

Supplementary Materials:

Advanced Understanding of Sea Surface Cooling off Northeastern Taiwan to Tropical Cyclone by Using Numerical Modeling

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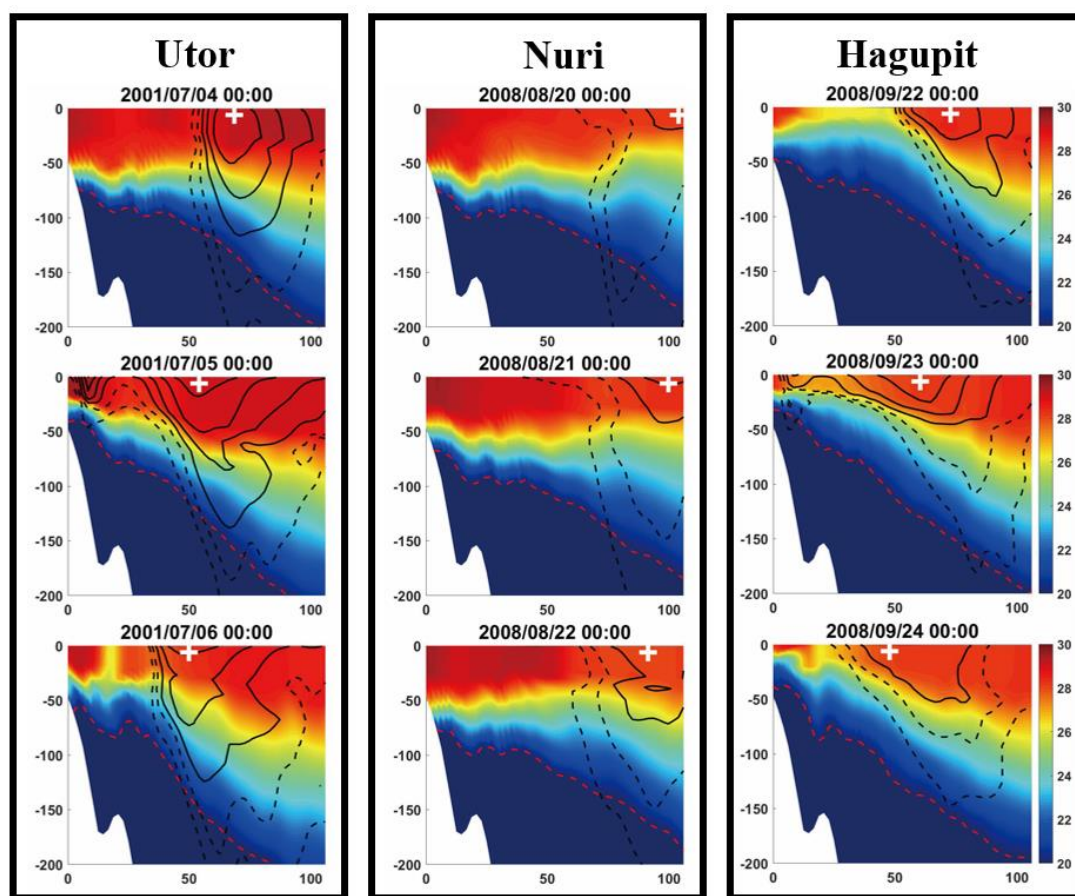


Figure S1. Latitudinal transects (from 121.93°E to 123.00°E, along 25.09°N) of temperature (°C, color shading) and the position where KC passed through simulated in UTOR_{STD} (left panel), NURI_{STD} (middle panel), and HAGUPI_{STD} (right panel). The position of KC was defined by outlines with northward current speeds greater than 50 cm/s (contours of 50 and 70 cm/s: dashed lines, contours above 90 cm/s: solid lines). The dashed-red contours denote 20 °C isotherms and the white cross indicates where the meridional current speed is strongest along the transect.

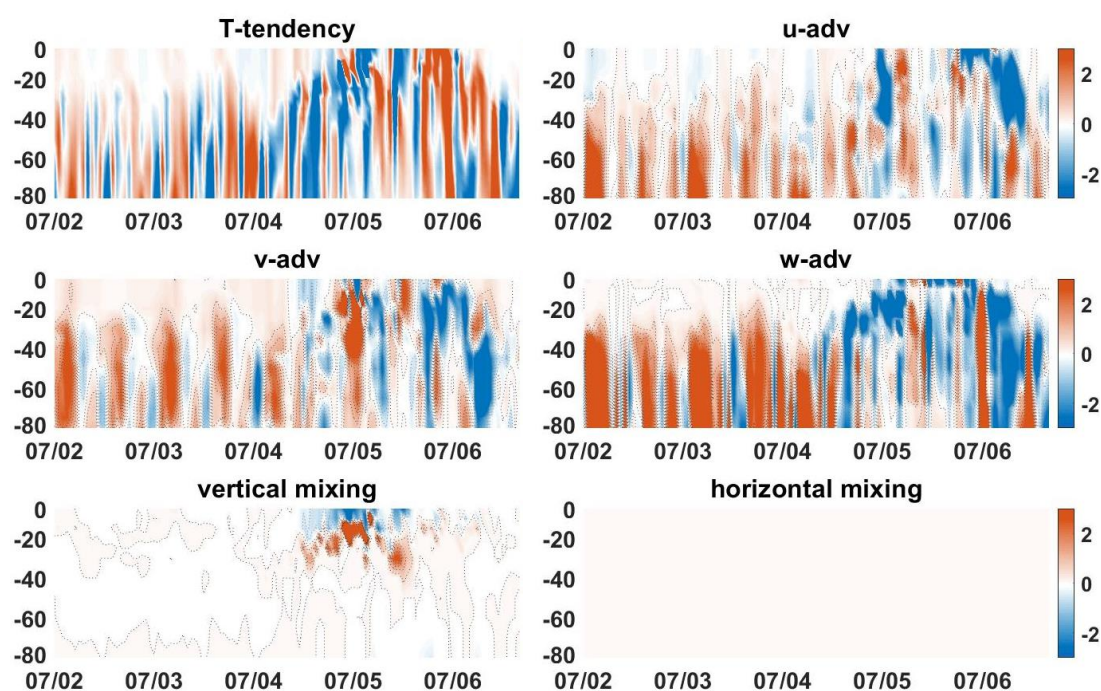


Figure S2. Depth-time variations (Hovmöller plot) of each term (unit: $10^{-4} \text{ }^{\circ}\text{C/s}$) in the HBA for the results of EXP_{STD} during the passage of typhoon Utor, for the model grid centered approximately closest to the maximum sea surface cooling (25.09°N, 122°E). The color shadings in blue (red) denote negative (positive) tendencies. The gray solid contours denote zero values.

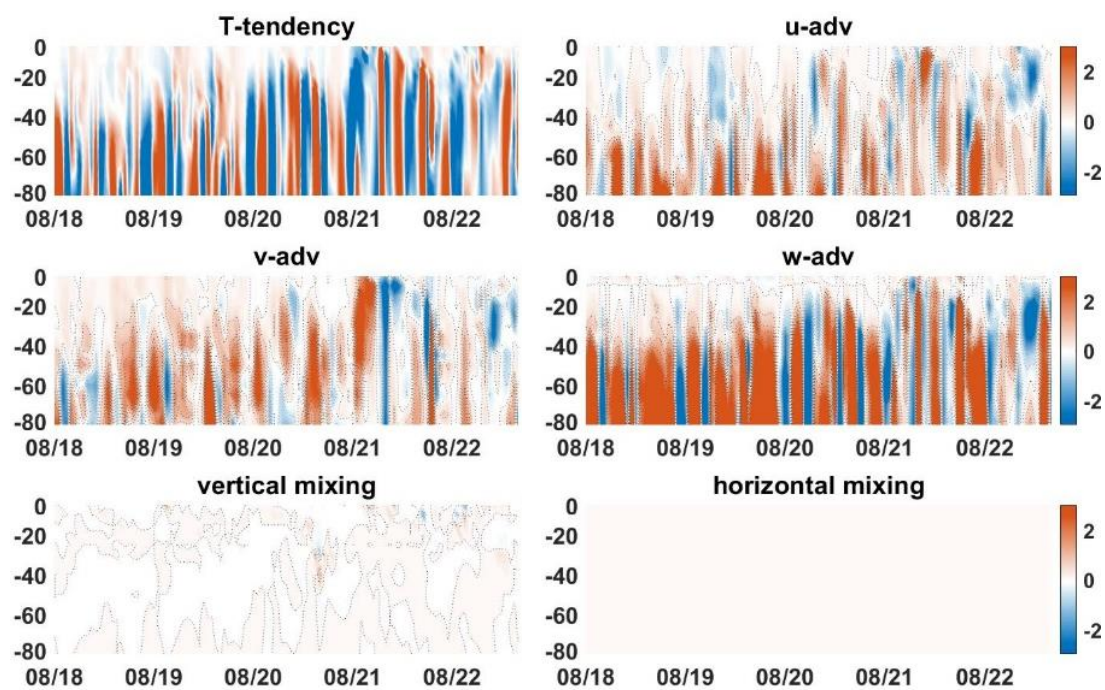


Figure S3. Similar to Figure S2, but for the results of HBA during the passage of Typhoon Nuri.

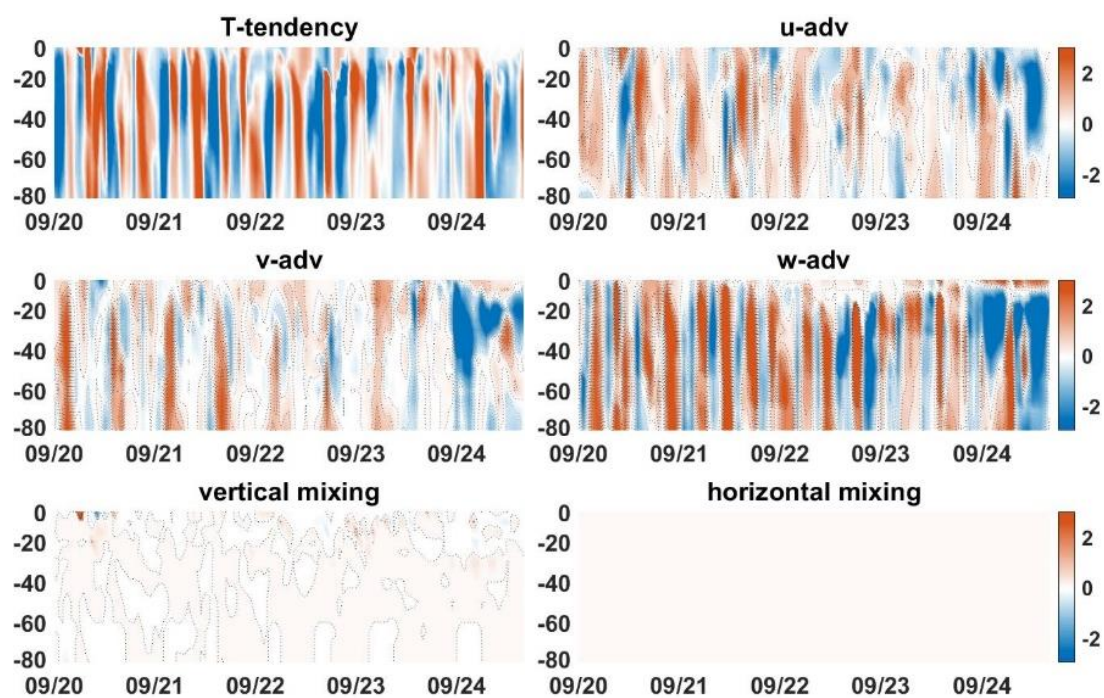


Figure S4. Similar to Figure S2, but for the results of HBA during the passage of Typhoon Hagupit.

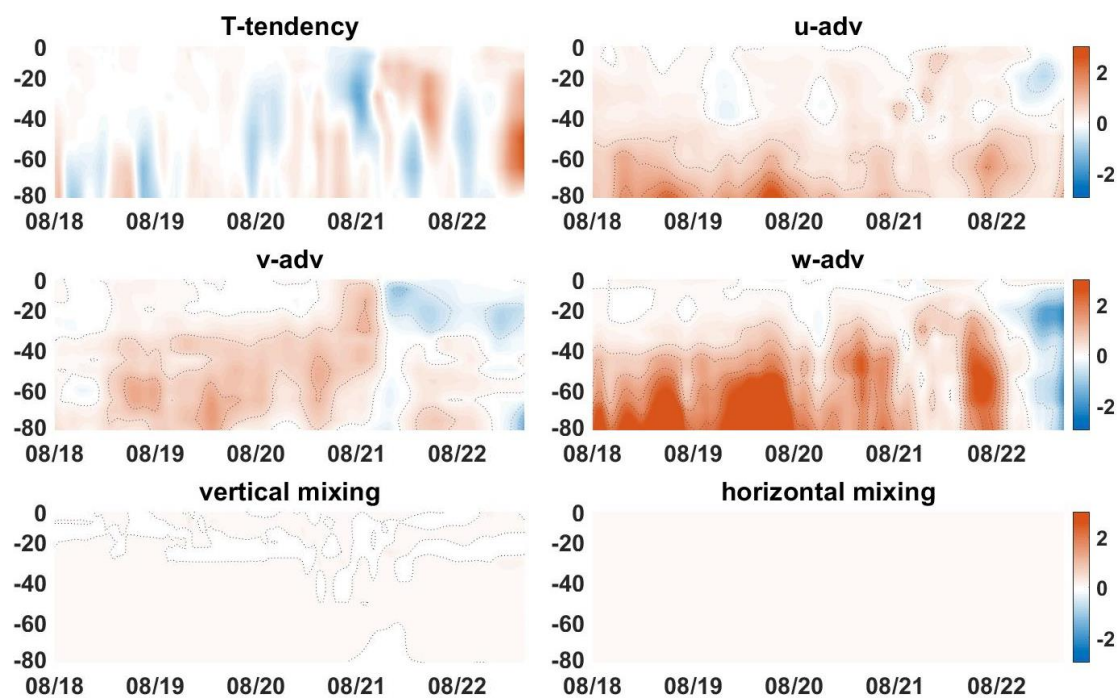


Figure S5. Similar to Figure 11, but for the results during the passage of typhoon Nuri.

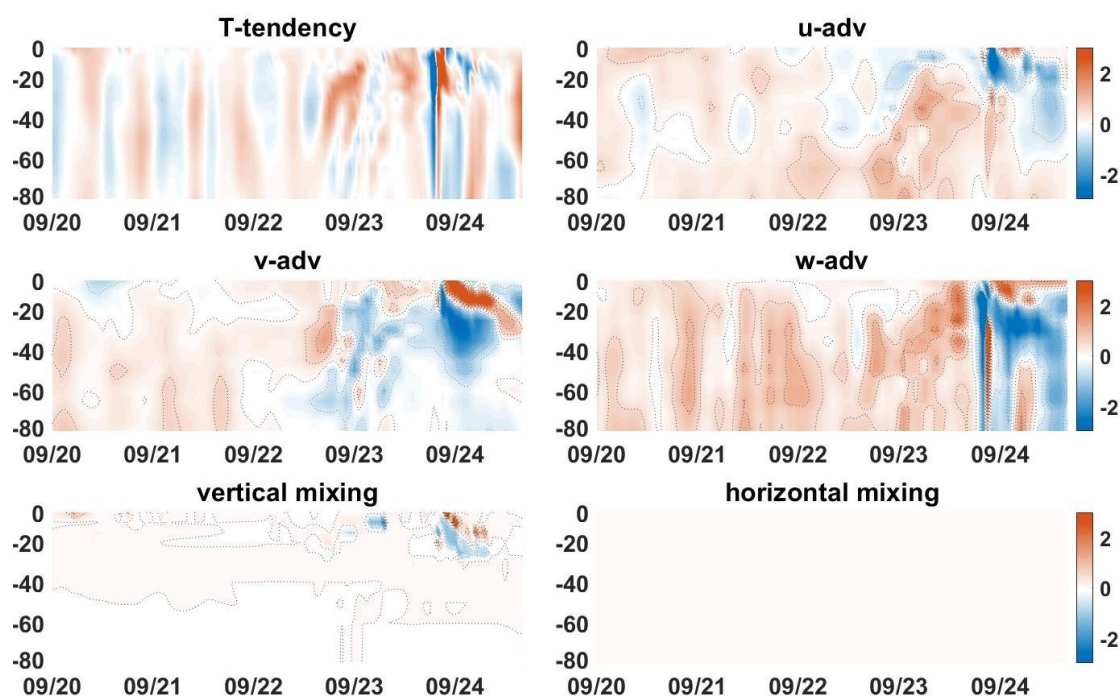


Figure S6. Similar to Figure 11, but for the results during the passage of typhoon Hagupit.