

Supplementary material to the paper

“Simulation of winter deep slope convection in Peter the Great Bay (Japan Sea)”

by S.V. Prants, M.V. Budyansky, P.A. Fayman, M. Yu. Uleysky

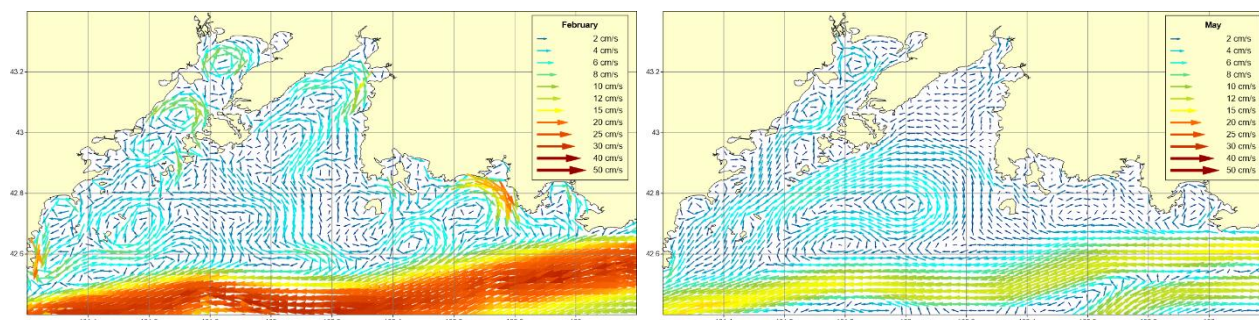


Figure S1. Monthly mean circulation in Peter the Great Bay on the surface in February (left) and in May (right).

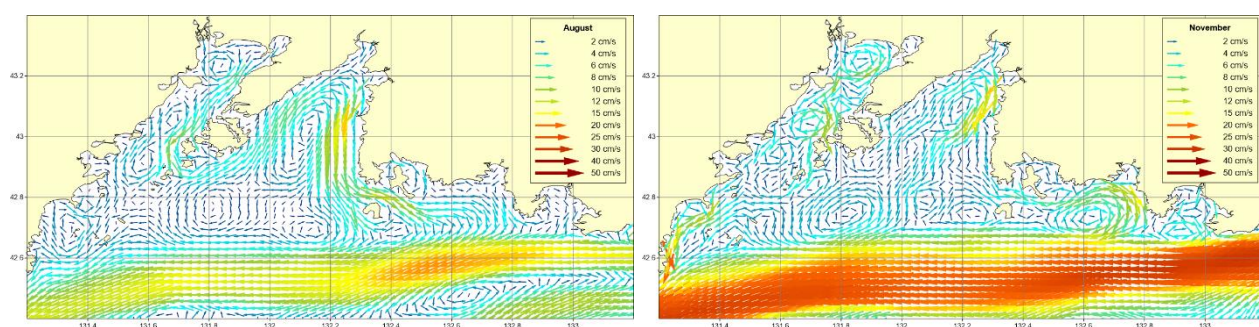


Figure S2. Monthly mean circulation in Peter the Great Bay on the surface in August (left) and in November (right).

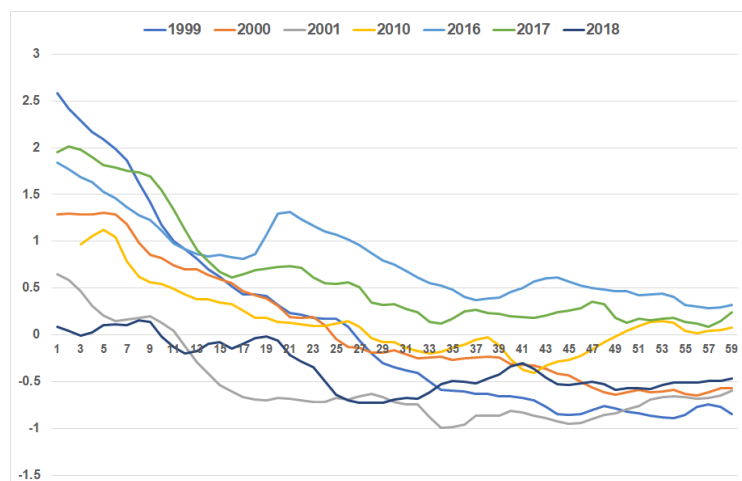


Figure S3. The weighted average temperature for specific years calculated by formula (4). The days are numbered from the beginning of the corresponding year.

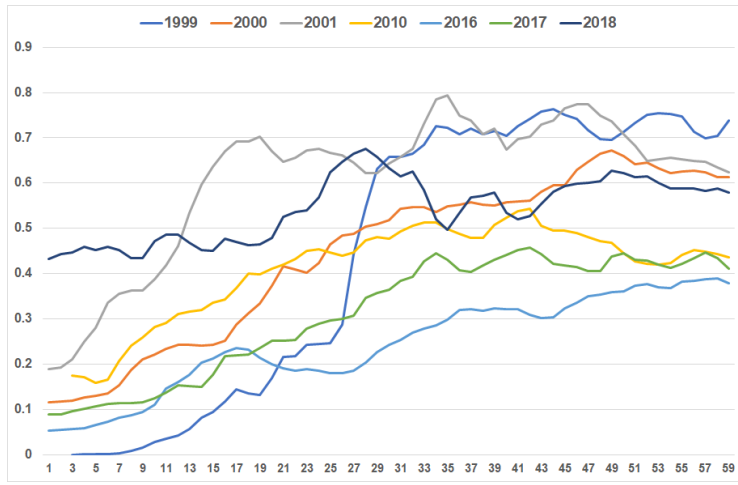


Figure S4. The ratio of the volume of water that has a negative temperature to the total water volume in the PGB area within 131.2°E - 133.1°E and 42.5°N - 43.4°N.

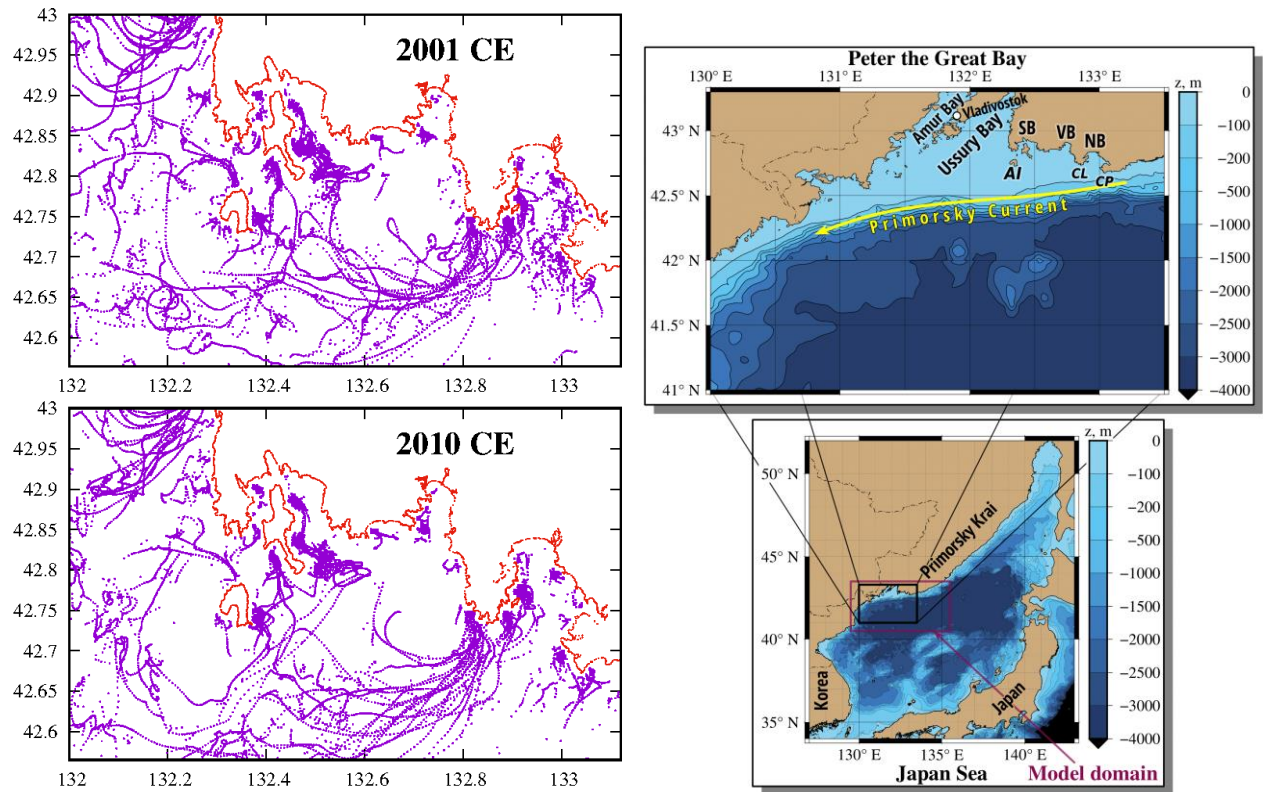


Figure S5. (Left). Hourly tracks of the centers of cyclonic eddies in the study area from January 1 to February 28 in 2001 and 2010. Majority of the cyclones, which transport dense shelf water to the continental slope, form in the eastern part of PGB between 132.6 and 133°E in the area around Cape Likhachev (CP) and Likhachev Bay. (Right). Bathymetric maps of Peter the Great Bay (top) and the Japan Sea (bottom).

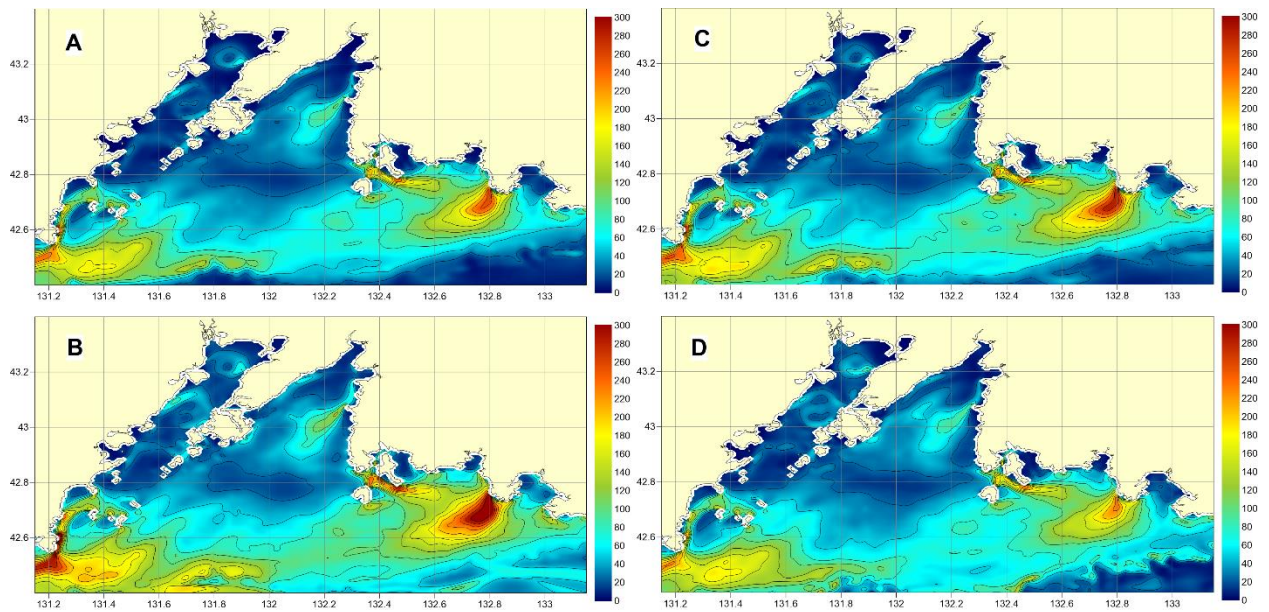
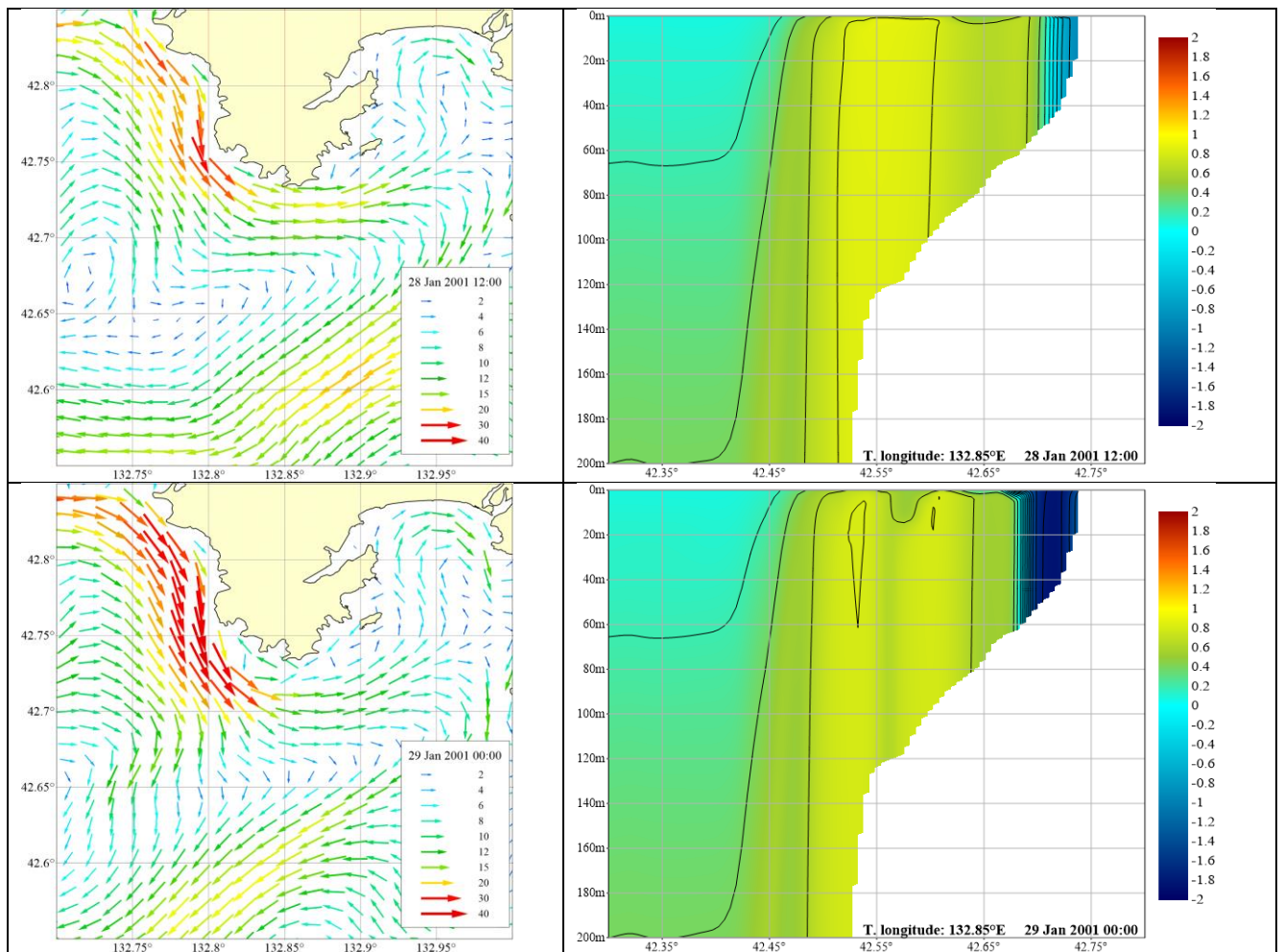
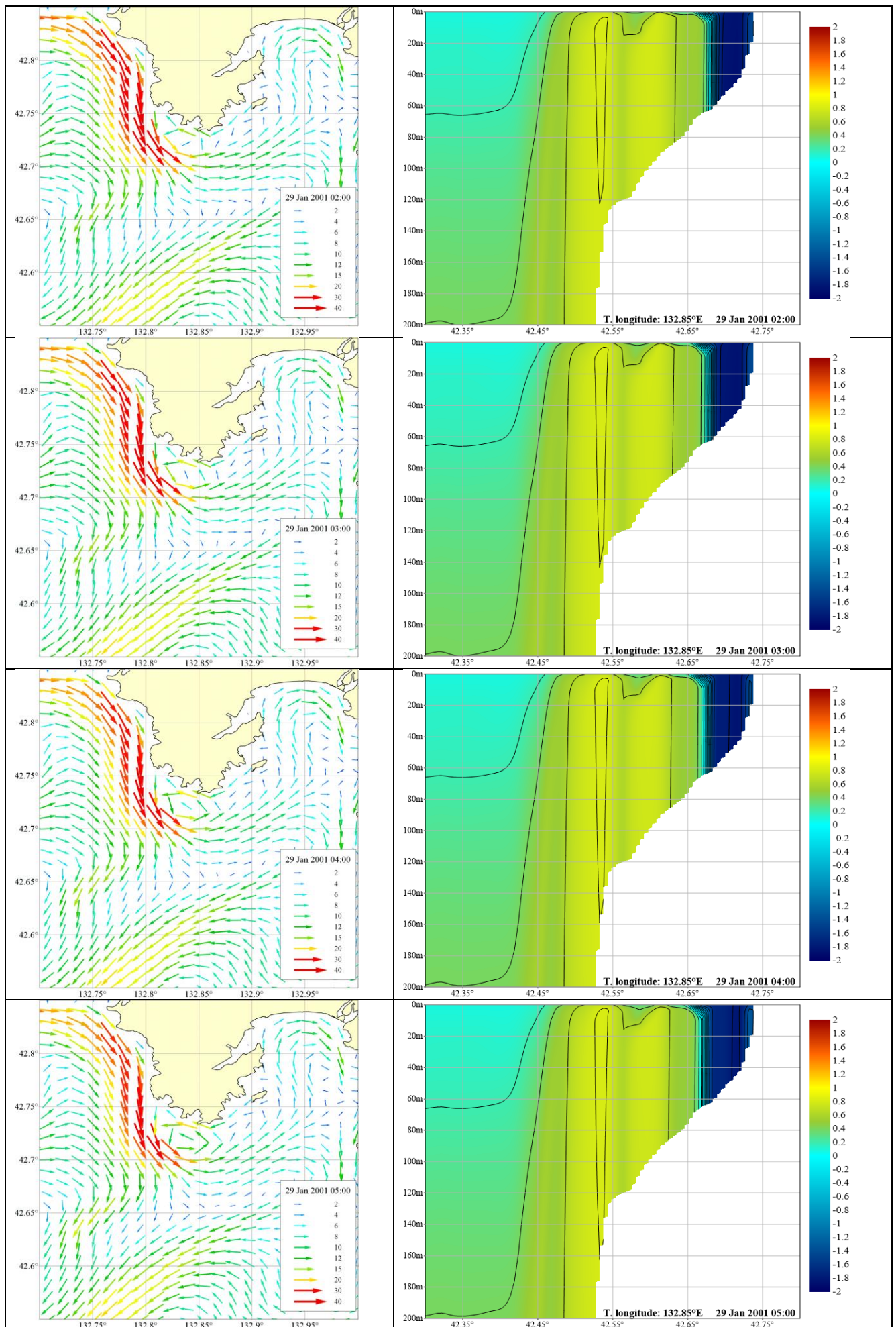


Figure S6. Simulated eddy kinetic energy (EKE) averaged from January 1 to February 28, 2001 for the barotropic component of velocity (A), and EKE in the 1st layer (B), 16th layer (C) and bottom ROMS layers (D).





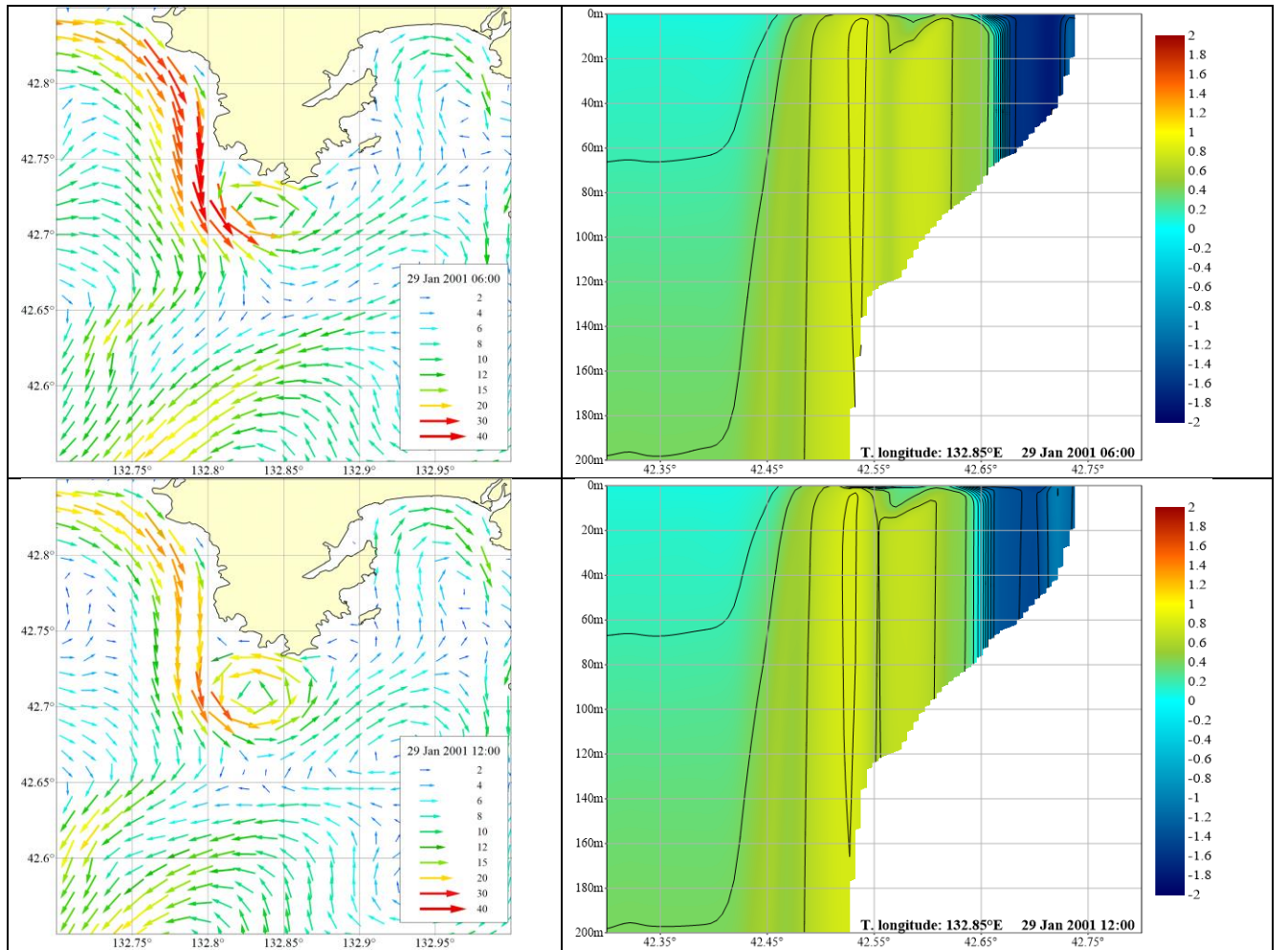


Figure S7. The barotropic velocity field (left column) and vertical section of simulated temperature along 132.85 E (right column) on January 28 and 29, 2001 in the area of generation of coastal cyclonic eddies.