Figure S1: The principal component time series (standardized) of the first three modes of MSLP shown in Fig 2.
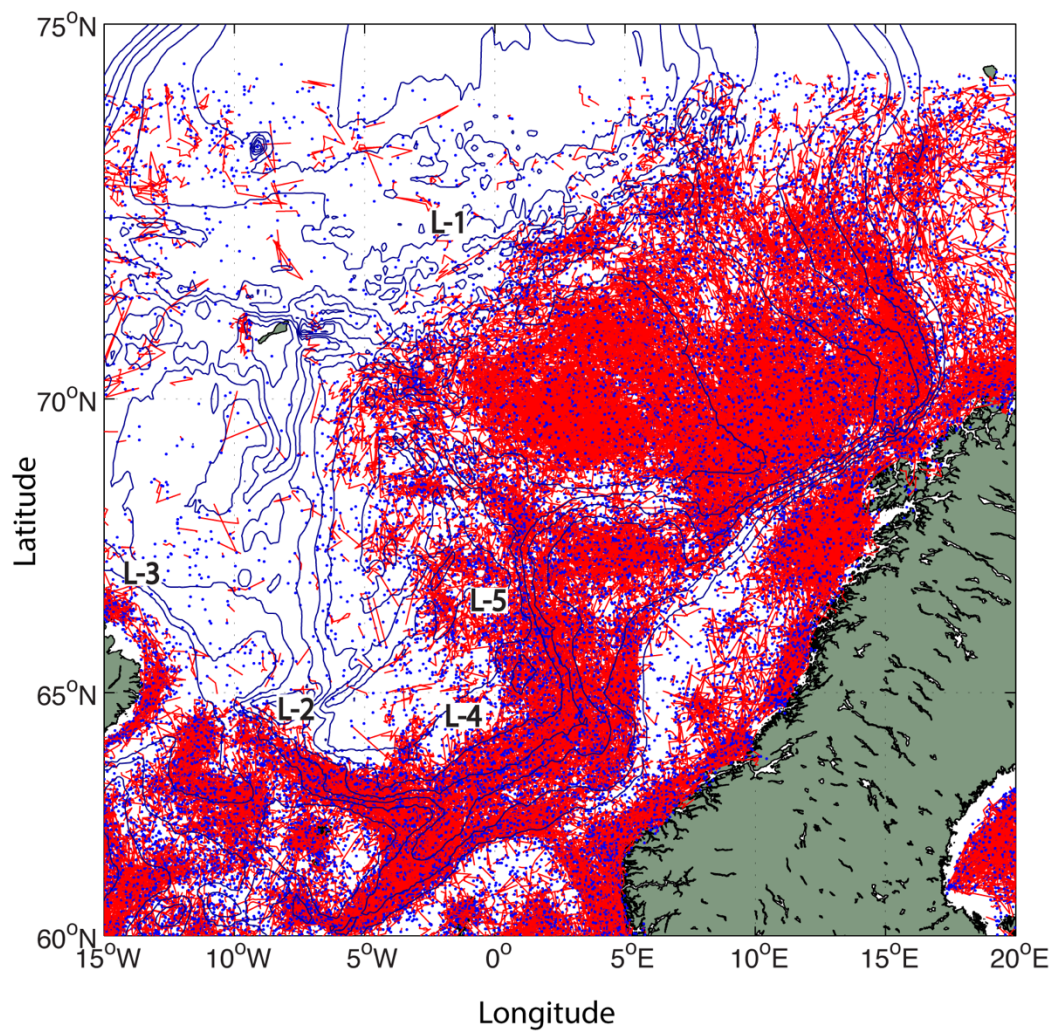
Figure S2: Tracks of all detected mesoscale eddies in the Norwegian Sea from the data obtained from Raj et al. (2016). Blue dots indicate the location of eddy generation. Locations 1, 2, 3,4 and 5 are represented respectively by L-1, L-2, L-3, L-4 and L-5.

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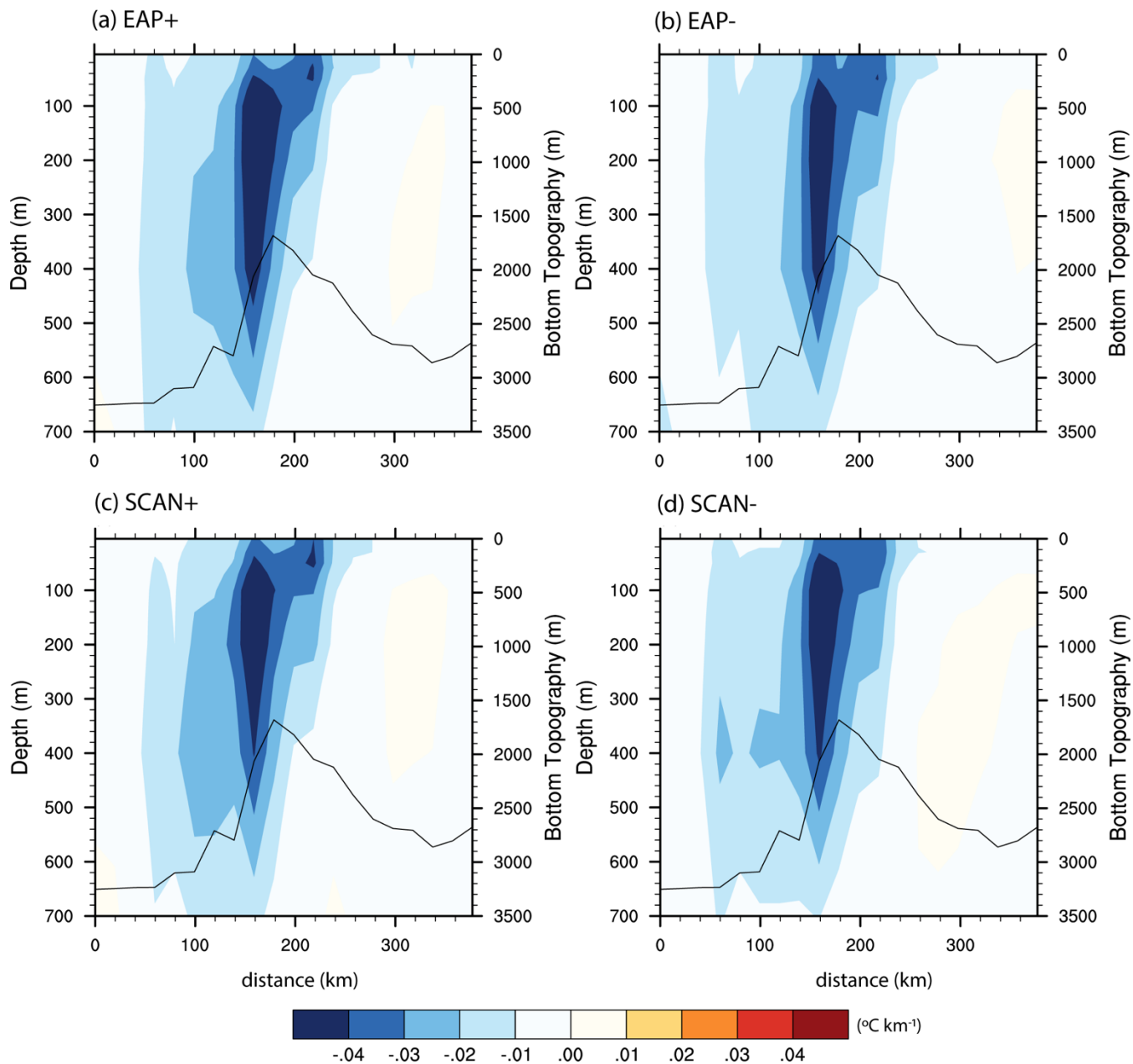
Figure S3: Gradient in the mean potential temperature (ᵒC /km) along the hydrographic section across the Mohn Ridge during positive (left panels) and negative (right panels) phases of (a, b) EAP and (c,d) SCAN. The bottom topography along the section is indicated by the black contour.