

Interactive comment on “The effect of typhoon on particulate organic carbon flux in the southern East China Sea” by C.-C. Hung et al.

Anonymous Referee #2

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General Comments: The paper describes the effects of two typhoons on SST, chlorophyll and particulate organic carbon fluxes in the southern East China Sea. This paper is novel as it combines satellite, modeling and field observations to examine the role of typhoons or hurricanes on POC flux. In addition to other hurricane effects such as cooling and phytoplankton blooms observed following a hurricane passage, this study aided by field data shows that hurricanes induce greater biogenic carbon sinking. Results from this work supports the need for additional studies on the contribution of storm events to global POC export flux in other marine environments. The paper is generally well written with detailed analysis of satellite derived estimates of SST, phytoplankton biomass and field hydrographic, biological and POC measurements. With increasing incidences of storm events, this study provides timely insights into the effects of hurricanes on POC export flux that need to be accounted for in the carbon budgets. This

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manuscript is acceptable for publication, however, text and data presentation could be improved.

Specific comments:

It is only in the results section that details on the two typhoons Fengwong and Sinlaku are provided. This information should be noted earlier in the text.

The two typhoons Fengwong and Sinlaku had dissimilar paths (please show typhoon Fengwaong path in Fig. 4a, b). Typhoon Sinlaku for example after crossing Taiwan veered to the northeast over the study area. Different impacts on the surface chlorophyll distributions are observed in Figure 4. The authors should discuss in greater detail the regional differences due to the passage of the two typhoons.

Technical comments Grammatical errors in the manuscript that the authors could easily identify and correct, including: Page 3525, L10: delete 'of the' Page 3526, L18: delete 'were estimated' Page 3530, L2: should be Fig. 3 instead of Fig. 3a Page 3531, L6: should be 'did not display' Figure 1: Missing labels; dates in Figure and legend not matching Figure 2: Missing labels

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