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Supporting Information for

Defining Mesoscale Eddies Boundaries from In-situ Data and a Theoretical Framework

Yan BARABINOT[1], Sabrina SPEICH[1], Xavier CARTON[2]

[1] Ecole Normale Supérieure, Laboratoire de Météorologie Dynamique (LMD), 24 rue Lhomond, Paris 75005, France

[2] Université de Bretagne Occidentale (UBO), Laboratoire d'Océanographie Physique et Spatiale (LOPS), IUEM, rue Dumont Durville, Plouzané 29280, France

Contents of this file

Figures S1 to S16

Introduction

Here are presented 16 figures related to the 7 mesoscale eddies studied in the article. For the sake of clarity, only one eddy has been presented in the article. Therefore, we dedicate this file to other vertical sections performed in the core of remaining eddies. The methodology to obtain these figures has already been detailed in the corresponding article. For each eddy, thermohaline anomalies on isopycnals, vertical 2D gradients and Ertel PV have been plotted. As described in the article, the horizontal resolution drives uncertainties on computed quantities as well as their shapes.

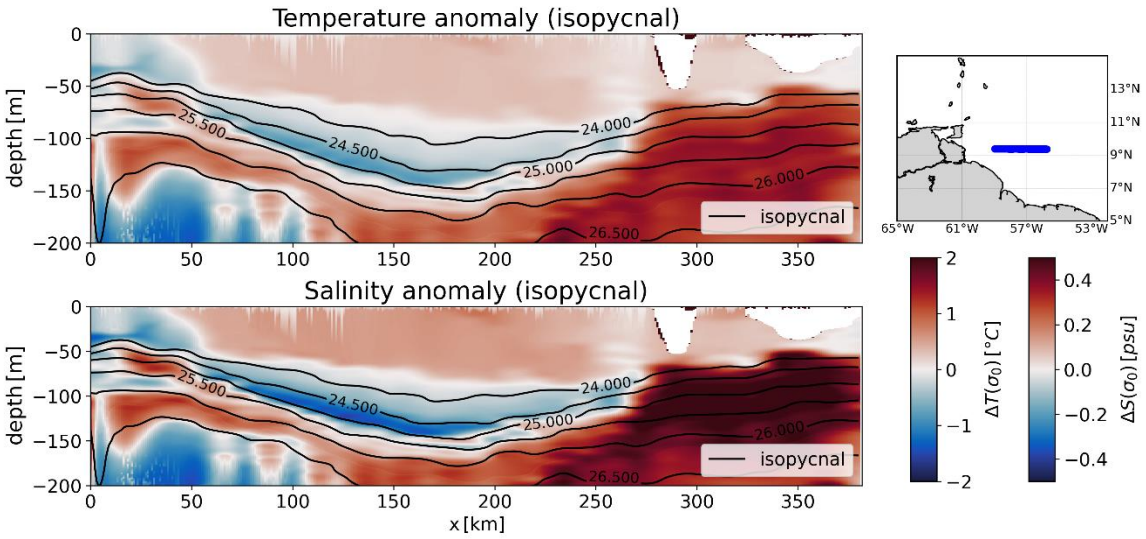

Figure S1. surface AE sampled during EUREC4A-OA experiment. Thermohaline anomalies on isopycnals. The small map shows the location of the ship track in blue (same for the following figures).

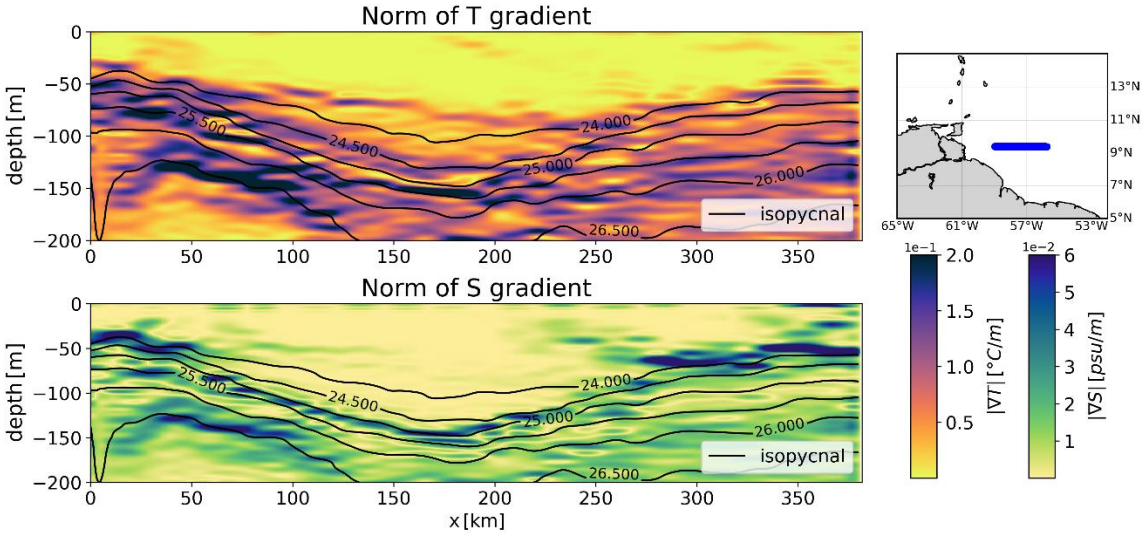

Figure S2. surface AE sampled during EUREC4A-OA experiment. Norms of 2D gradients for temperature and salinity.

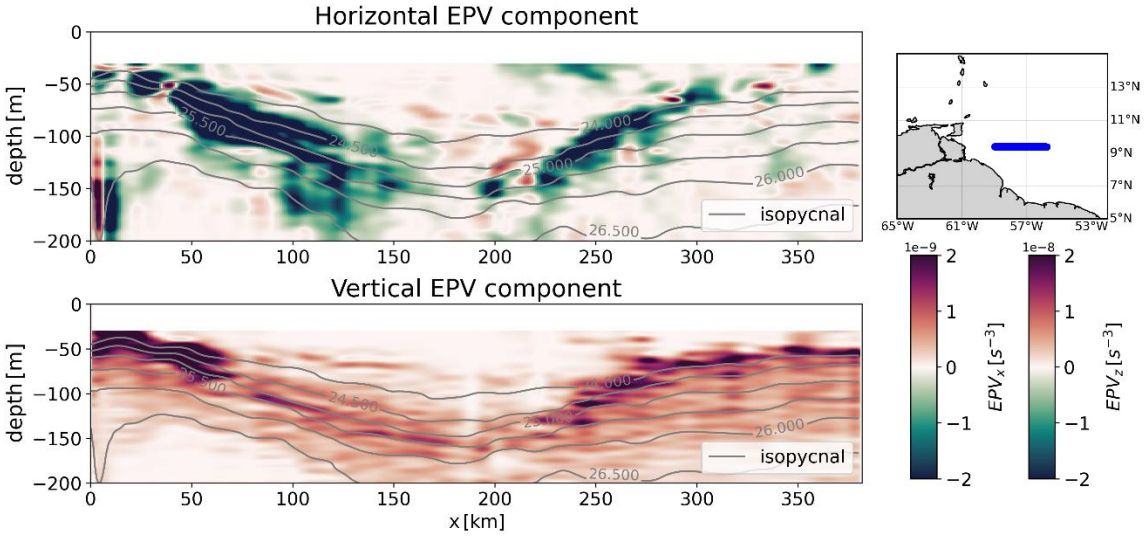

Figure S3. surface AE sampled during EUREC4A-OA experiment. Horizontal (EPV_x) and vertical (EPV_z) components of Ertel PV.

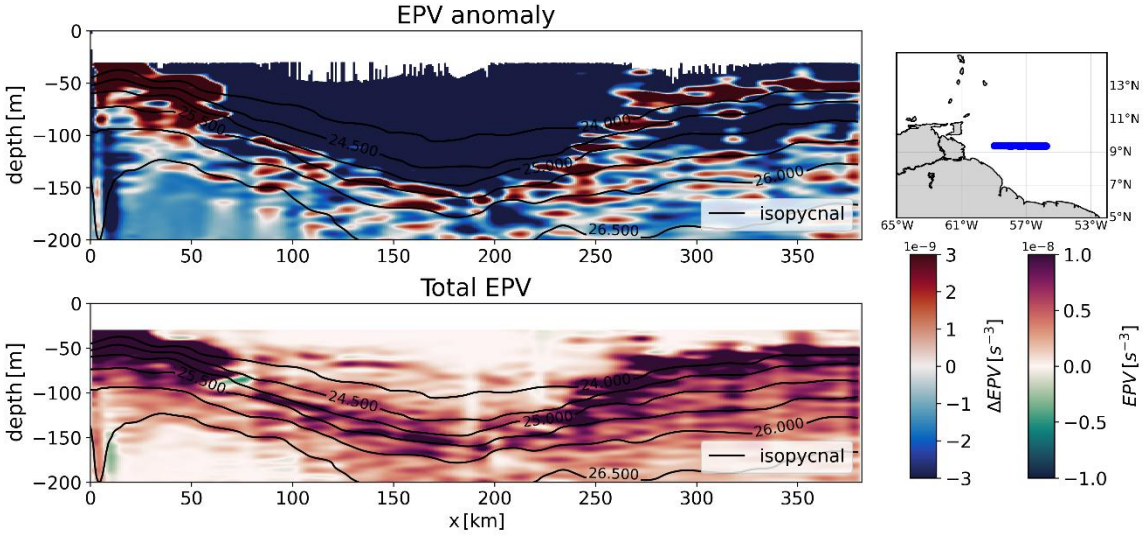

Figure S4. surface AE sampled during EUREC4A-OA experiment. Ertel PV and Ertel PV anomaly.

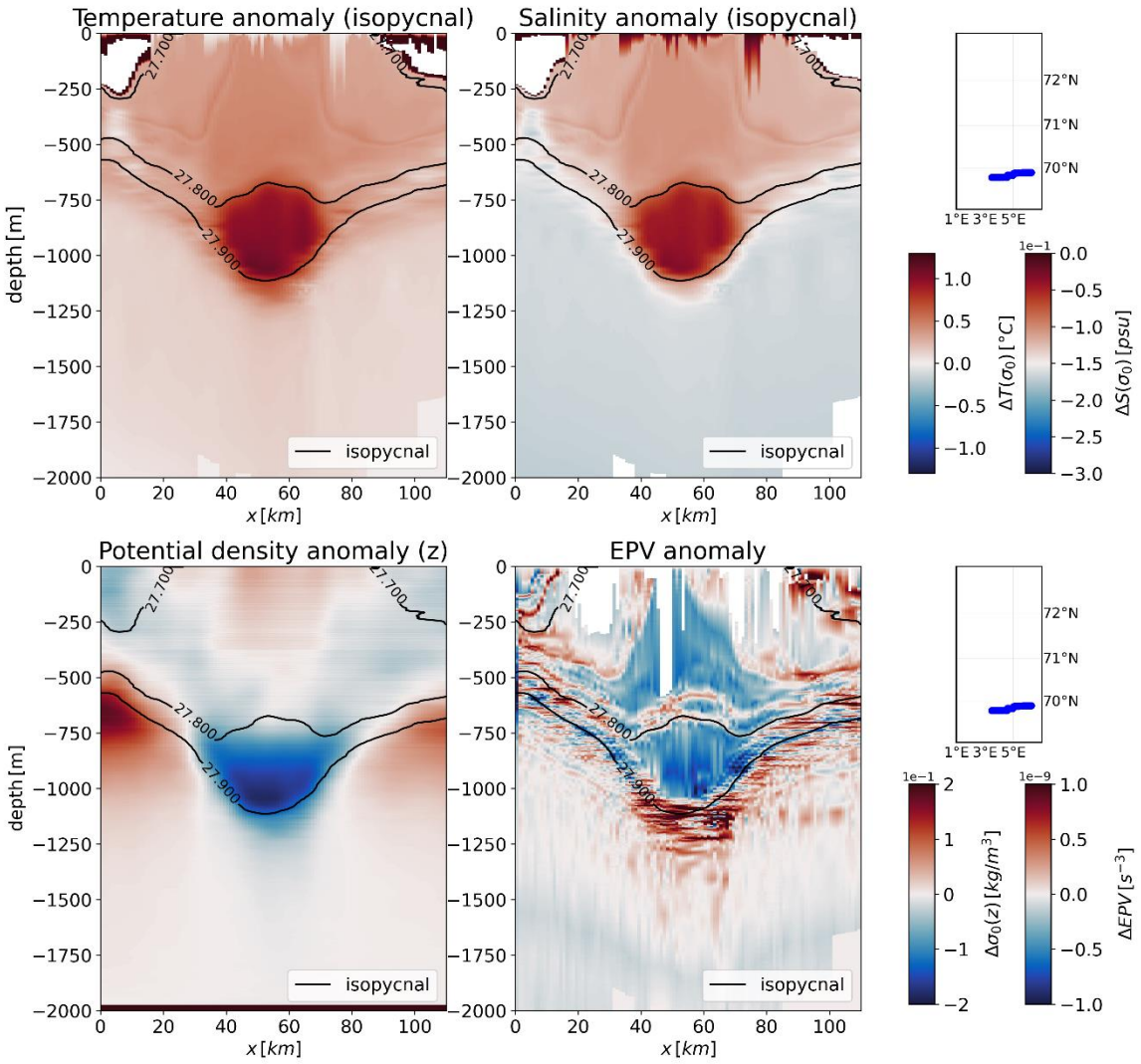

Figure S5. subsurface AE sampled during KB2017606 experiment. Thermohaline anomalies on isopycnals.

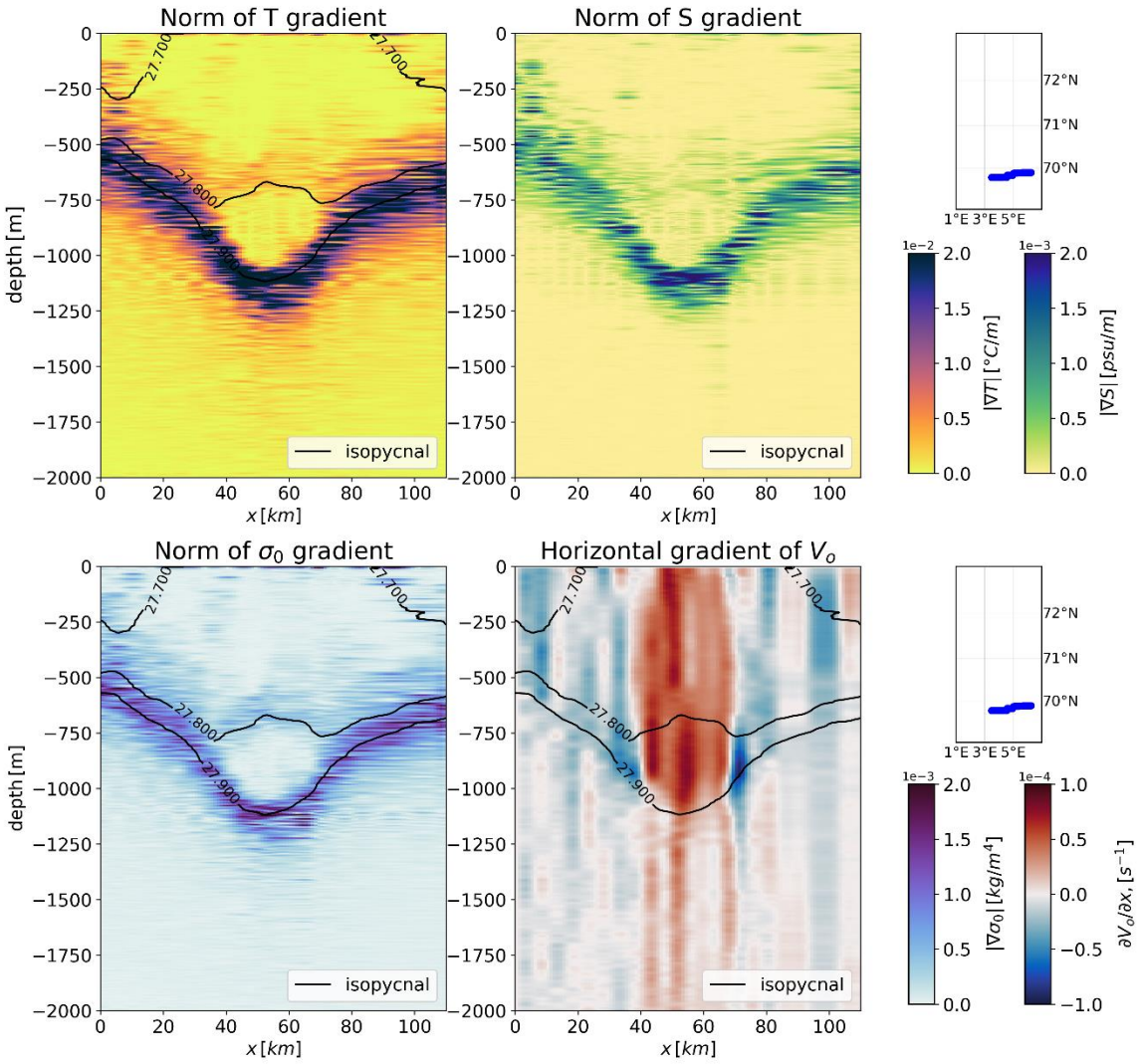

Figure S6. subsurface AE sampled during KB2017606 experiment. Gradients.

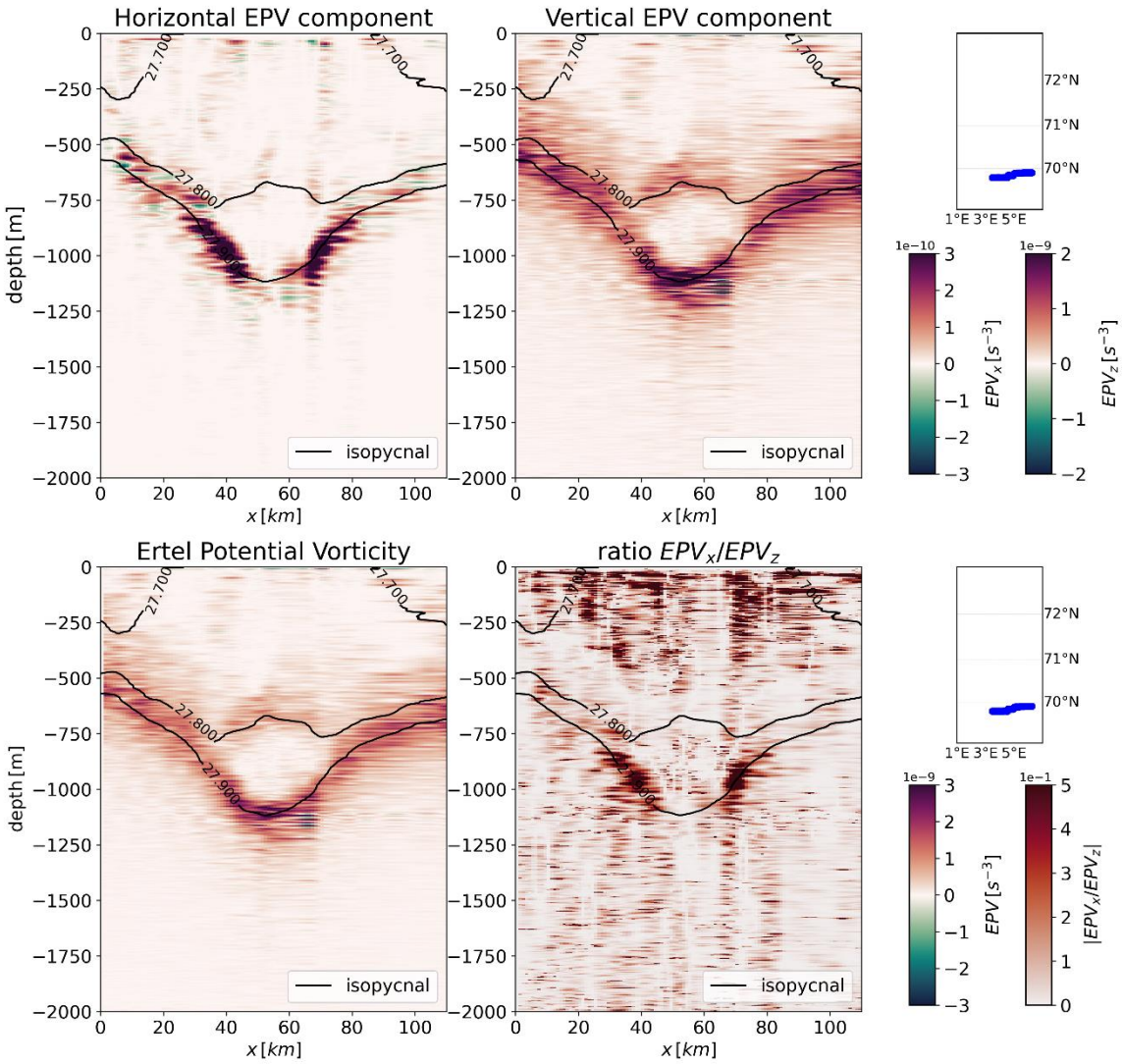

Figure S7. subsurface AE sampled during KB2017606 experiment. Ertel PV components.

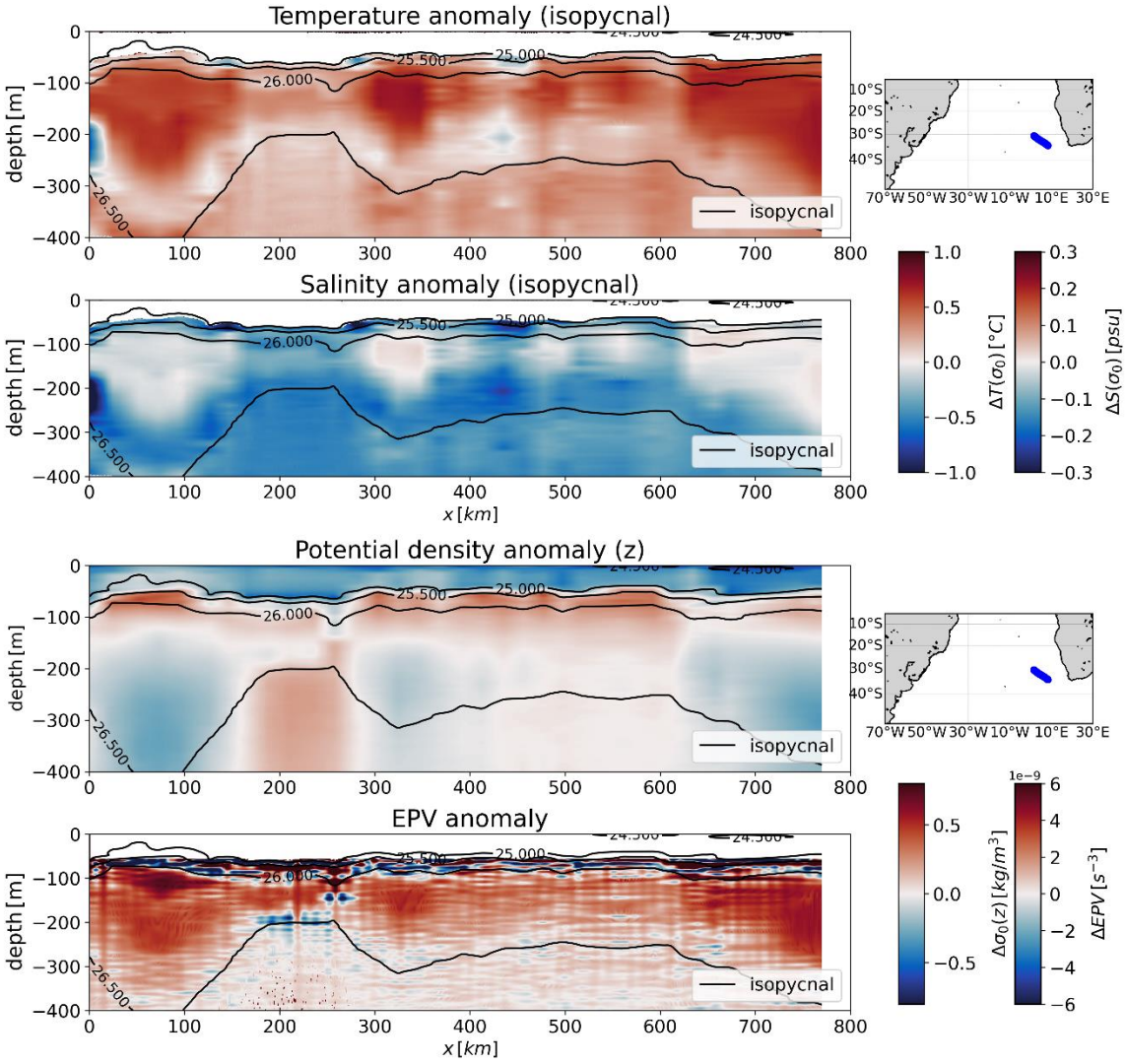

Figure S8. 2 surface AEs sampled during M124 experiment. Thermohaline and Ertel PV anomalies.

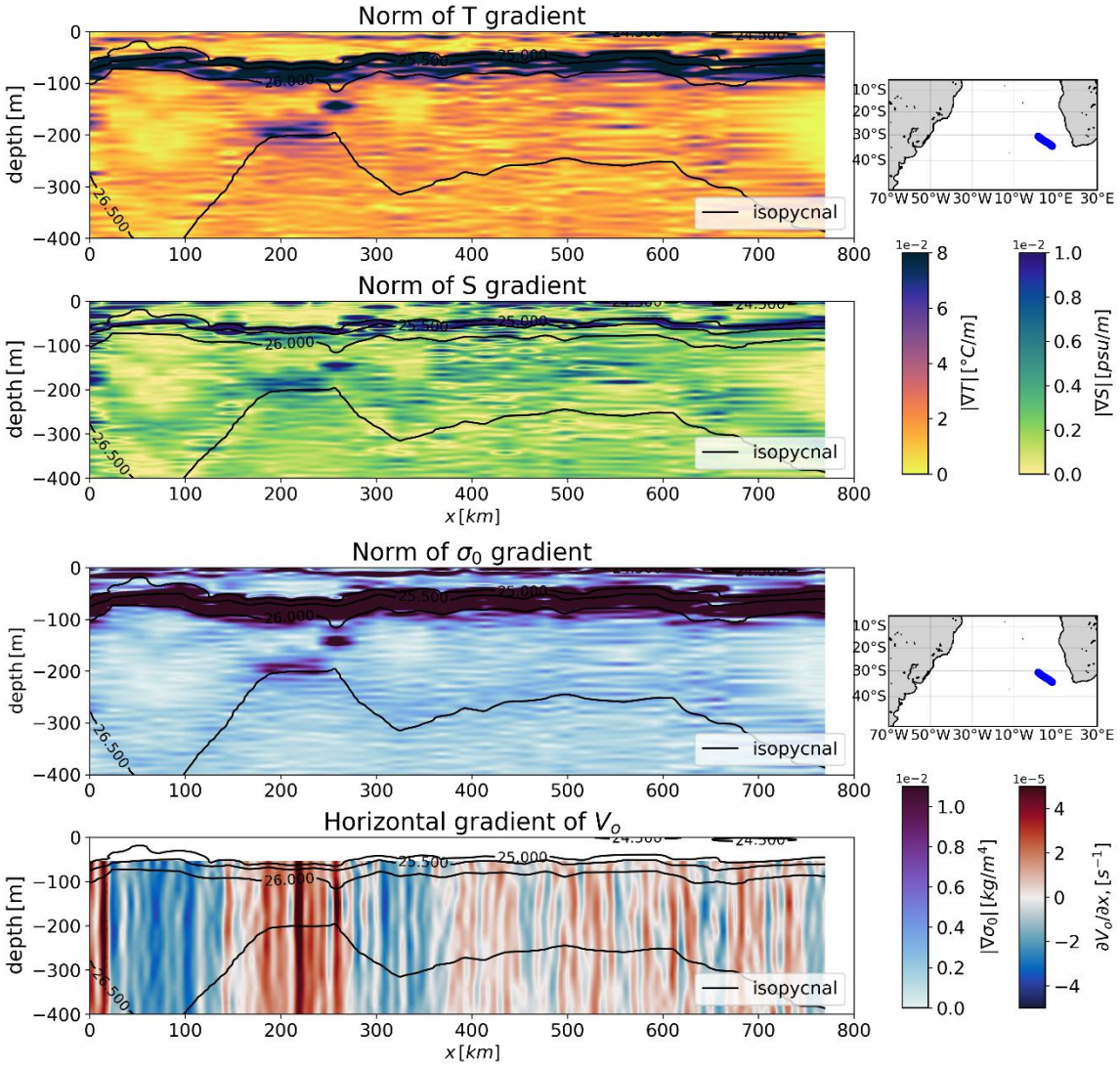

Figure S9. 2 surface AEs sampled during M124 experiment. Gradients.

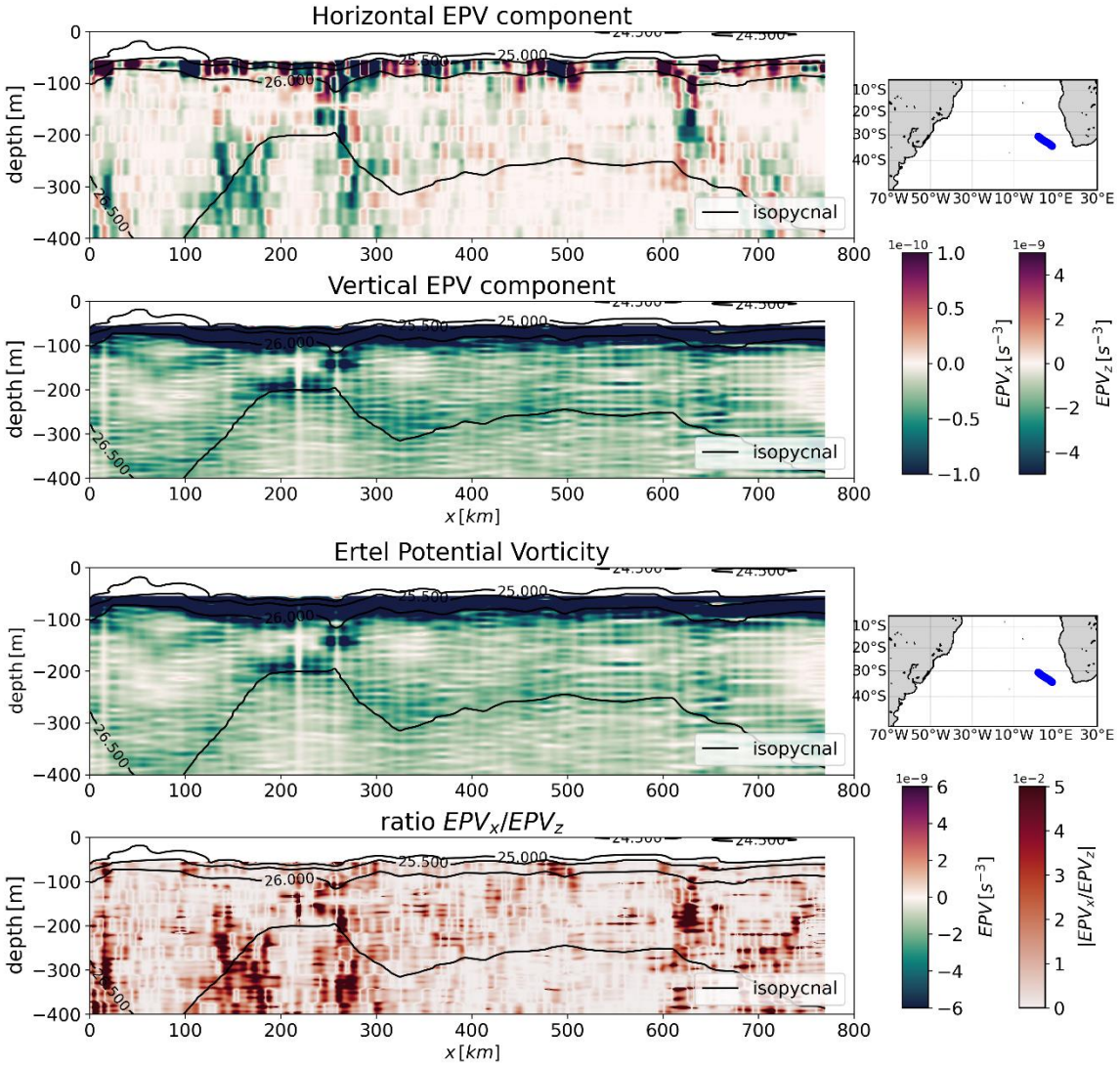

Figure S10. 2 surface AEs sampled during M124 experiment. Ertel PV components.

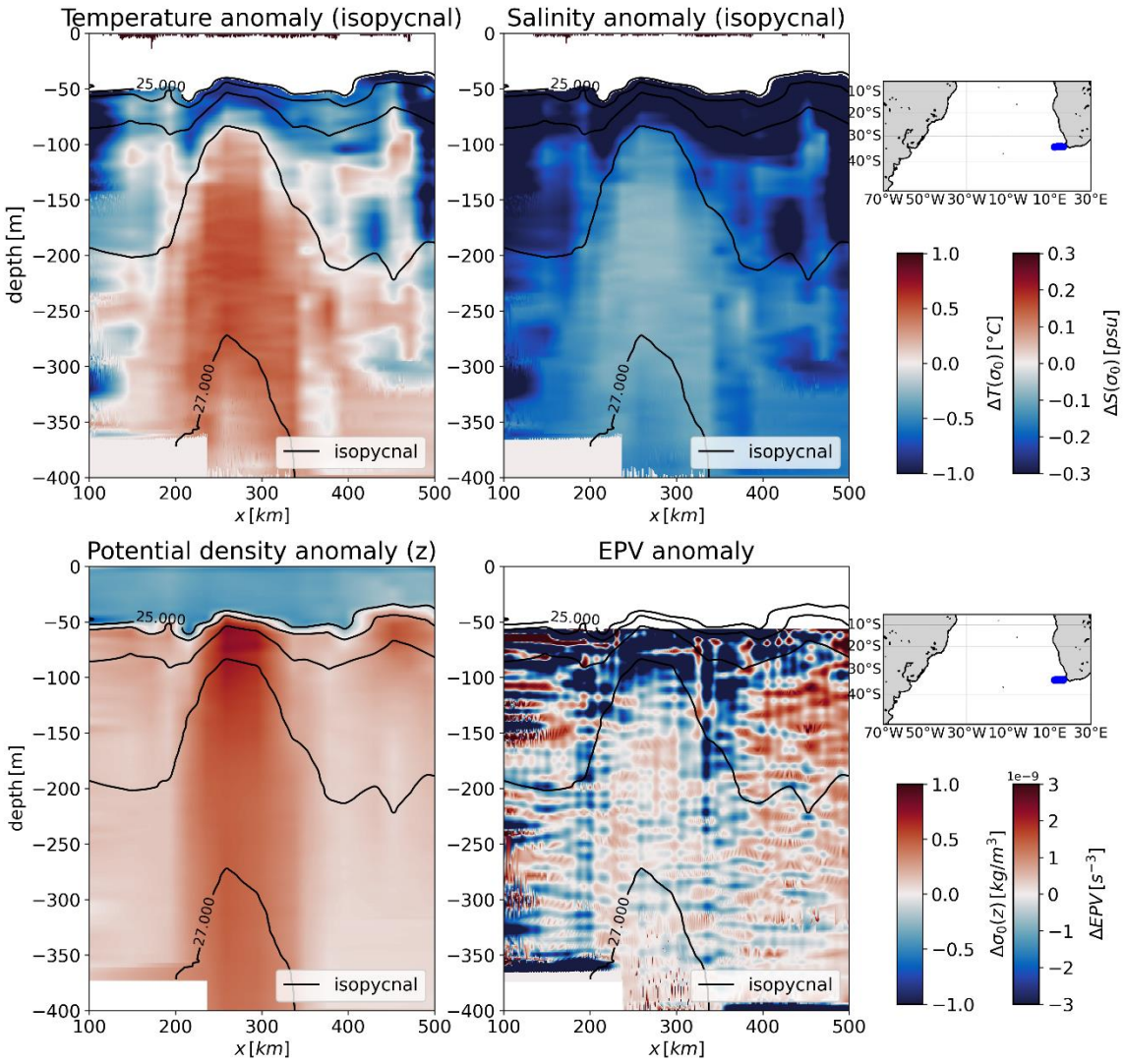

Figure S11. surface CE sampled during M124 experiment. Thermohaline and Ertel PV anomalies on isopycnals.

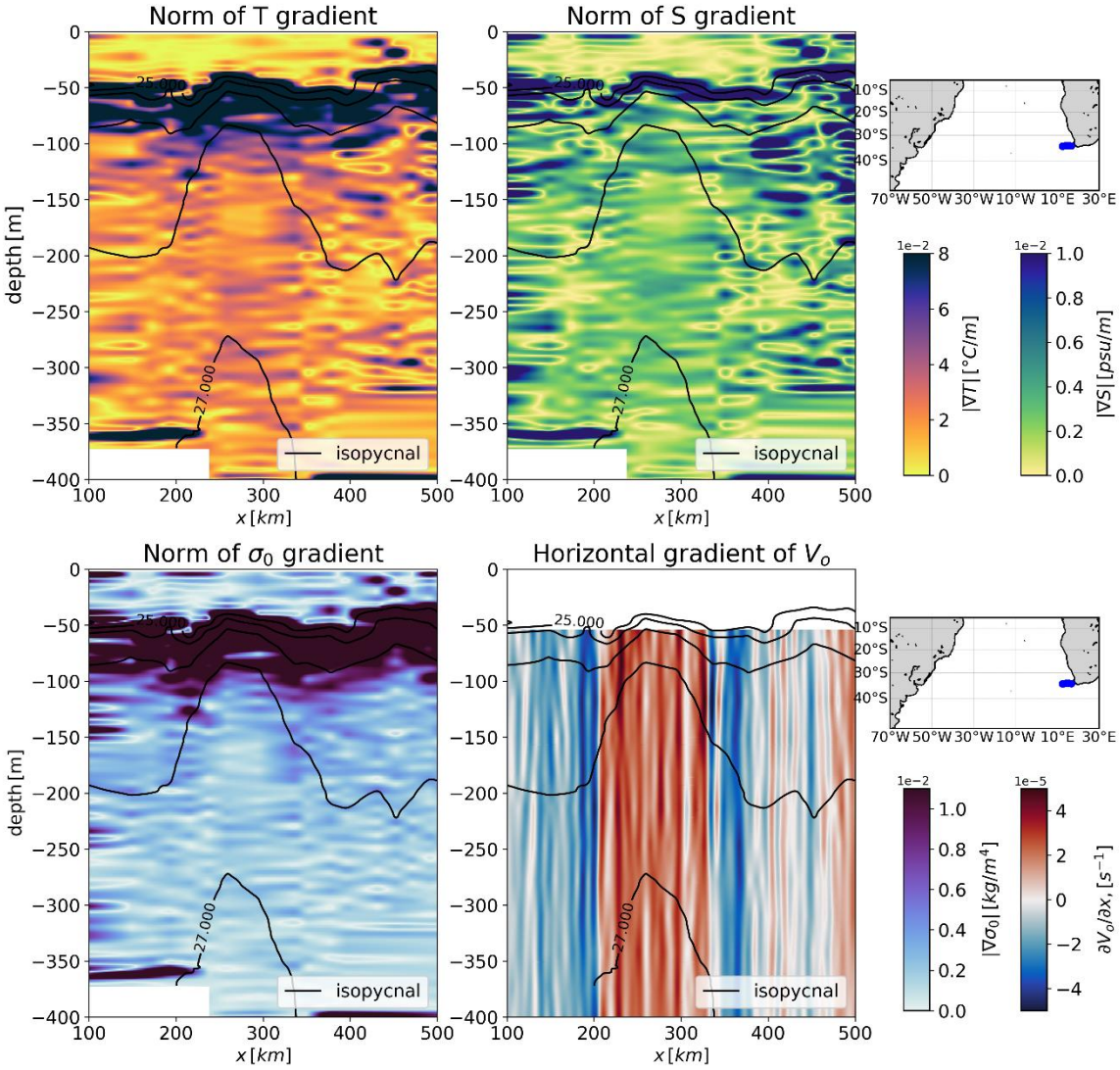

Figure S12. surface CE sampled during M124 experiment. Gradients.

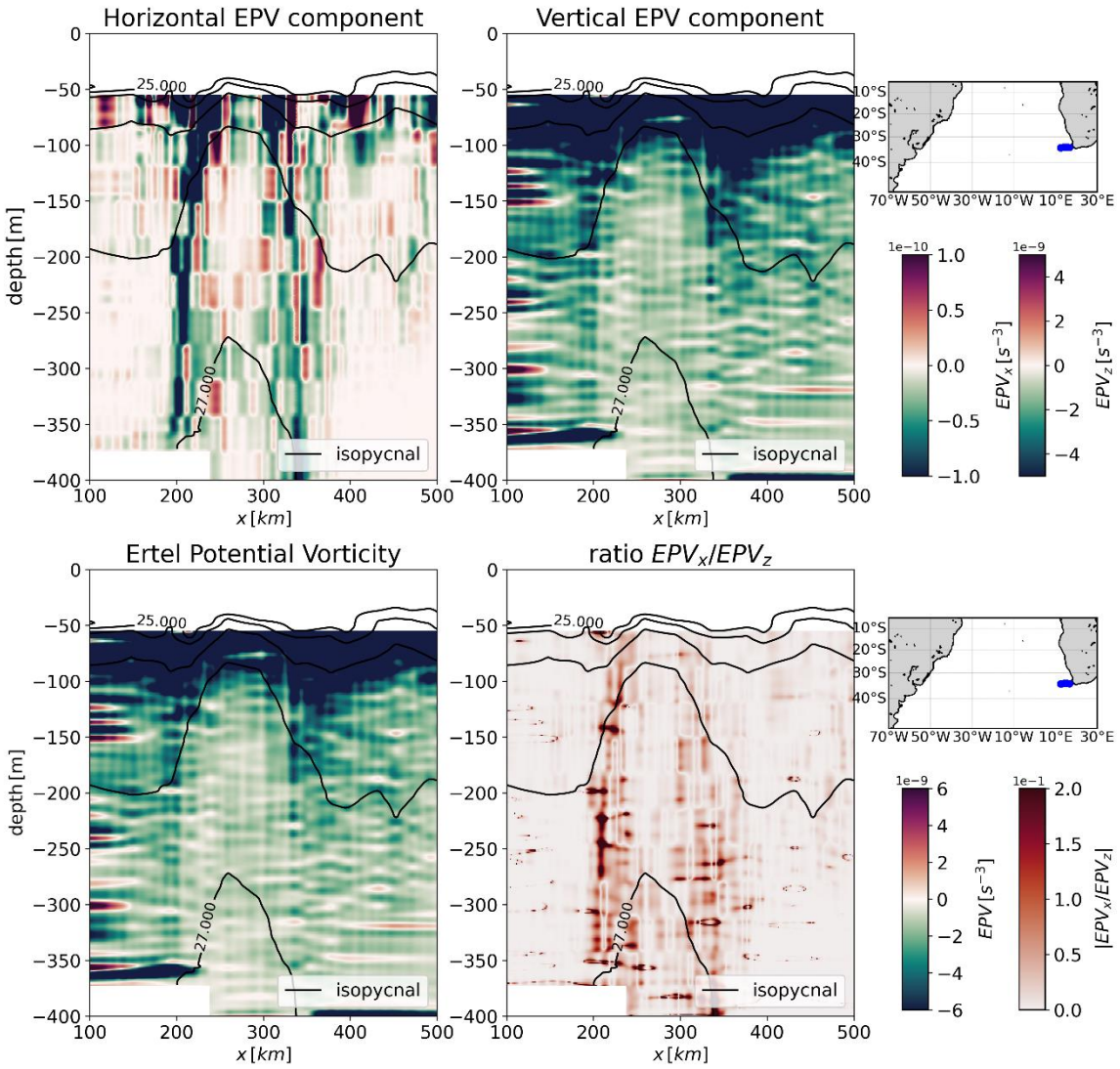

Figure S13. surface CE sampled during M124 experiment. Ertel PV components.

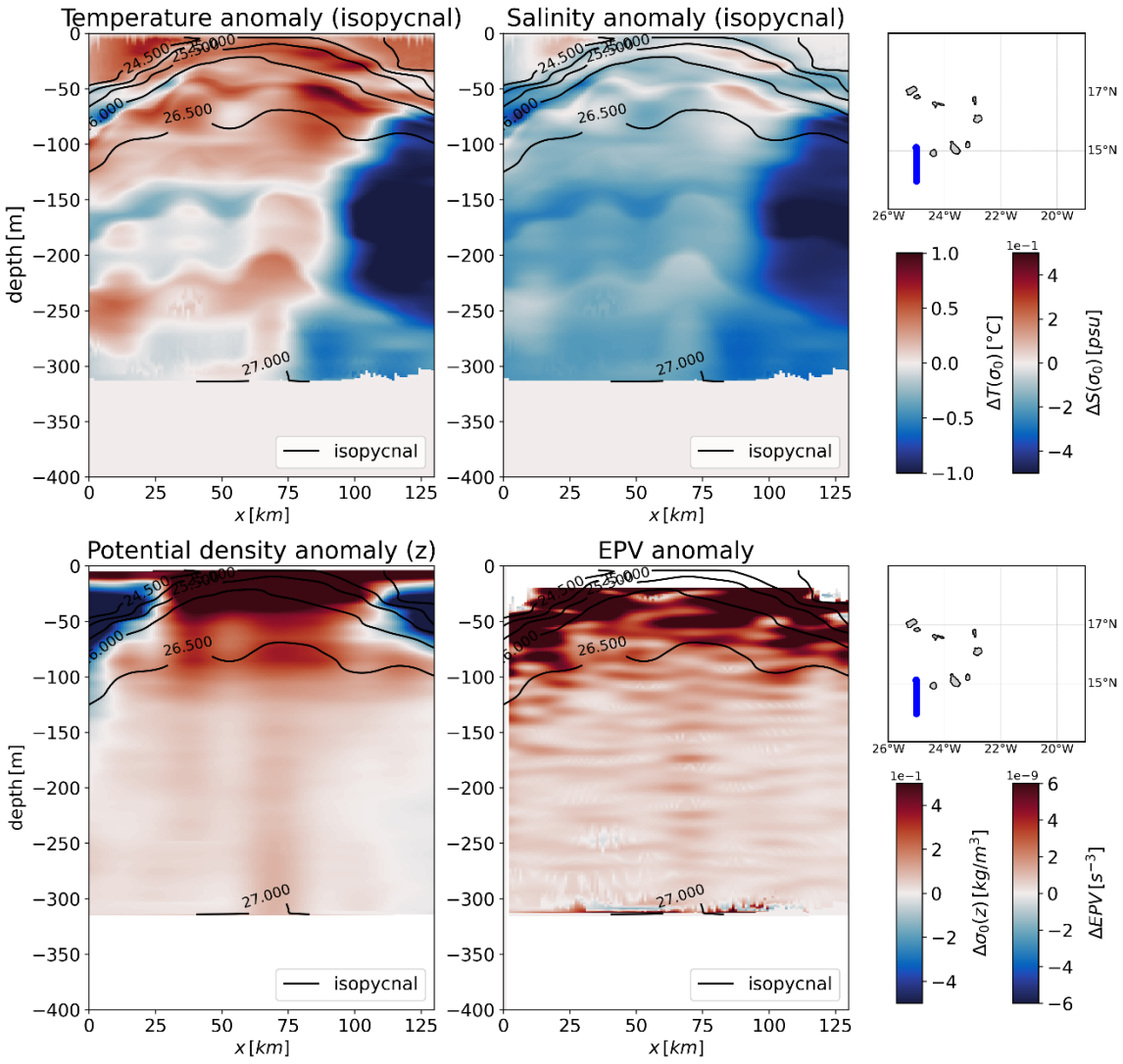

Figure S14. surface CE sampled during M160 experiment. Thermohaline and Ertel PV anomalies on isopycnals.

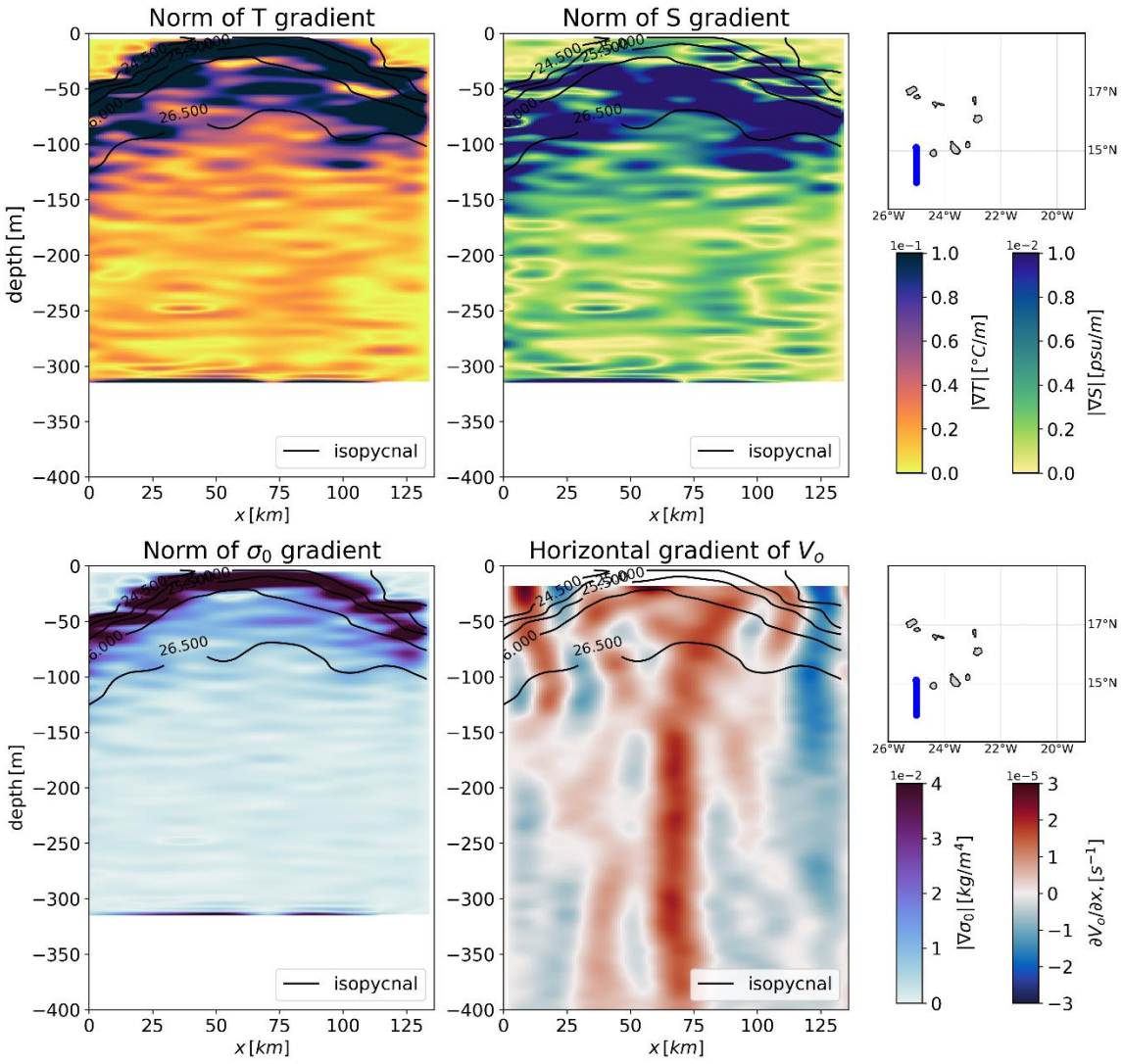

Figure S15. surface CE sampled during M160 experiment. Gradients

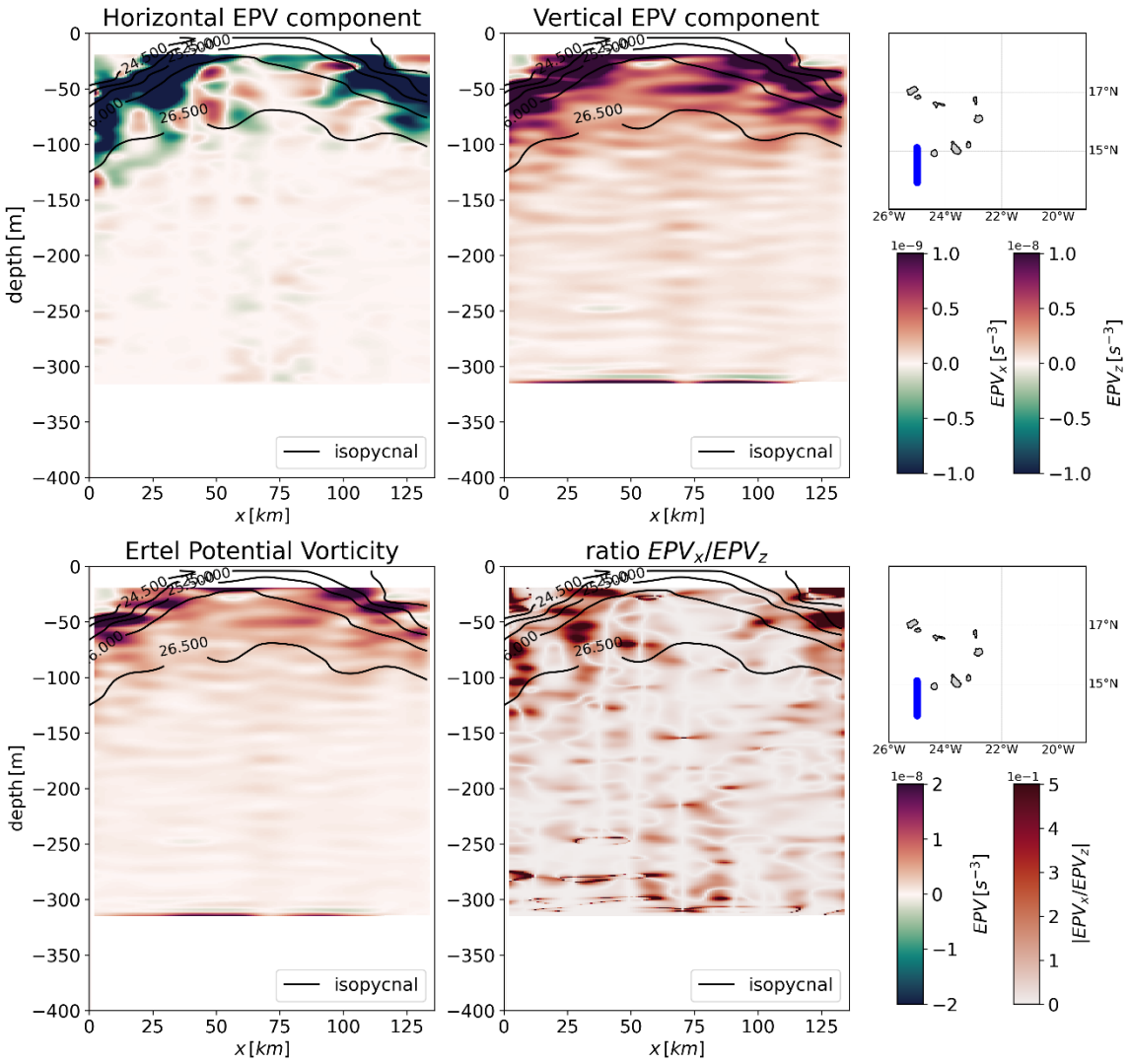

Figure S16. surface CE sampled during M160 experiment. Ertel PV components.