

We would like to thank the referee for his valuable remarks of our study. We made some revisions carefully. Here are the answers to the comments.

This is a short paper that describes some small eddies along an upwelling front in the South China Sea. There are a few speculations about mechanisms, but nothing definitive.

Reply: The physical mechanisms responsible for the genesis of the small-scale eddies are complicated. Researchers accounted the genesis of the small-scale eddy for some reasons, such as topography, wind, upwelling, mesoscale eddy, but there is still much that is not known. The temporal evolution (of the order of days) and spatial scale (less than 50 km) of the small-scale eddy require adequately resolved time series and the spatial resolution. The present ocean dynamic satellite have limitations in observation of small-scale eddies because of the coarse resolution. So, we have difficulty to get a definitive mechanism based on the present satellite observation.

Starting on page 13521, line 5, there is an attempt to relate these small eddies to some mesoscale feature. I do not understand the approach. I believe that an extra figure showing the mesoscale and submesoscale eddies would be helpful here.

Reply: We have specified the anticyclonic mesoscale eddy (AME) in Figure 3(a). Figure 3 shows the anticyclonic mesoscale eddy (AME), small-scale phytoplankton tendrils and the offshore phytoplankton filaments (shown below). The small-scale eddies along the front of the filament is associated with the occurrence of a mesoscale anticyclonic eddy. The generation of the small-scale eddies may be related to the interaction of the offshore current and the mesoscale anticyclonic eddy. Based on it, we tried to find the relationship of the small-scale eddy with the relative movement of the offshore current and the mesoscale anticyclonic eddy.

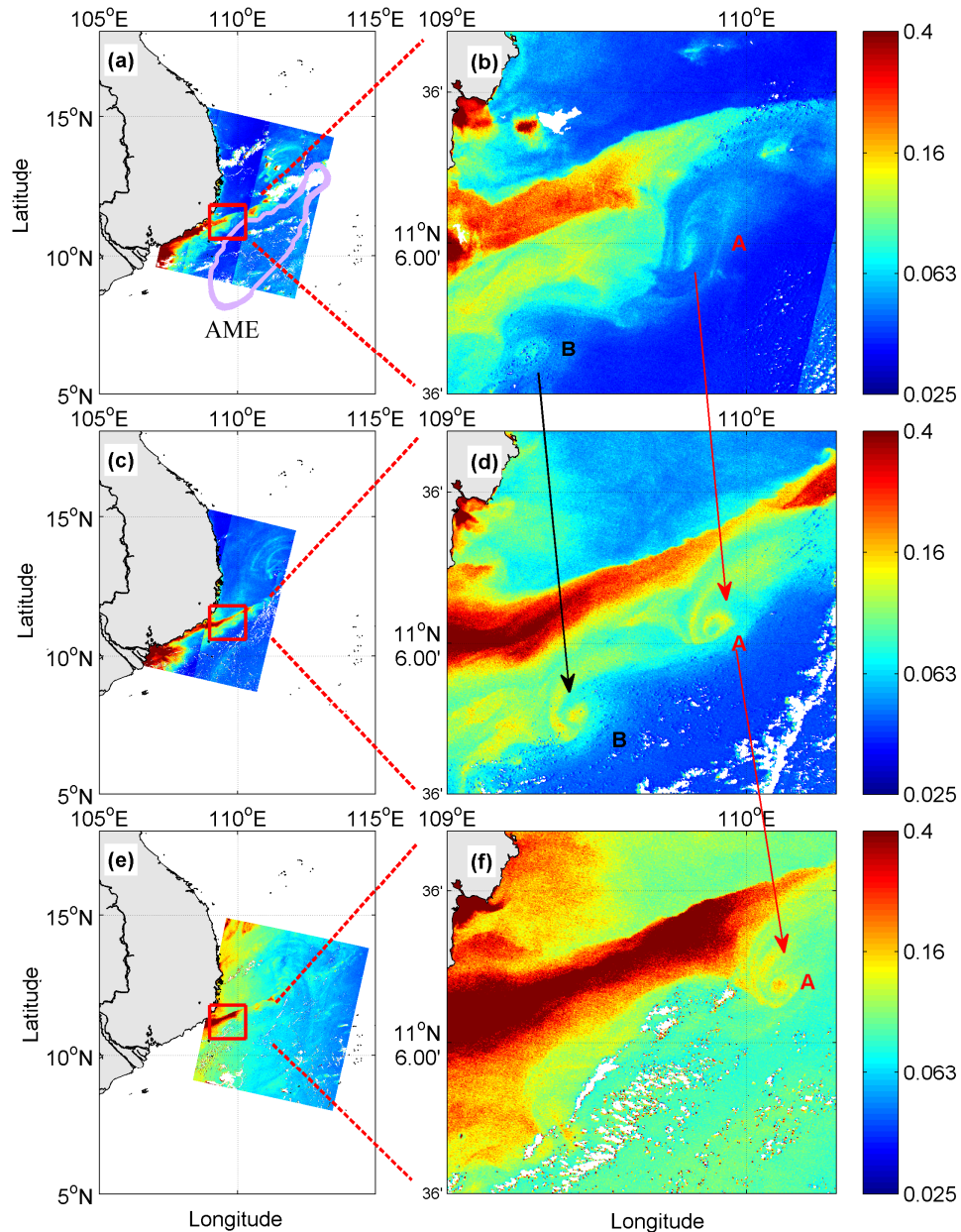


Figure 3. Daily 300 m MERIS chlorophyll (unit: mg m^{-3}) on (a) 9 July 2008, (b) 12 July 2008, (c) 13 July 2008. The cloud covered area is masked by the white color. ‘A’ and ‘B’ indicate two small cyclonic eddies respectively. The pink circle in (a) denotes the anticyclonic mesoscale eddy (AME) on 9 July 2008, which is derived from AVISO MSLA data following the method of Chelton et al. (2011).

This paper is harmless, describes some interesting features and so is publishable after some revisions.

Thank you again for reviewing our manuscript.