

Response to Reviewer #2

The suggested corrections and improvements are included in the final version as below:

You have demonstrated the existence of the wind event in July 2018 at the TT Gulf, but the supplementary movie seems to start from August 2018. Is it possible to start the movie before July 2018 such that the effect of the wind event can be seen?

A new video of the eddy genesis in the region starting from 01 June 2018 is produced.

L.5 -114 → 114 -- remove the minus sign

It is removed and corrected in the text.

L.31 EDA → eddy detection algorithm (EDA) -- first appearance in the main text

It is added in the main text.

L.82 "could resulted" -- please fix.

The typo is corrected.

L.87 "(Nishino et al., 2011)" should be without brackets.

The citation is corrected.

L.177 What are the "ultimate" temperature and salinity?

The sentence is rephrased as:

In contrast to assuming a depth of no motion at 1200 m (e.g. He et al. (2018)), heat and salt transport were calculated by integrating equations 4 and 5 for the upper 1500 m water depth, where the sign of the temperature anomaly changes.

L.185 "consistently mimicked" -- do you mean "reproduced" (in the model)?

"reproduced" is replaced in the text.

Fig.11 caption Salinity between 34.7 and 33 cannot be contoured at the interval of 0.2

because $34.7-33=1.7$ is not a multiple of 0.2.

It is corrected to: between 33 and 34.8