

Tunnel valleys in the southeastern North Sea

Complex incision patterns dating back to MIS16?

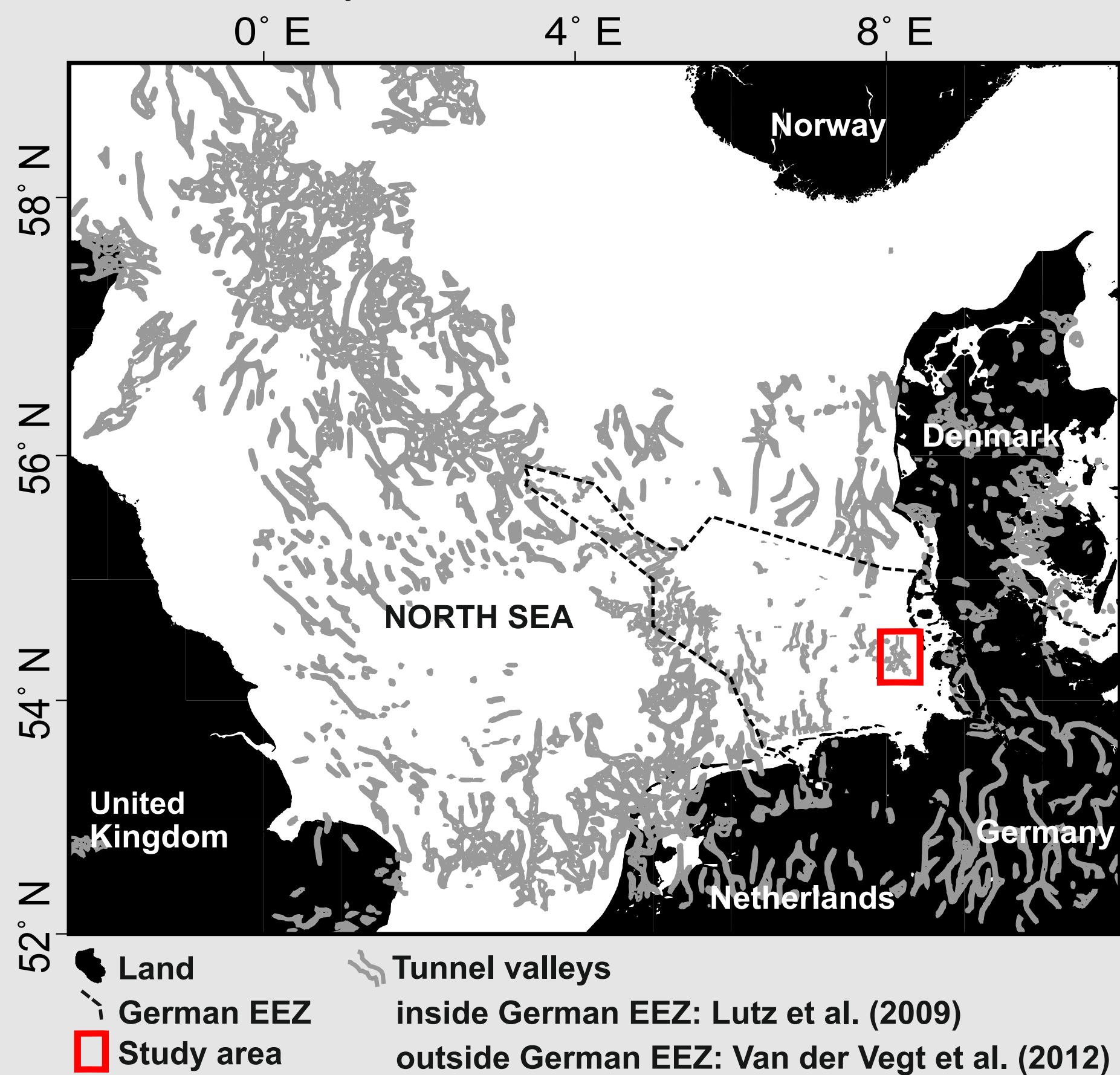
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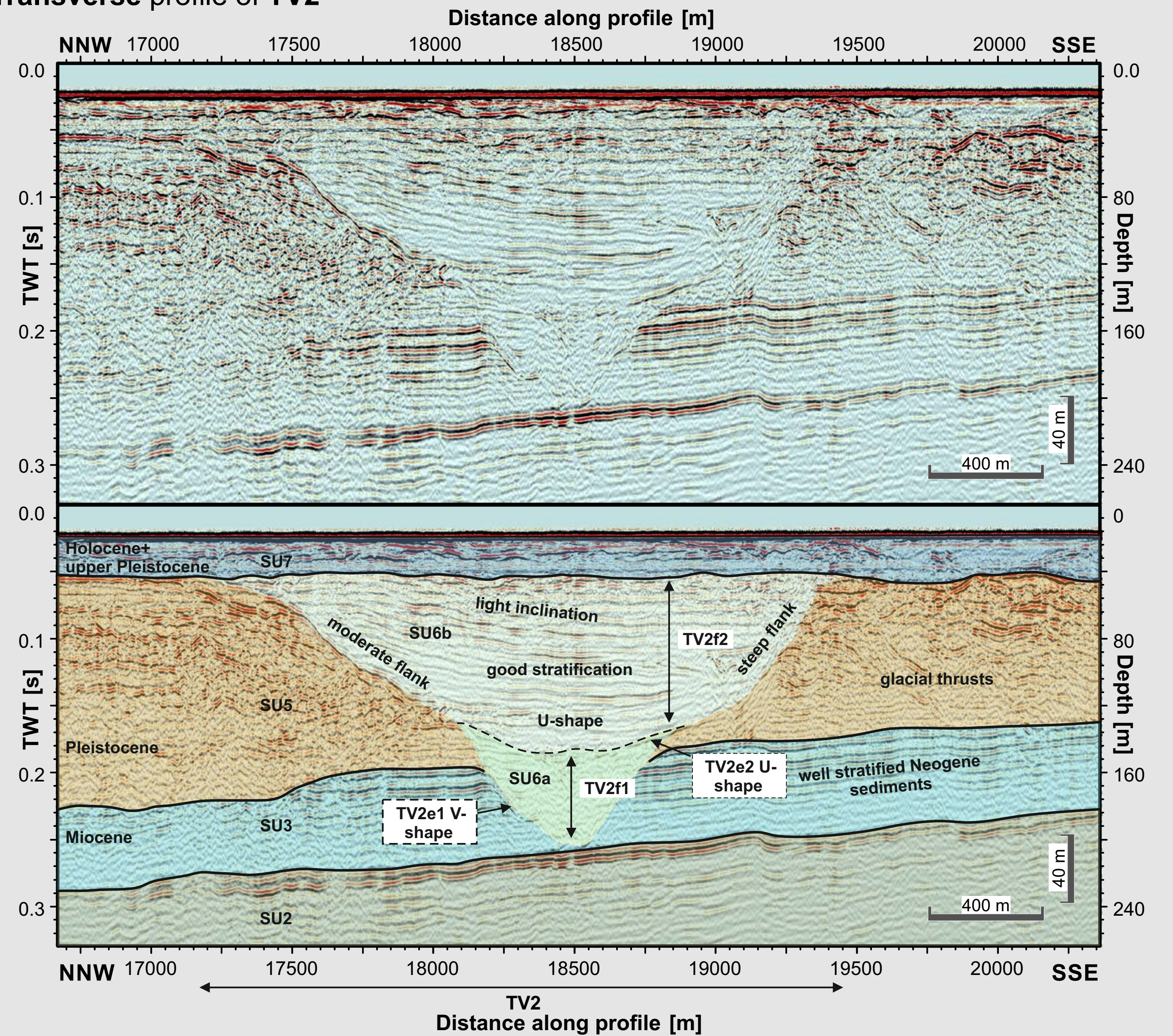
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Introduction to the study area

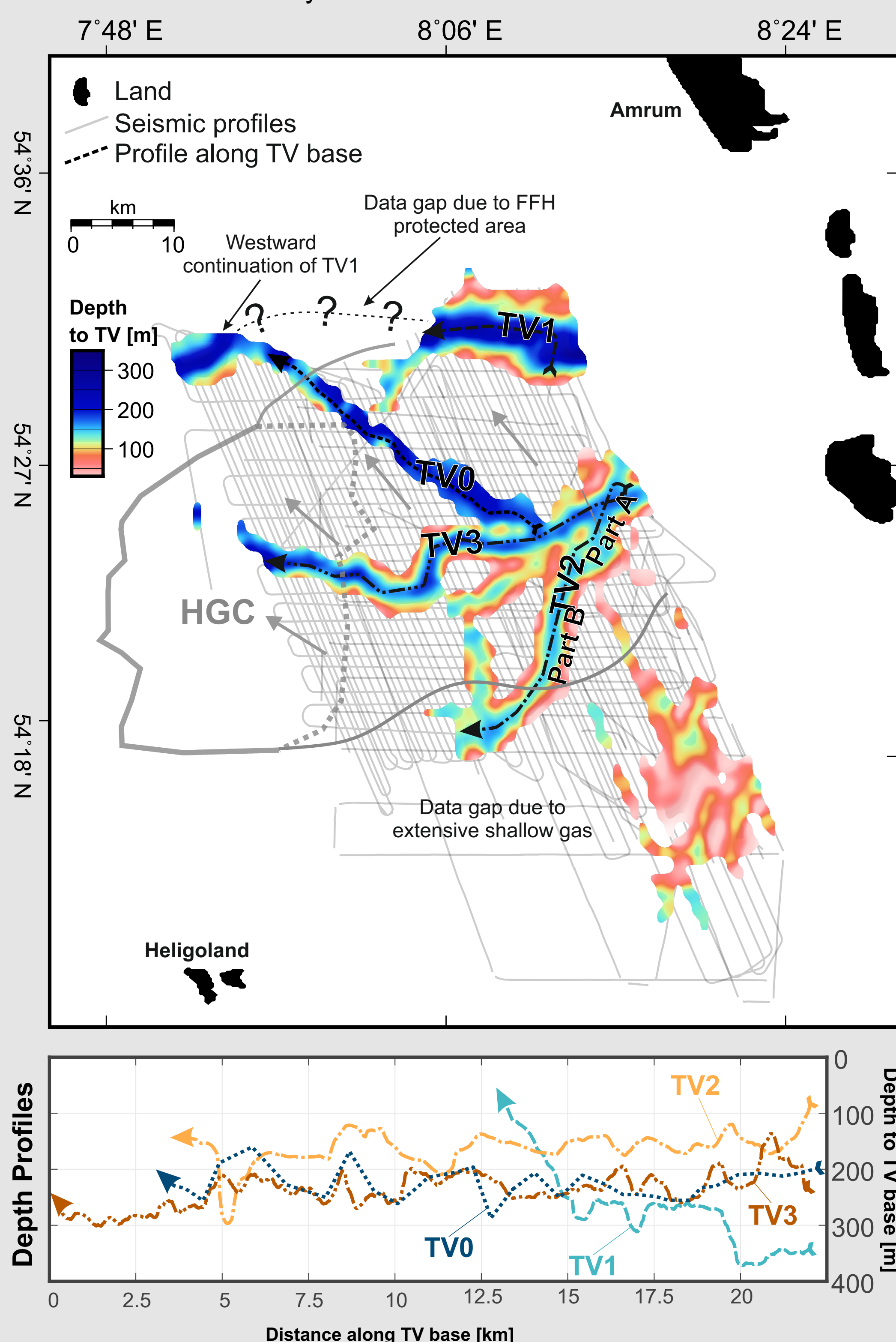


The glacial history of the North Sea region is complex but buried landforms provide valuable insights into past ice dynamics. This study aims to analyze the formation sequence of tunnel valleys and a glaciotectionic complex in the North Sea, based on our densely spaced high-resolution seismics from research cruises AL496 and MSM98/2.

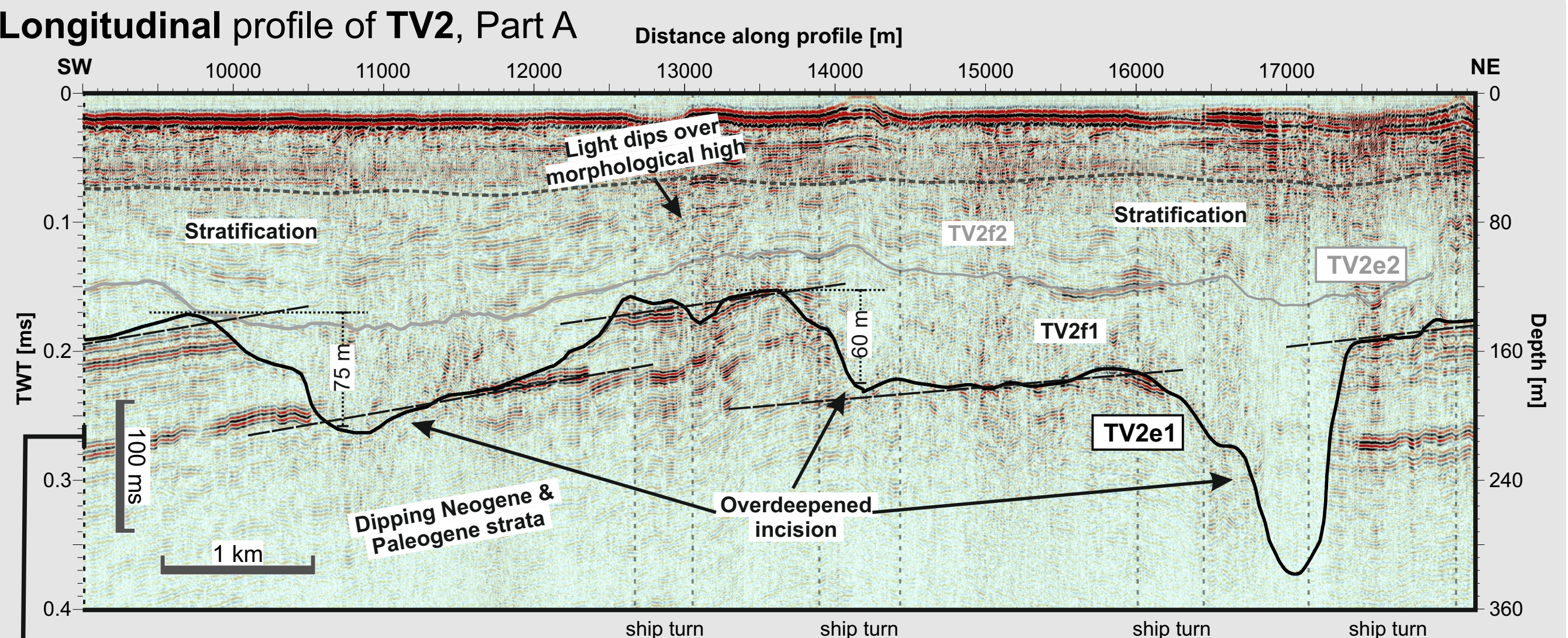
Transverse profile of TV2



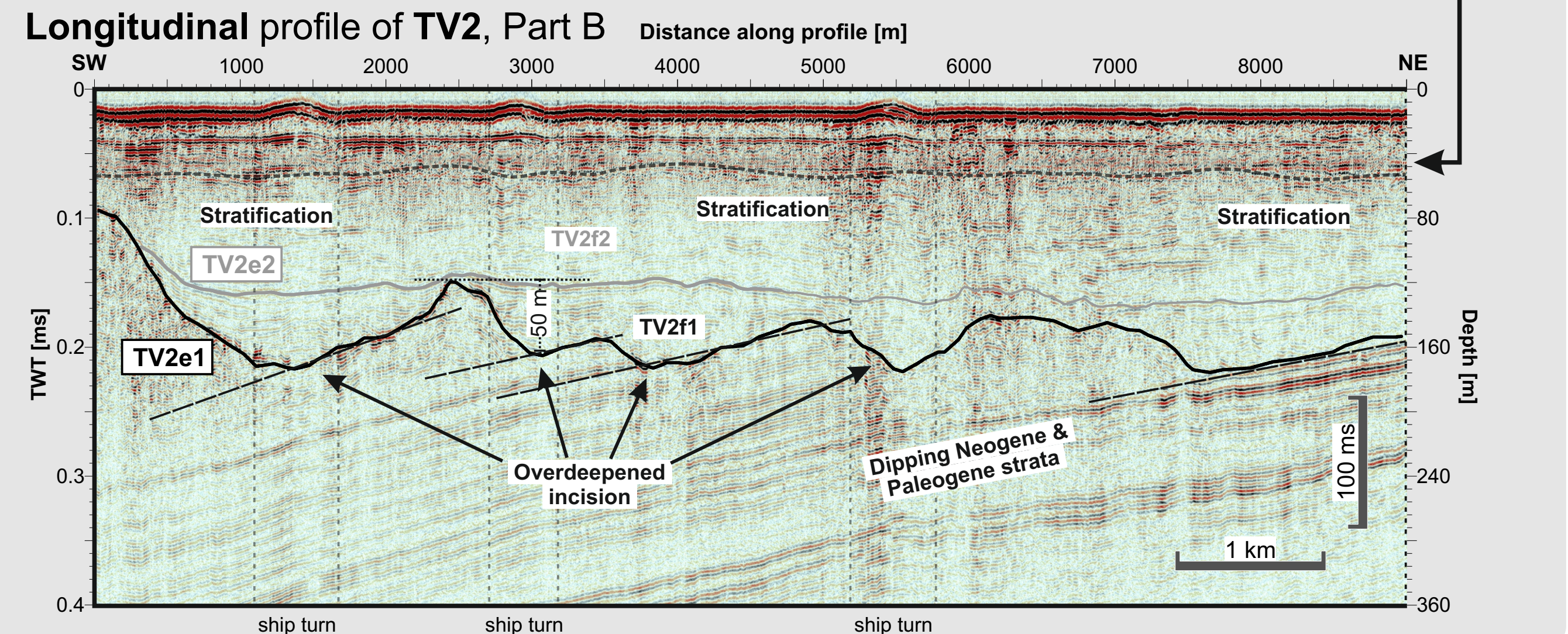
Distribution of tunnel valleys



Longitudinal profile of TV2, Part A

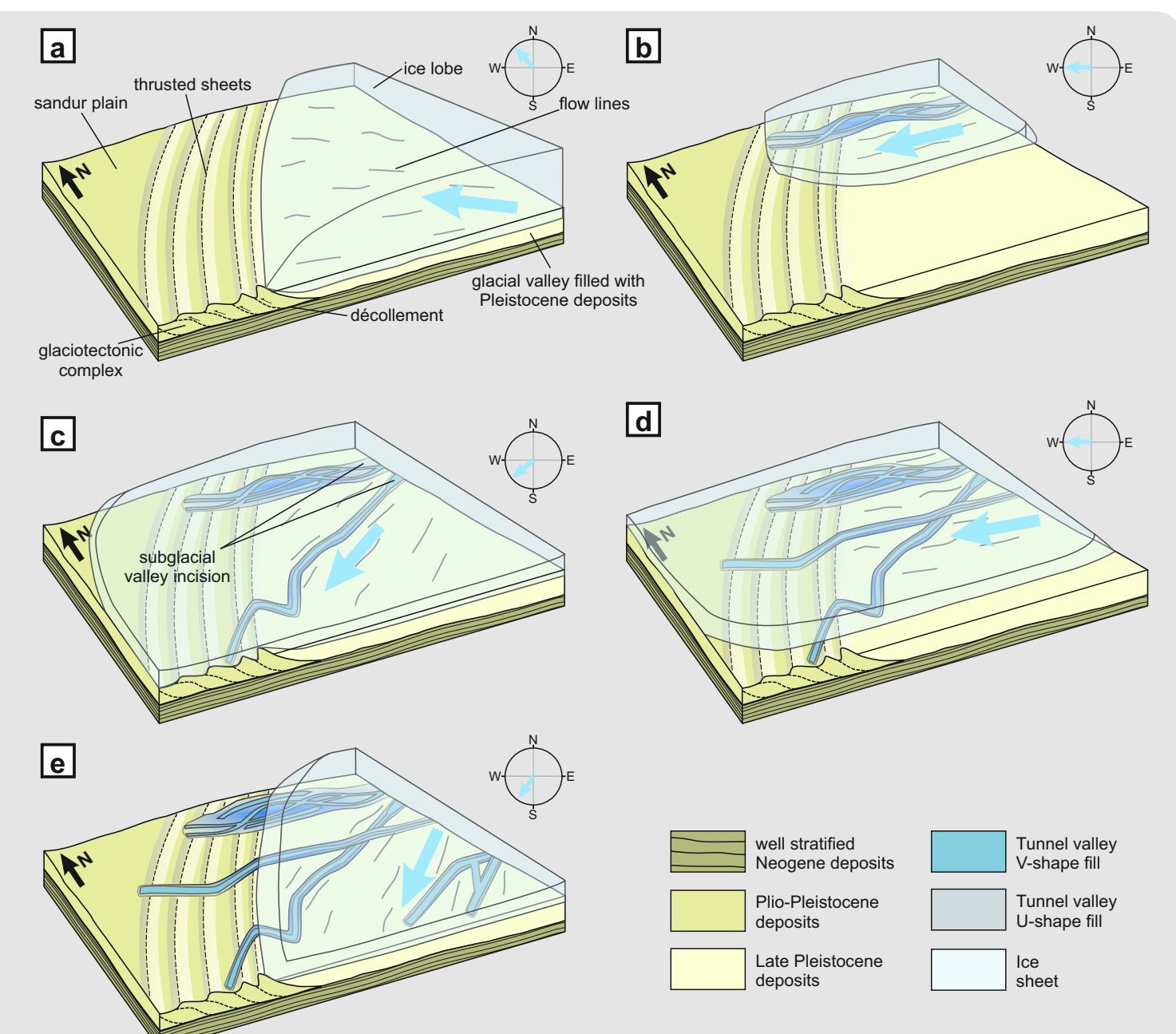


Longitudinal profile of TV2, Part B



Model of formation

Our investigation of glacial landforms in the southeastern North Sea has revealed new details of the region's complex glacial history. We mapped a previously unknown tunnel valley formed before the glaciotectionic complex with a similar orientation. This tunnel valley indicates the presence of an ice sheet in the area before the extensive Elsterian MIS10–12 ice sheets. Our results contribute to the knowledge of ice-sheet dynamics during different stages of glaciation in the southeastern North Sea.



References

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We would like to thank the Schleswig-Holstein Agency for Coastal Defence, National Park and Marine Conservation (LKN.SH) and the State Agency for Agriculture, Environment and Rural Areas of Schleswig-Holstein (LLUR) for funding this work as part of the project "Nordfriesland Süd – the geological/sedimentological architecture and habitat distribution in the Wadden Sea – Shelf between the Amrum Bank and the Eider Channel (North Sea)".