International Council for the Exploration of the Sea.

CM1974/C: 22
Hydrography Committee

Preliminary results of "JONSDAP 1973" surveys.

During September and October 1973 the "Joint North Sea Data Acquisition Program" (JONSDAP) has been carried out, a joint enterprise of Belgium, United Kingdom and the Netherlands. It aimes to give a coherent set of data to be used as an input for several models of the southern North Sea.

The following institutes and laboratories are involved:

Belgium:

- Math. Modelsea (National Program of research and development on the physical and biological environment of the North Sea, sponsored and conducted by the Ministry of Science Policy).

United Kingdom:

- University of East Anglia;
- Institute of Oceanographic Sciences, Bidston;
- Ministry of Agriculture, Fisheries and Food, Fisheries Laboratory, Lowestoft;
- Hydraulics Research Station, Wallingford.

Netherlands:

- Royal Netherlands Navy, Hydrographic Department;
- Royal Netherlands Meteorological Institute;
- Netherlands Institute for Sea Research;
- Directorate for water management and hydraulic research (Rijkswaterstaat).

One of the major goals, the display of the current pattern and water level, and their variations in time and position, will only be reached after a longer time.
However, it was thought worth while to publish preliminary results in the form of temperature and salinity charts, per decade, during the JONSDAP period. Although not all S and T data are already at disposal, it is thought that the majority of it, now at hand, gives a good insight in the water circulation. (see figs.)
Since the southern North Sea is rather shallow, generally the water is well-mixed from surface to bottom.
In the case of insufficient coverage of data for a certain decade additional information on temperature can sometimes be obtained from the weekly SST charts submitted by DHI (Deutsches Hydrographisches Institut) Hamburg. The latter generally give less detail in the southern part of the North Sea. During the JONSDAP period there is no discrepancy between our charts and those of DHI.
The period of data acquisition, after the summer maximum temperatures, covers the time of rapid temperature-decrease.
For that reason inherent discrepancies cannot be avoided completely.
Time-series of surface-temperature from lightvessels give a decrease of more than 0.1°C per day during 11-20 October, which cannot be neglected over that decade.

Attention is drawn to the fact that during the covered period the horizontal temperature gradient near the continental coast is reversing: the situation changes from summer-mode to winter-mode.
Salinity surveys give short-term deviations of well-known long-term averages according to ICES-atlas. The chartlets give a fair picture of salinity distribution, ten days being a practical period, generally giving for JONSDAP a sufficient combination of observational density and of synopticity. During the third period of September observations are scarce, during some of the others they are on the verge of the synoptic demands.
Excluding some improbable values, the results of a limited salinity intercalibration between four participants (all using inductively coupled salinometers) indicate that serious systematic differences in their salinity data are absent (personal comm., S.B. Tijssen, Neth. Inst. for Sea Research).

For the JONSDAP-participants,

M.P. Visser - E. Wiggers.
Royal Netherlands Meteorological Institute.
De Bilt - Netherlands.

Legend for figures.

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X	Merchant vessel
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□	Willem Beukelsz.
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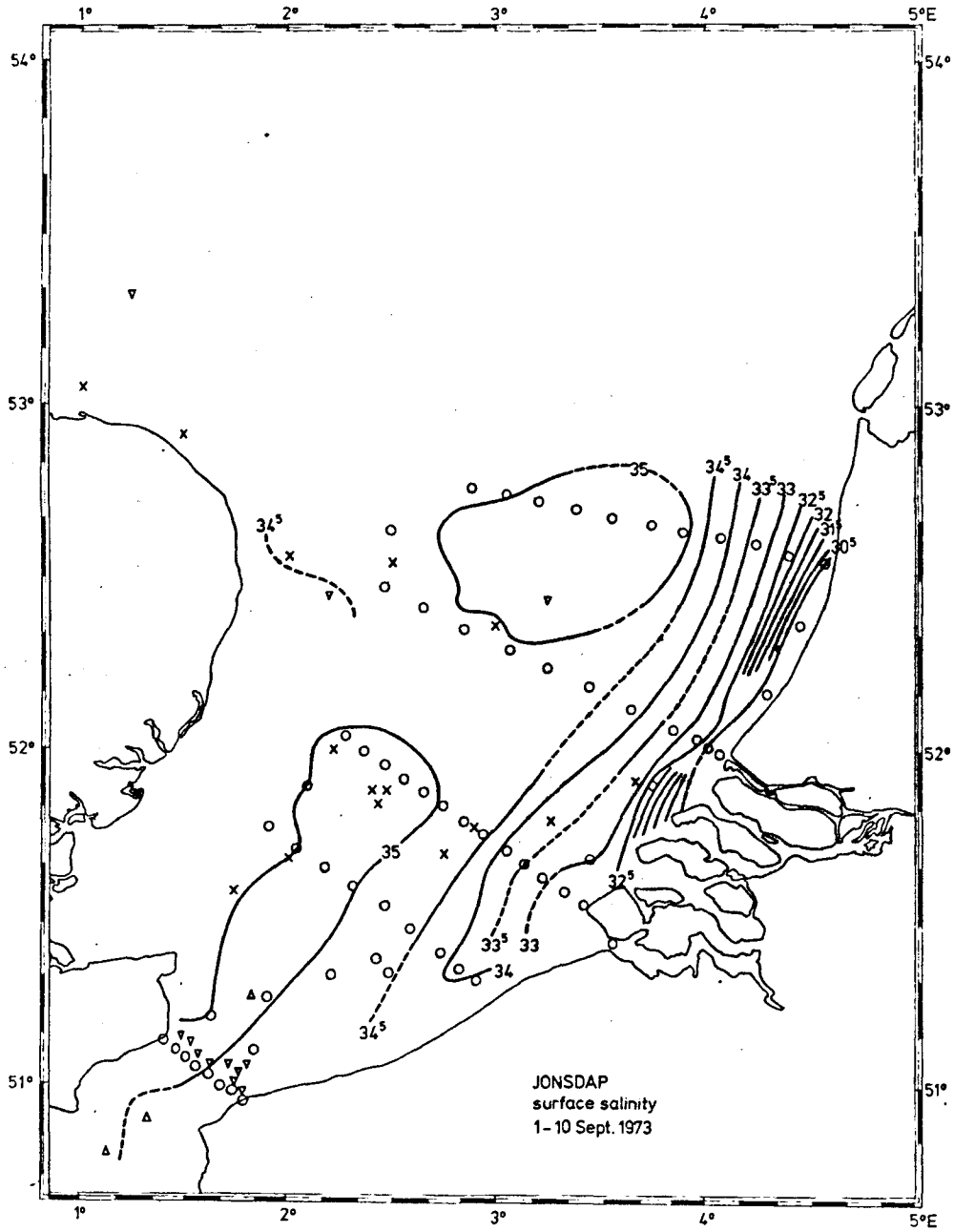
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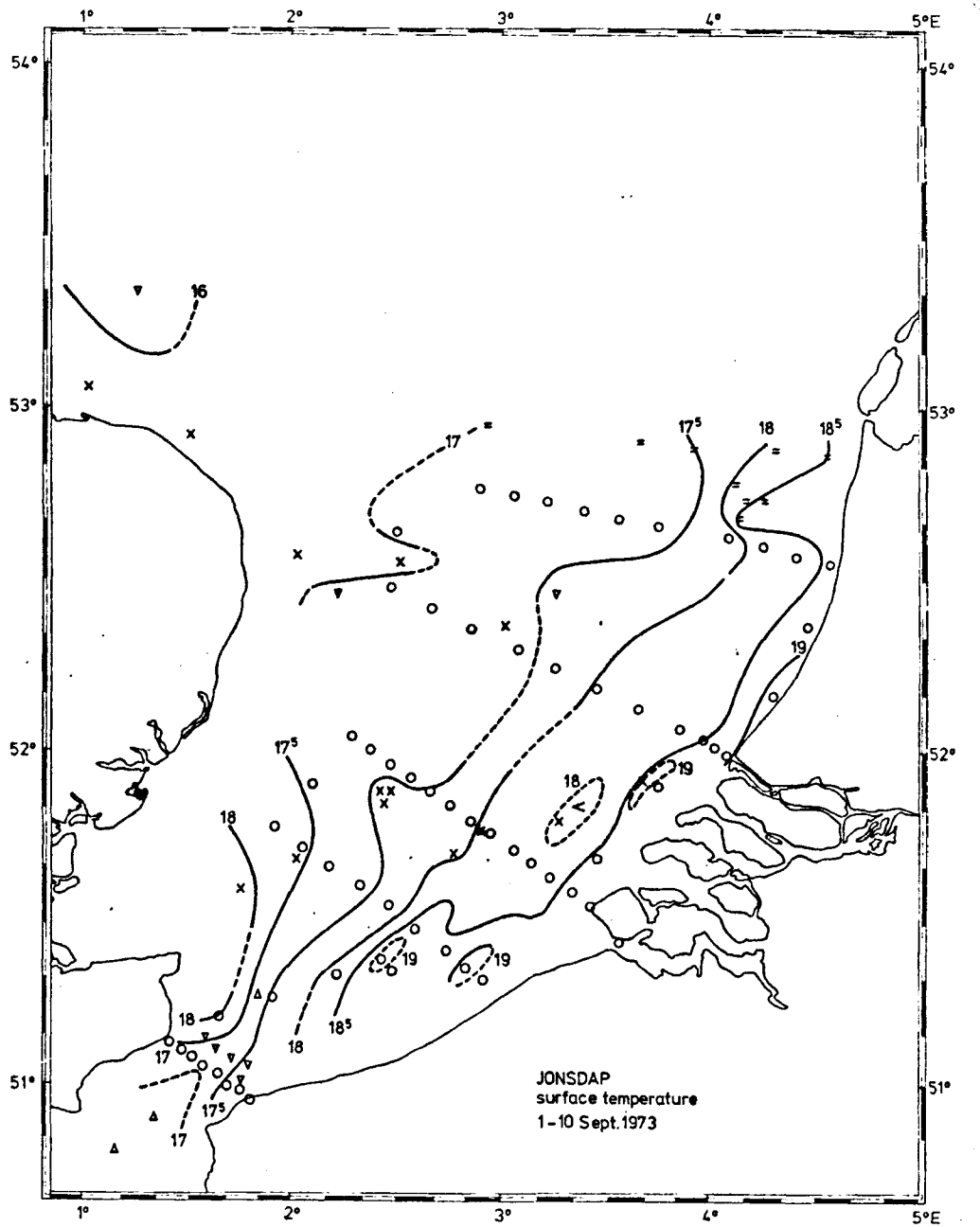
surface salinity
1-10 Sept. 1973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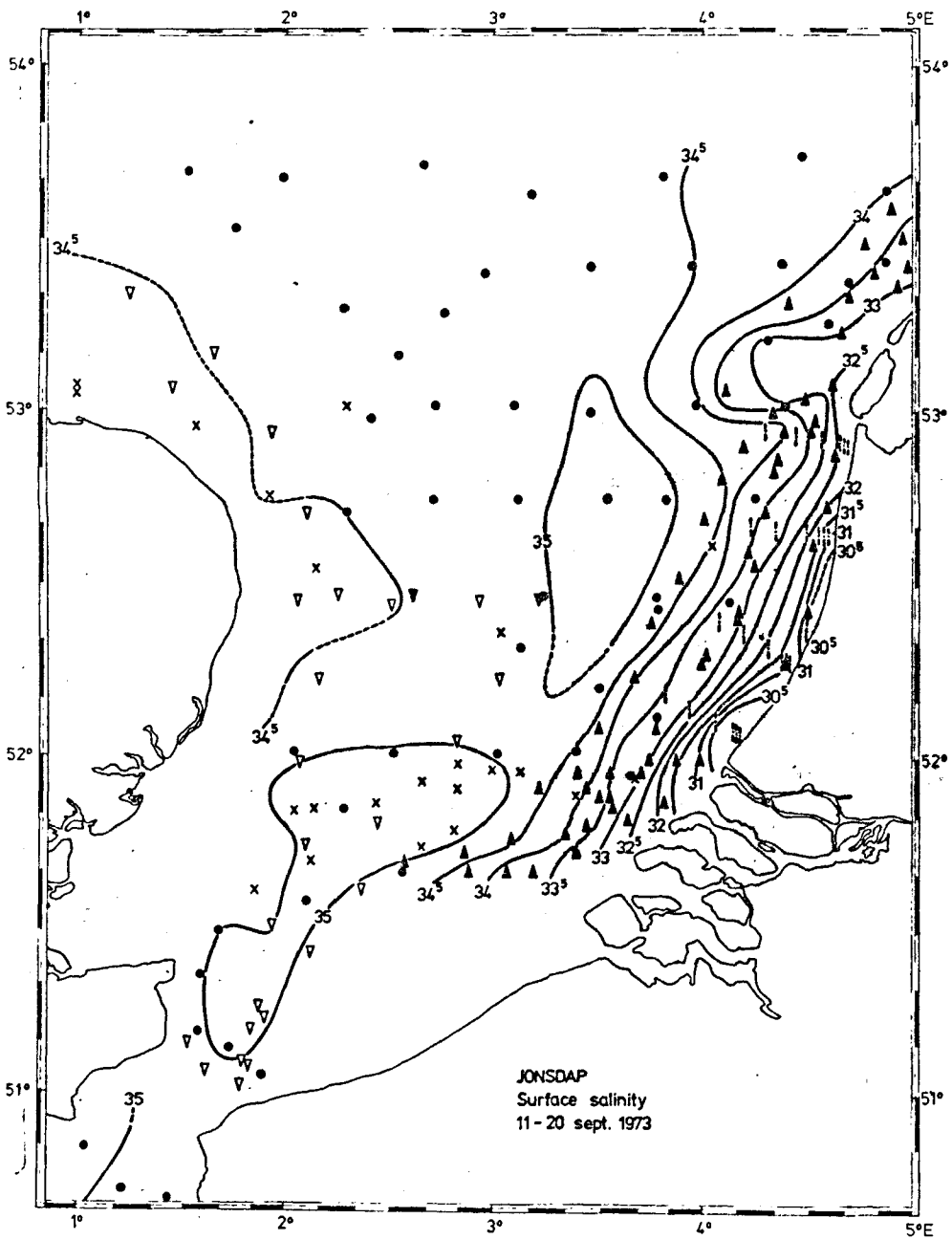
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Surface salinity
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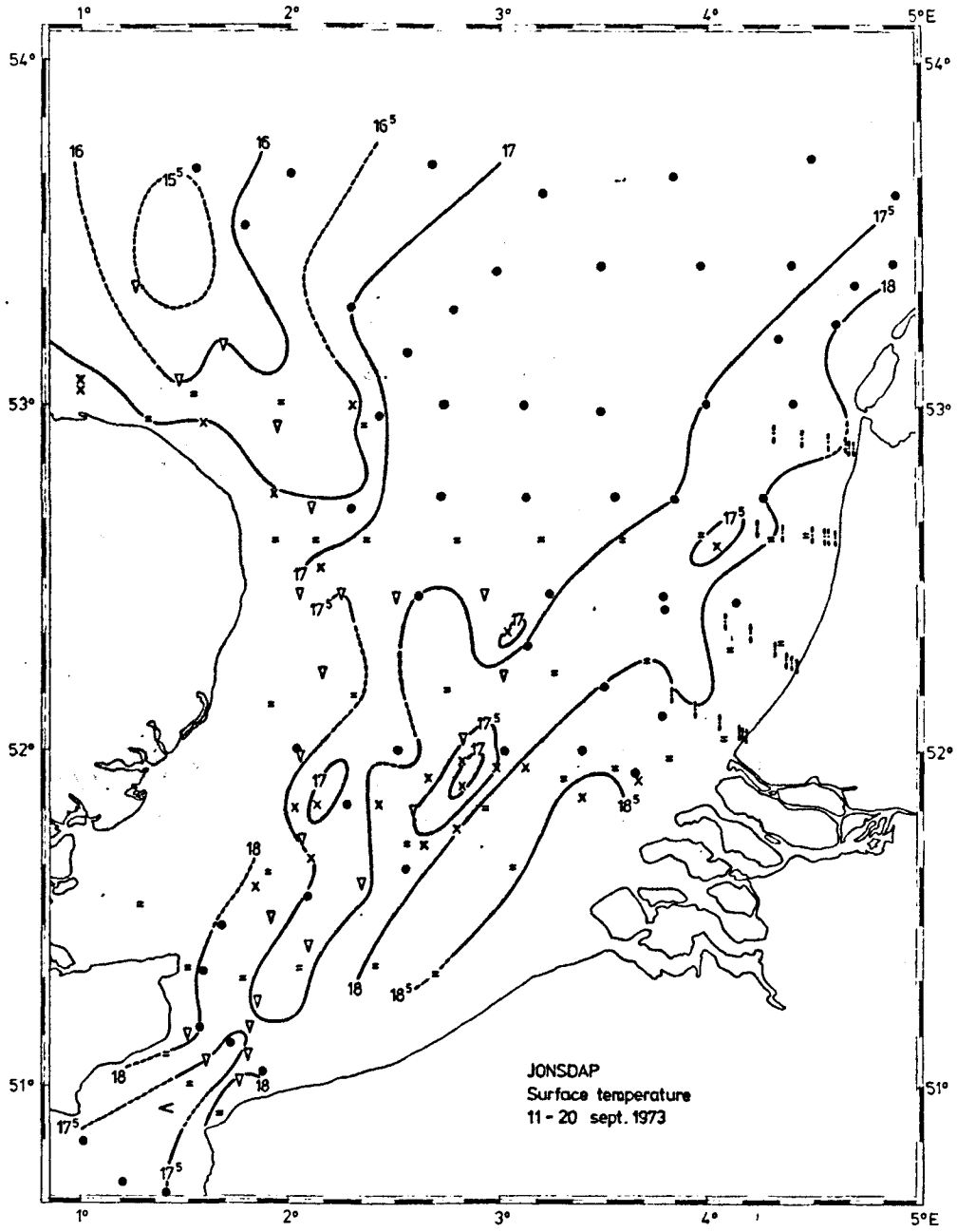
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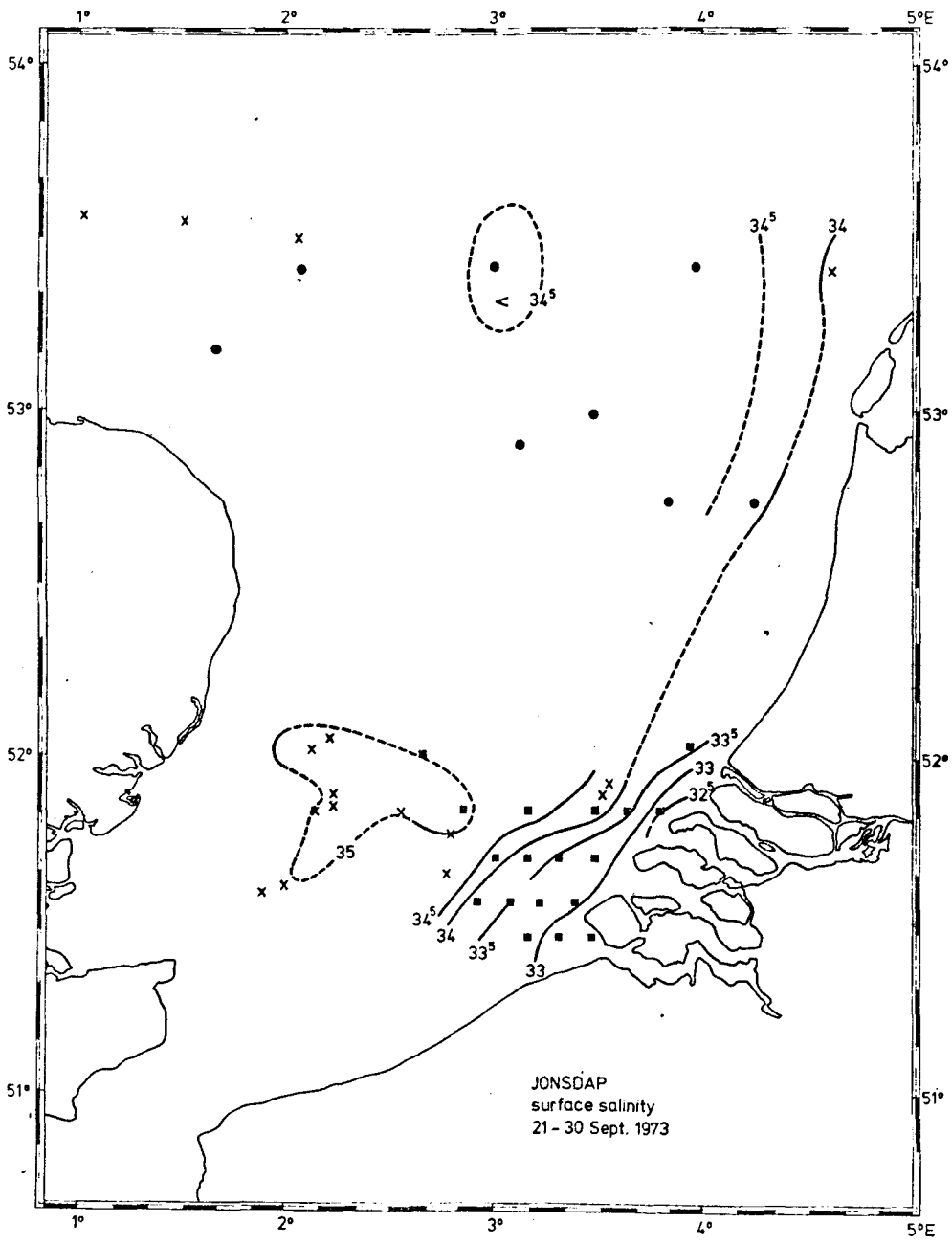
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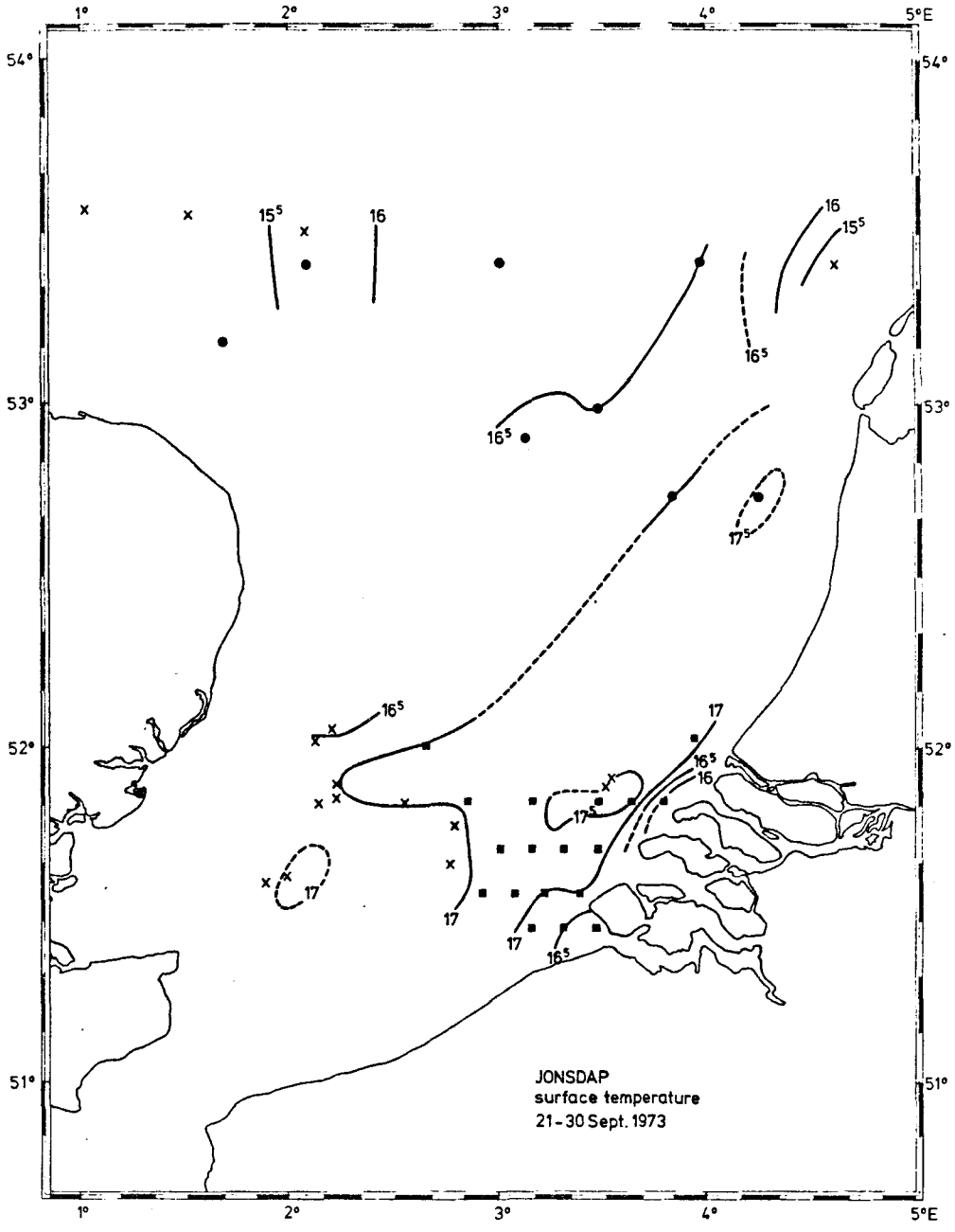
surface salinity
21 - 30 Sept. 1973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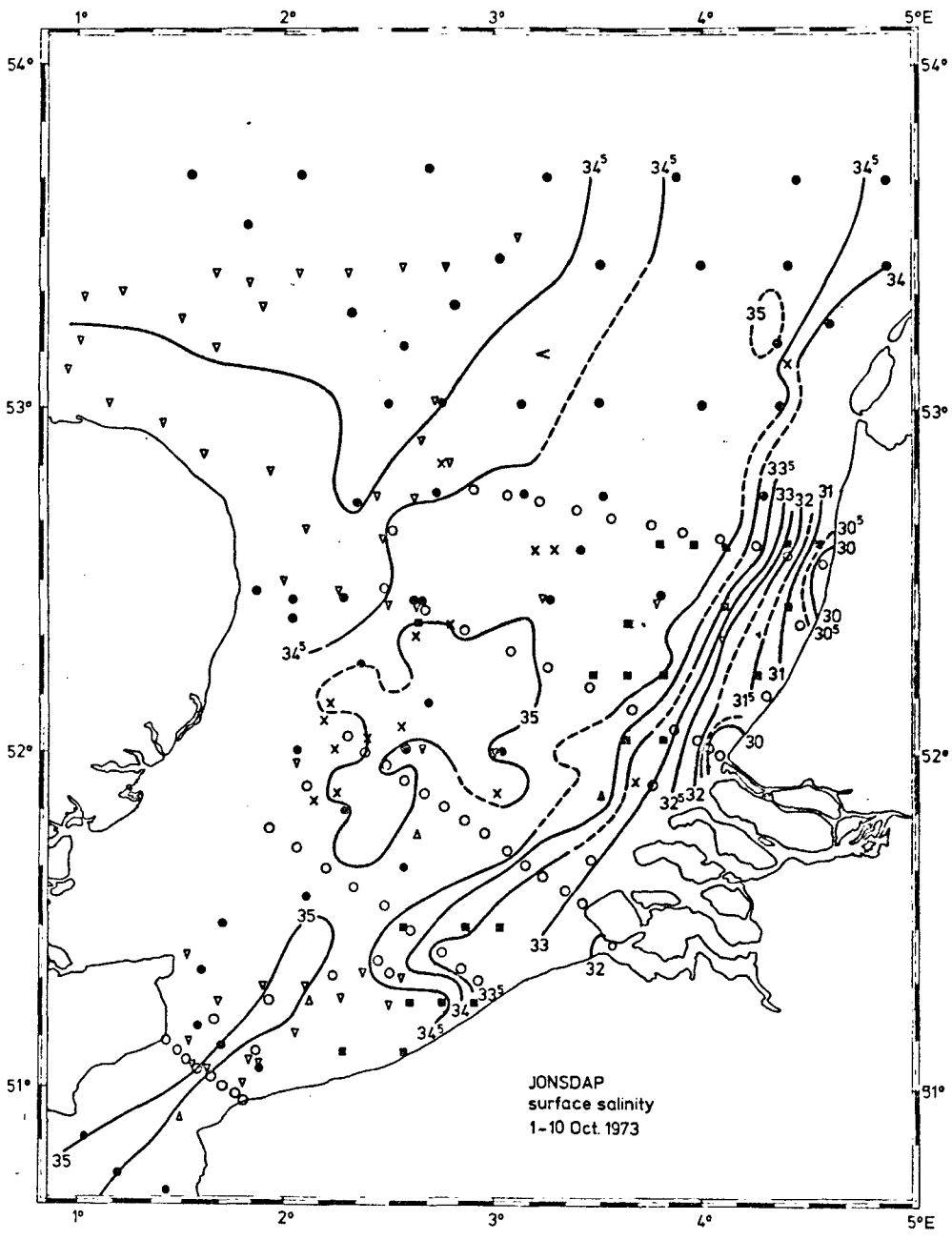
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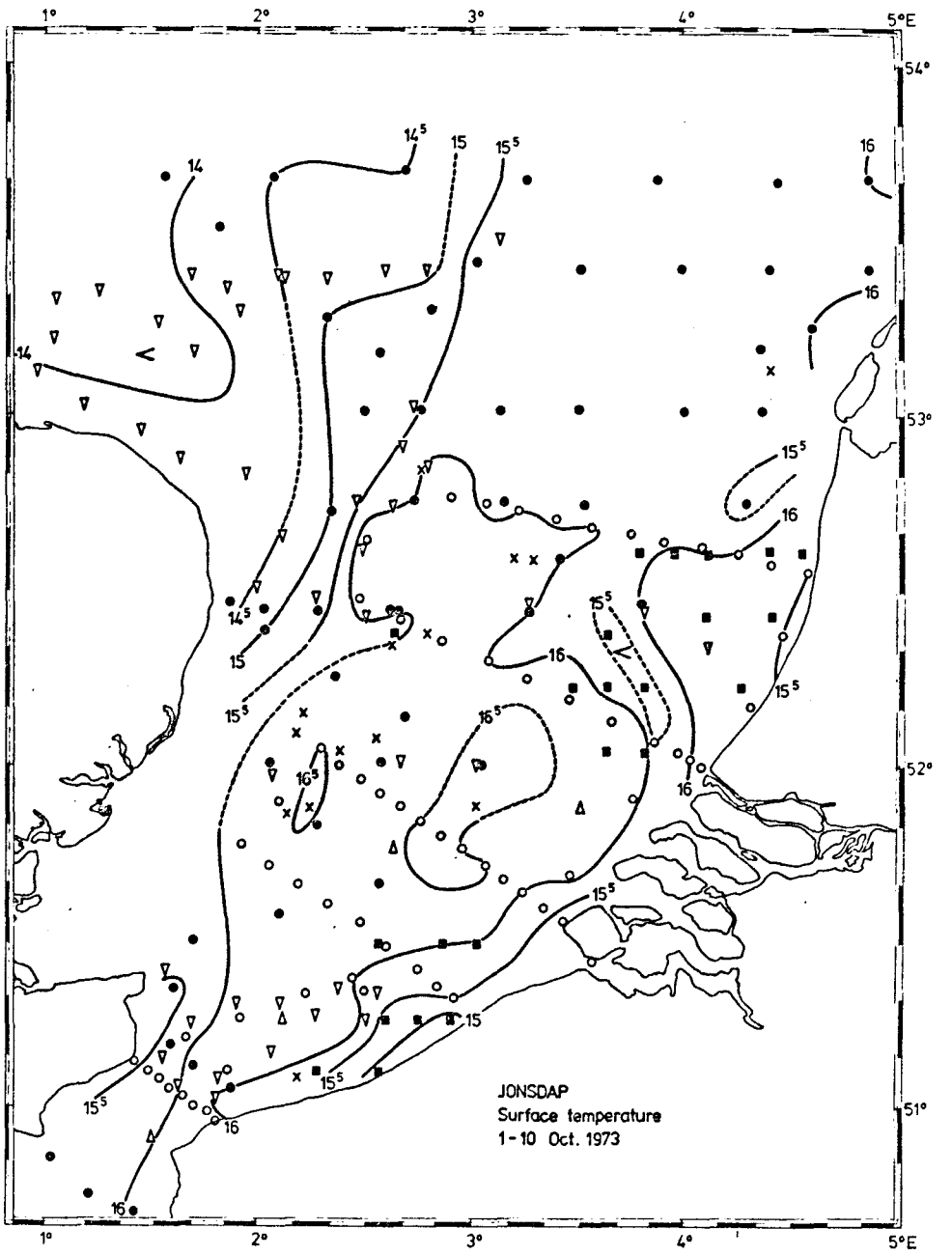
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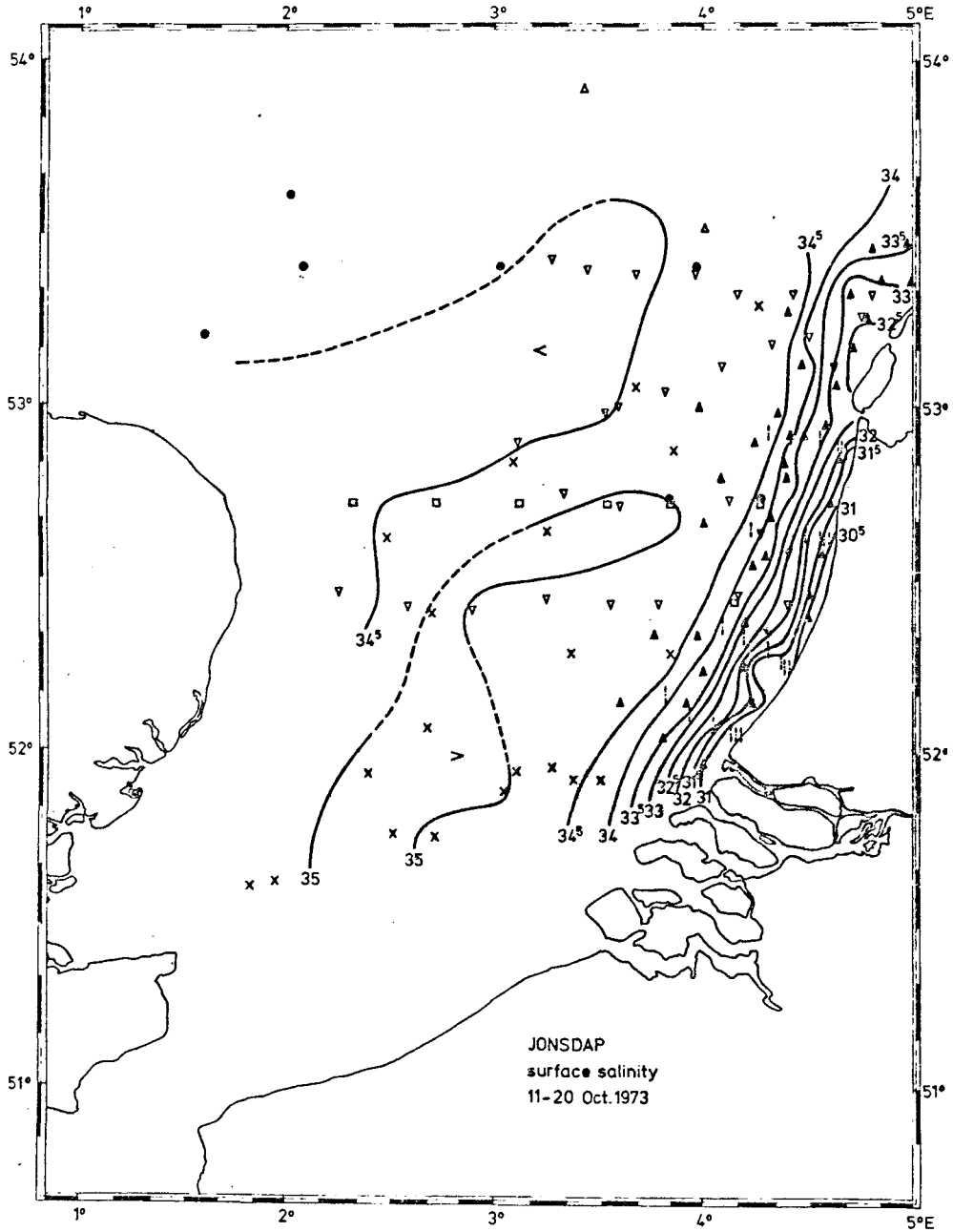
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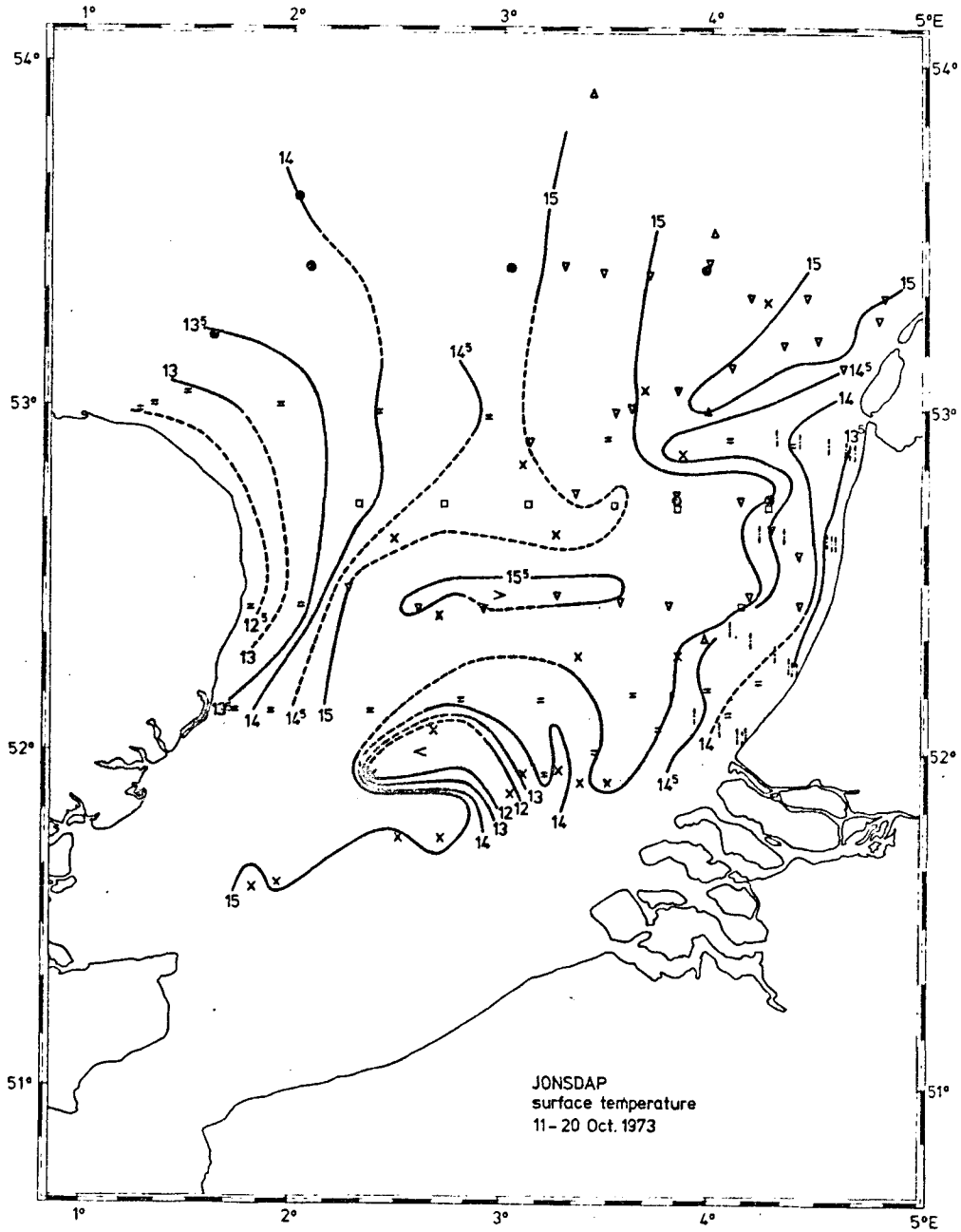
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surface temperature
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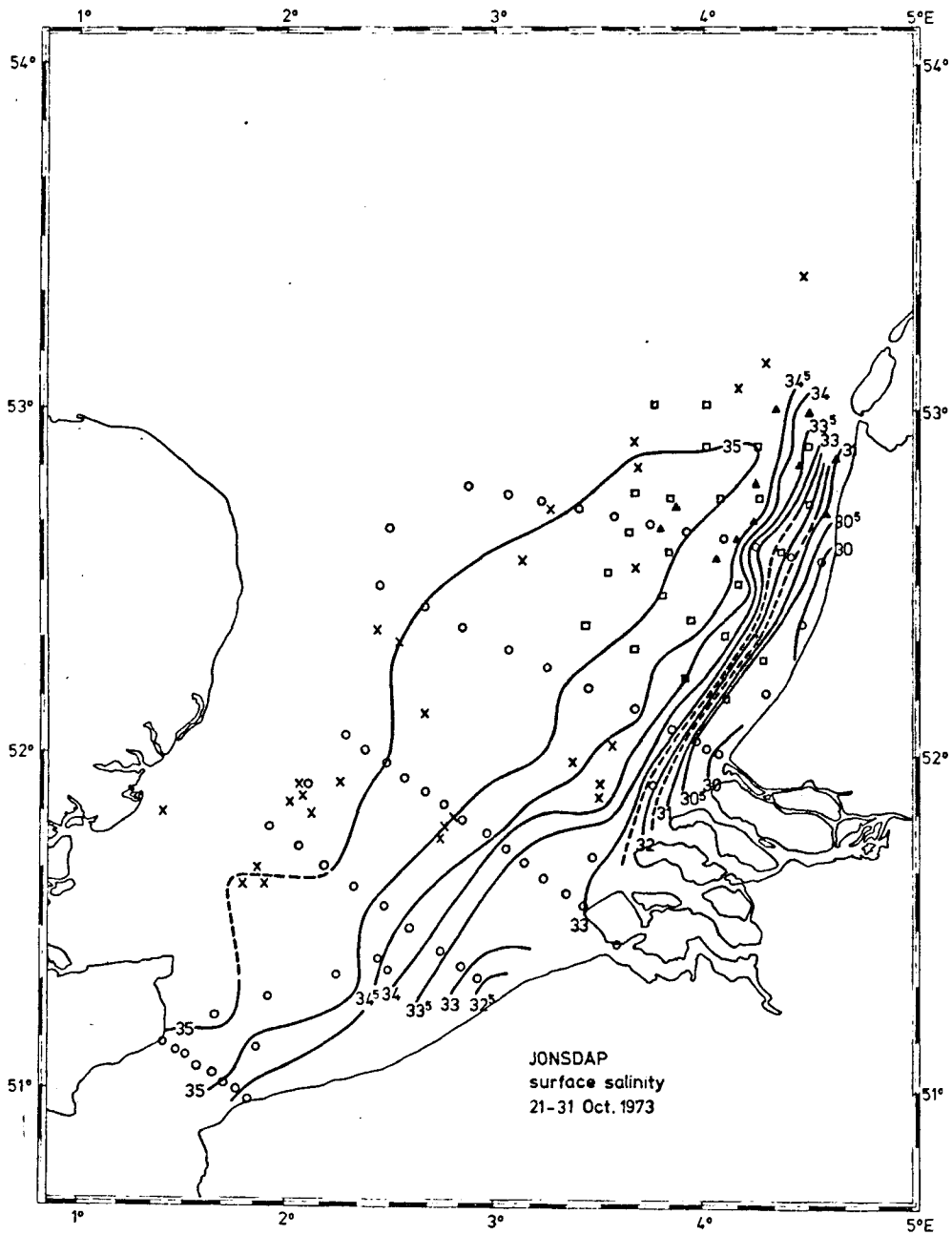
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surface salinity
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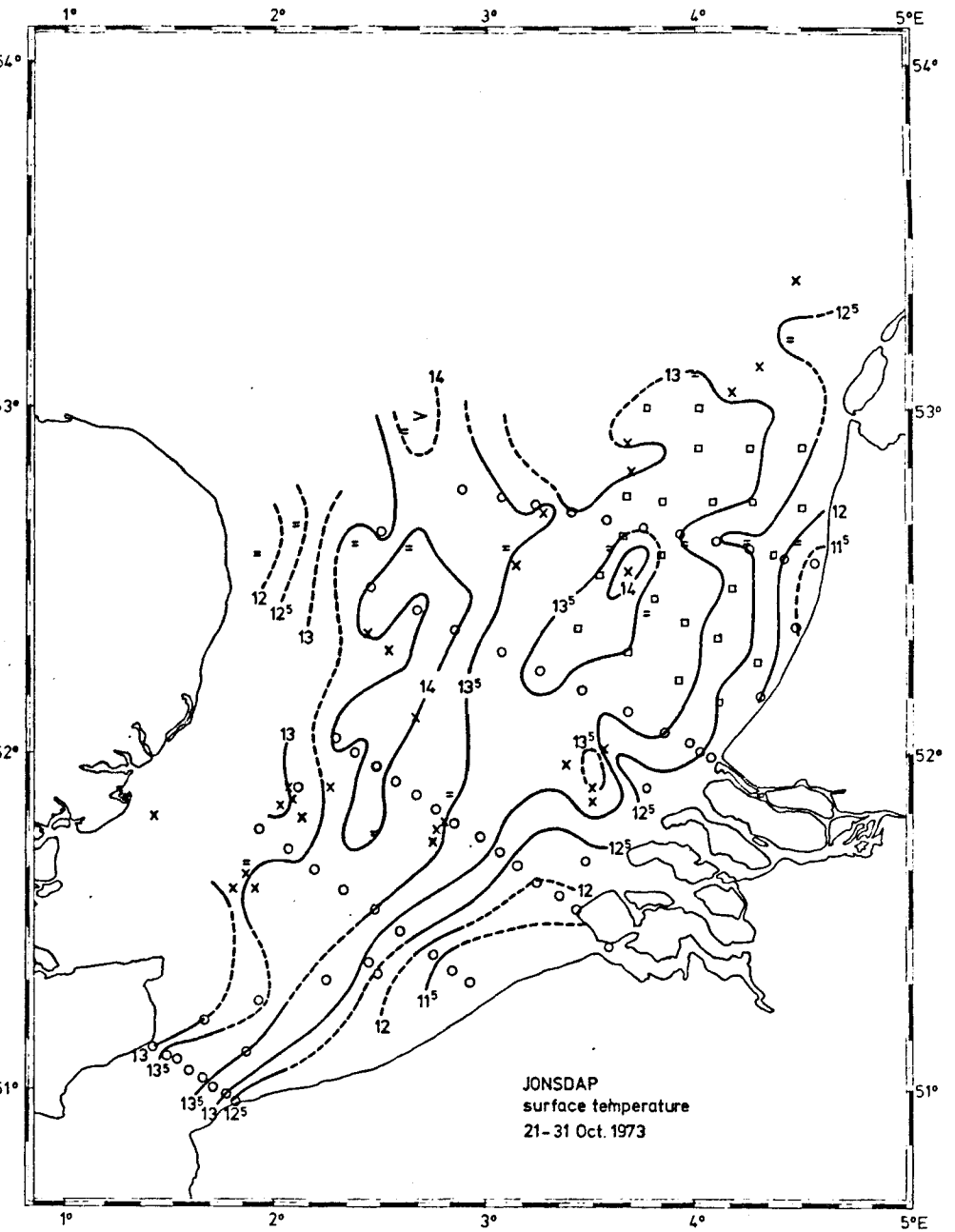
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