

Supporting Information for “Coherent pathways for subduction from the surface mixed layer at ocean fronts”

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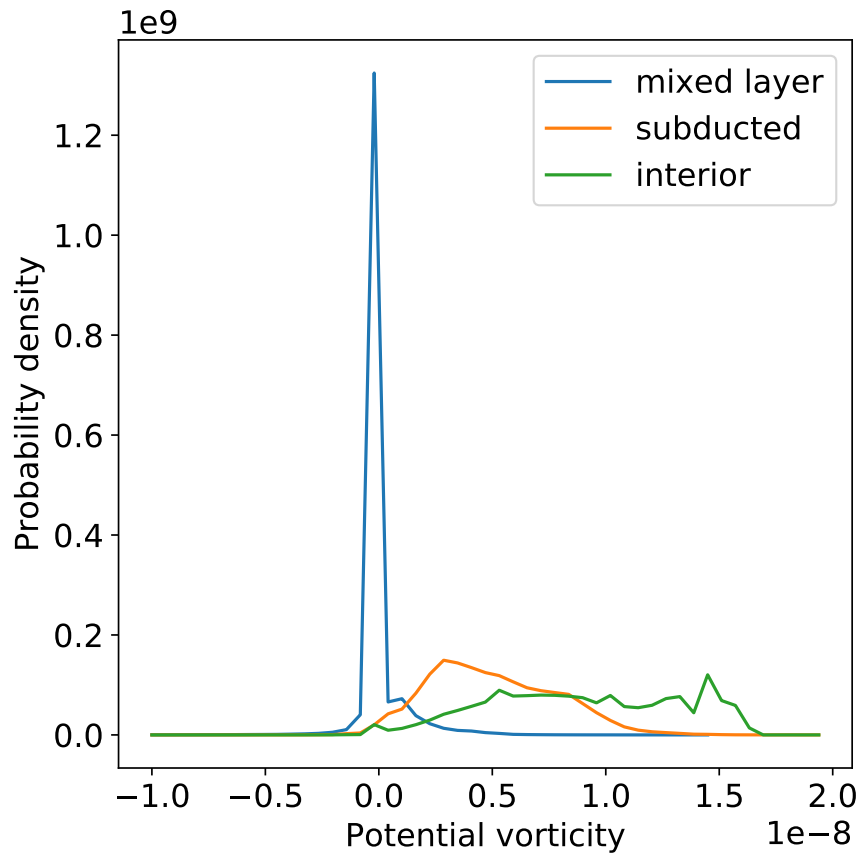


Figure S1. PV probability density functions on model day 50 in the mixed layer (blue line), on outcropping isopycnals, but below the mixed layer (green line), and of water that subducted from the mixed layer (orange line) during an offline tracer experiment that started on model day 43.75. The tracer was initialized in the mixed layer and restored within the mixed layer at every time step but not restored below.

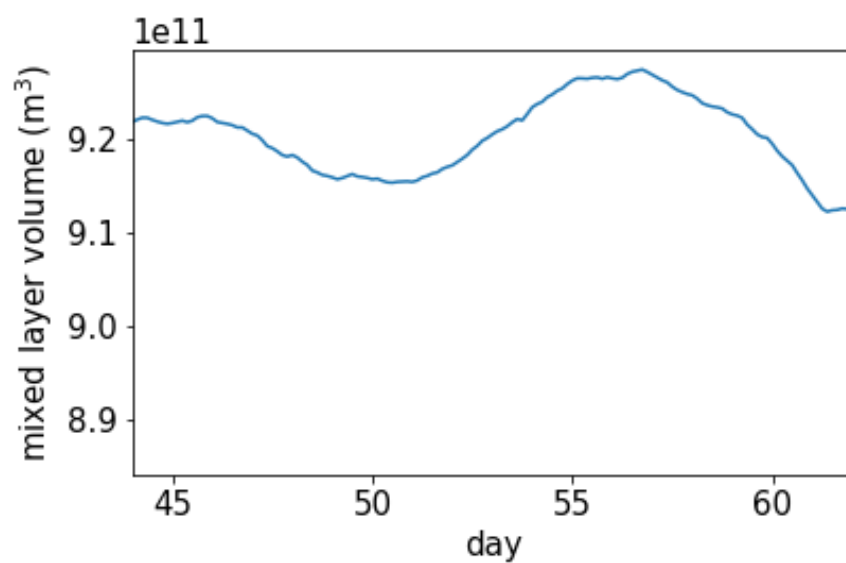


Figure S2. Volume of the mixed layer through the analysis period. The mixed layer volume is fairly constant throughout the analysis period, indicating that there is little restratification.

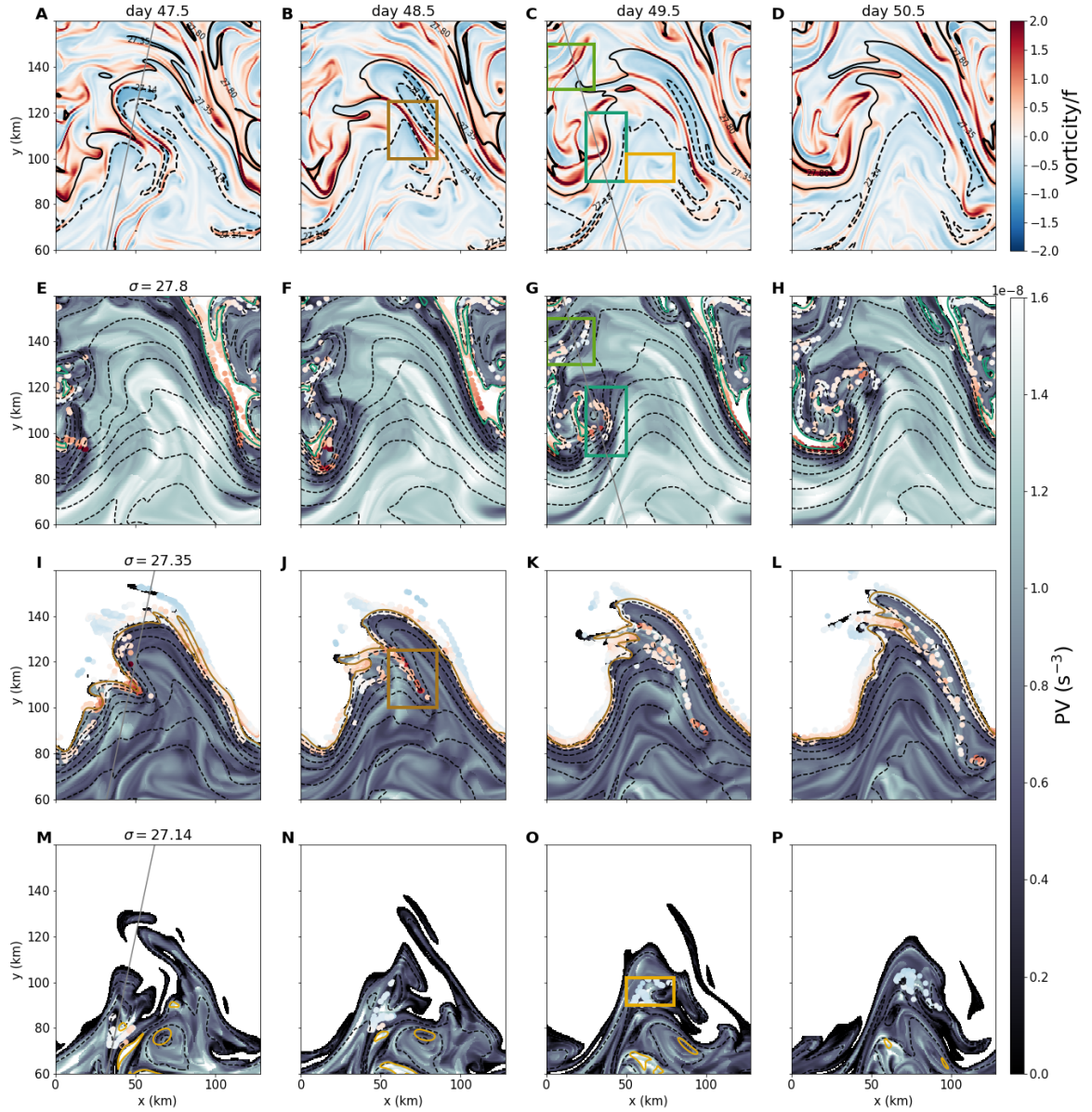


Figure S3. Evolution of water parcels that subduct out of the mixed layer on three isopycnal surfaces. (A-D) Surface relative vorticity. The grey lines show the cross sections in main text figures 6 and 7. The contours are for the isopycnal surfaces shown in the lower panels. (E-P) PV on the $\sigma = 27.8$ (E-H), $\sigma = 27.35$ (I-L), and $\sigma = 27.14$ (M-P) surface. The black contours are isopycnal height at 10 meter intervals. All particles shown have density within 0.01 kg/m^3 of the isopycnal surface and subduct below the mixed layer during their trajectory. The particles are colored by their relative vorticity.