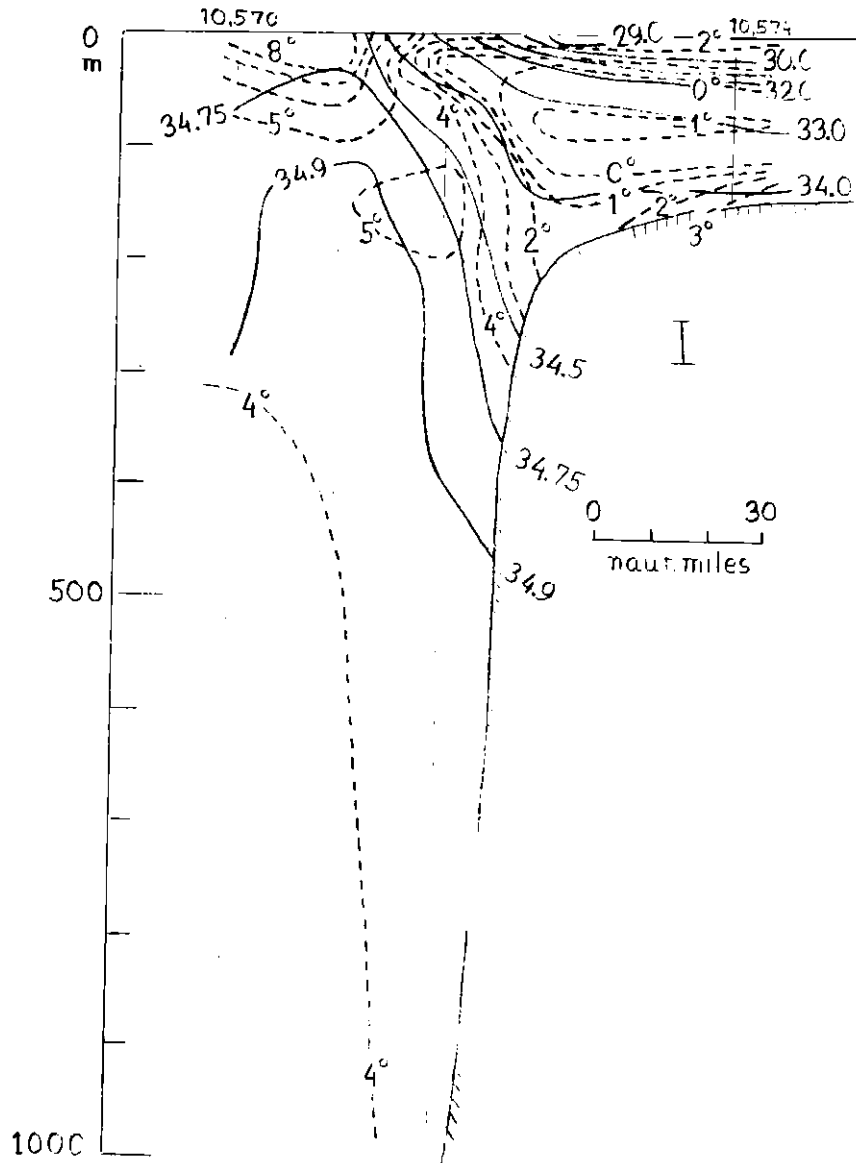


Figure 2. Section I off Cape Farewell 8-9 August 1957.

The Fylla Bank section had been worked by M/C "Adolf Jensen" earlier in the year in the beginning of April and in late June. Over the shallow part of the bank the temperature was in April 0.15°C. in 40 metres and in June 1.35°C. The winter cooling seems not to have been very severe.

As in previous years a fixed station was worked in the entrance of Godthåb Fjord (64°07'N - 51°53'W) as often as possible throughout the year from the ships M/C "Adolf Jensen" and M/C "Tornaq".

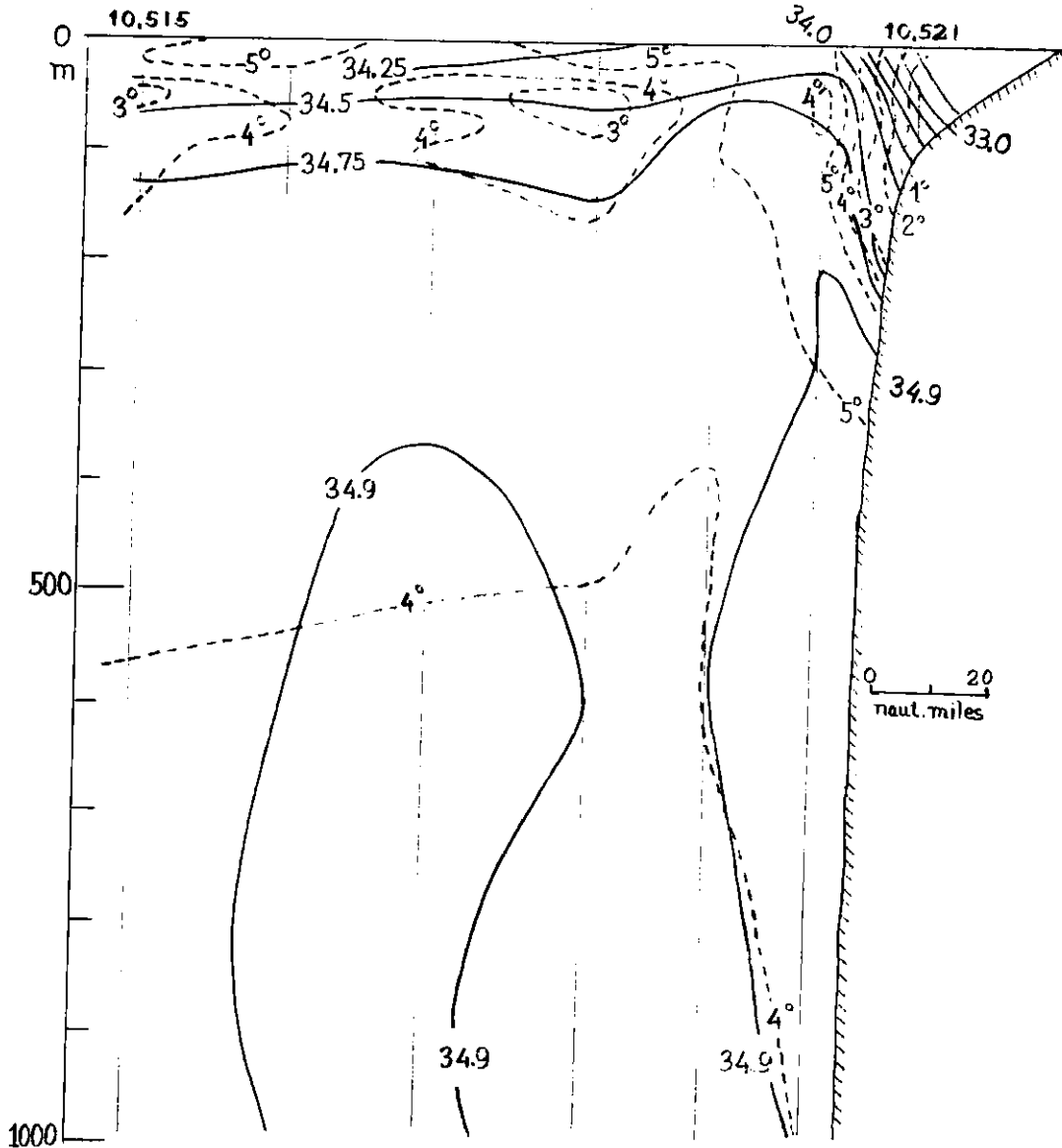


Figure 3. Section II off Frederikshåb 7-8 July 1957.

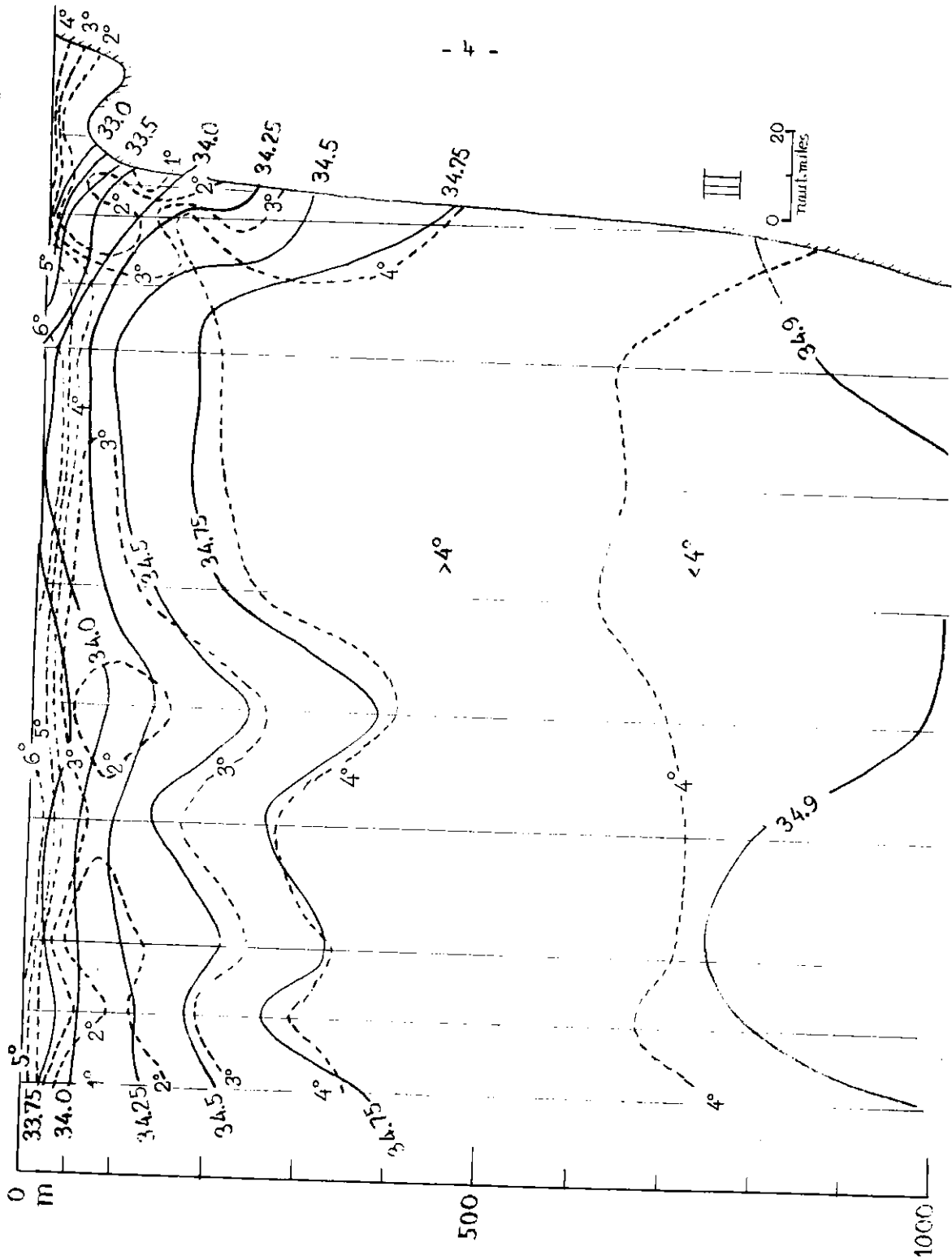


Figure 4. Section III across Fylla Bank 15-17 July 1957.

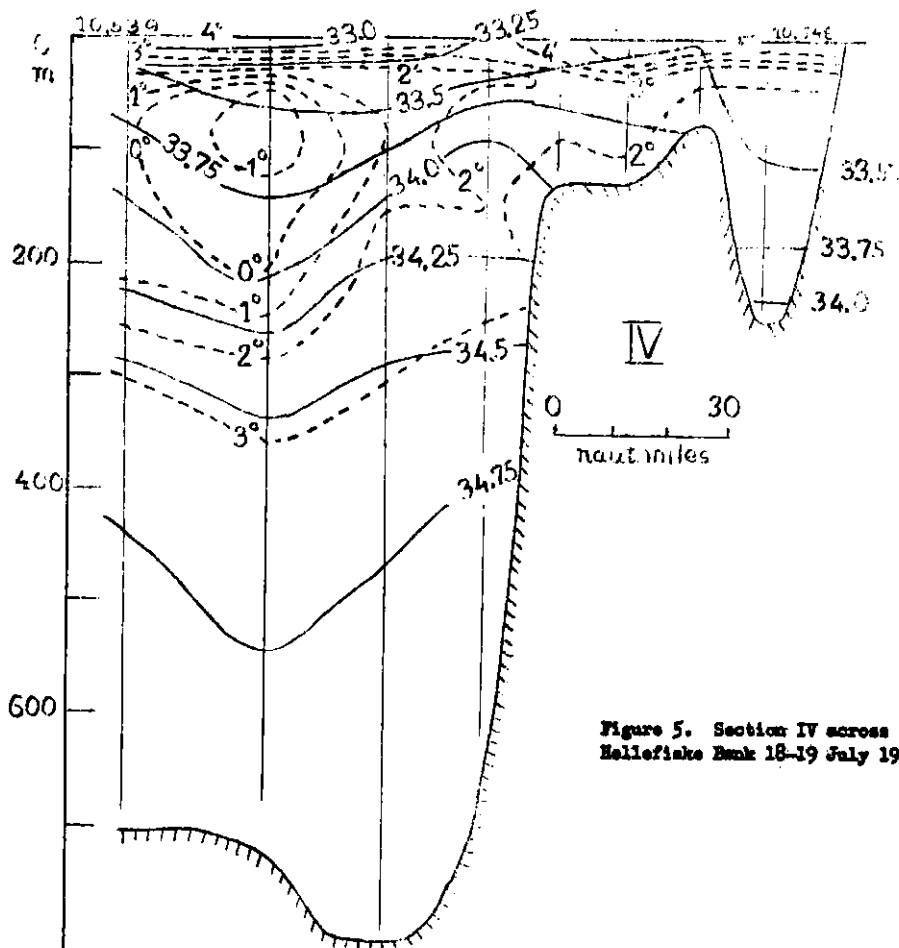


Figure 5. Section IV across Lille Hellefiske Bank 18-19 July 1957.

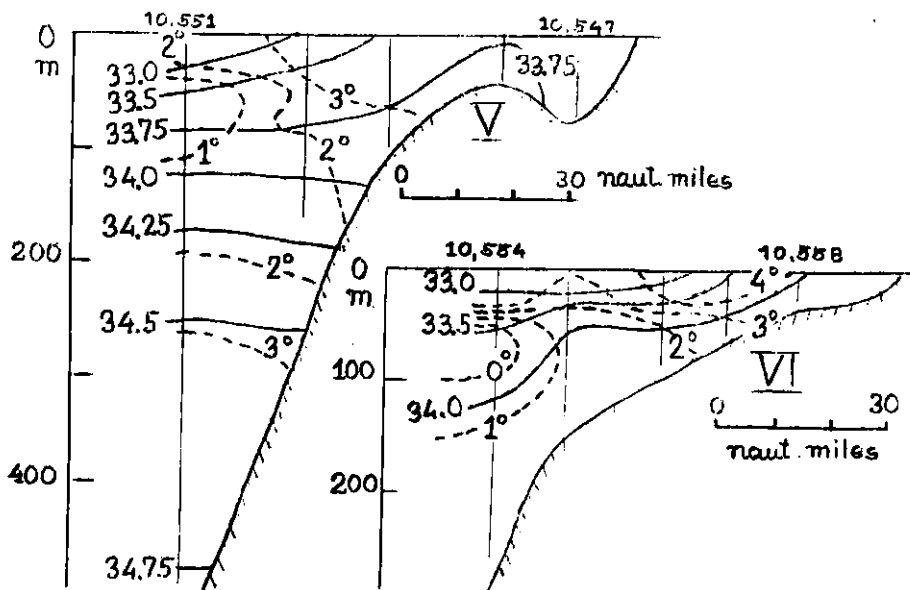


Figure 6. Section V across Store Hellefiske Bank 20-21 July 1957.

Figure 7. Section VI off Egedamind 21-22 July 1957.

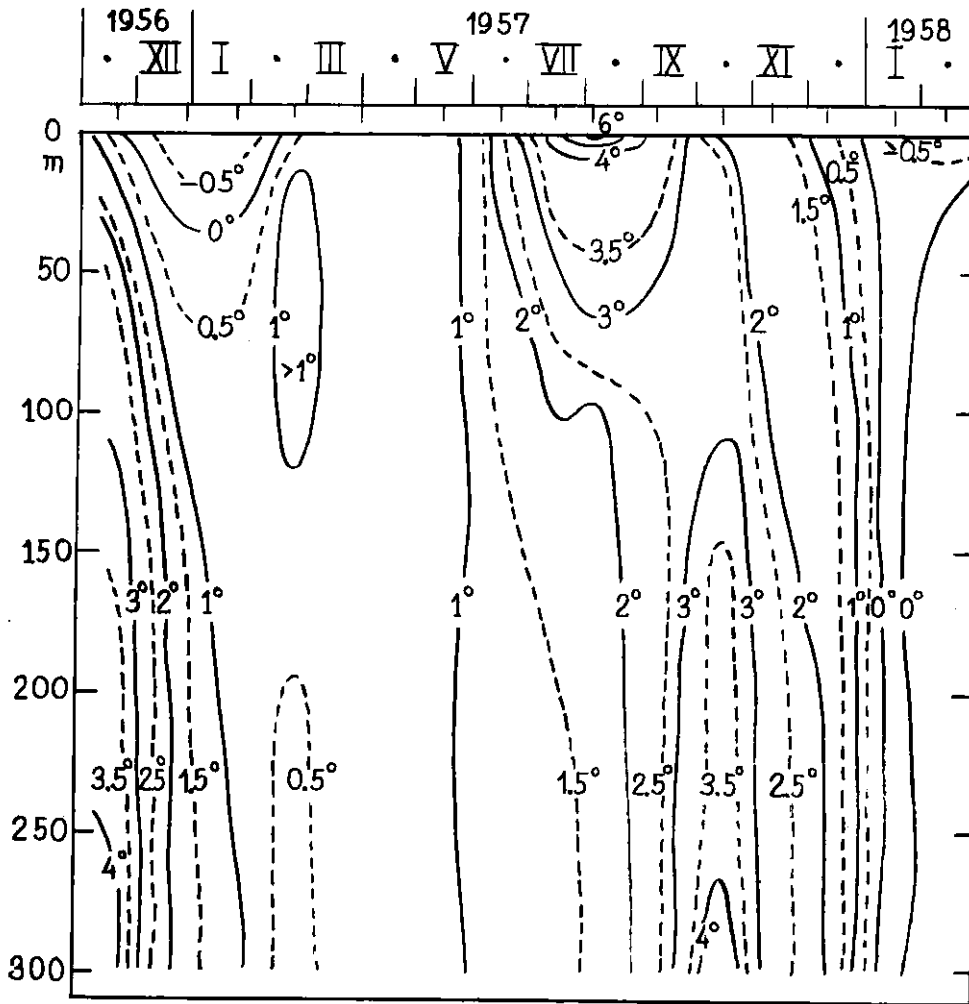


Figure 8. Variation of temperature at the entrance of Godthåb Fjord.

The variation of the temperature from November 1956 to February 1958 is shown in Figure 8. In March and April 1957 the temperature was as usual nearly uniform from surface to bottom. The winter cooling appeared, however, to have been less severe than usual as the bottom temperature was positive all the year. In November a strong inflow of warm bottom water took place. This is about a month earlier than usual.

In January 1958 the winter cooling was already very strong and negative temperatures were found from surface to bottom.

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