



Supplement of

Understanding the resilient carbon cycle response to the 2014–2015 Blob event in the Gulf of Alaska using a regional ocean biogeochemical model

Yumi Abe et al.

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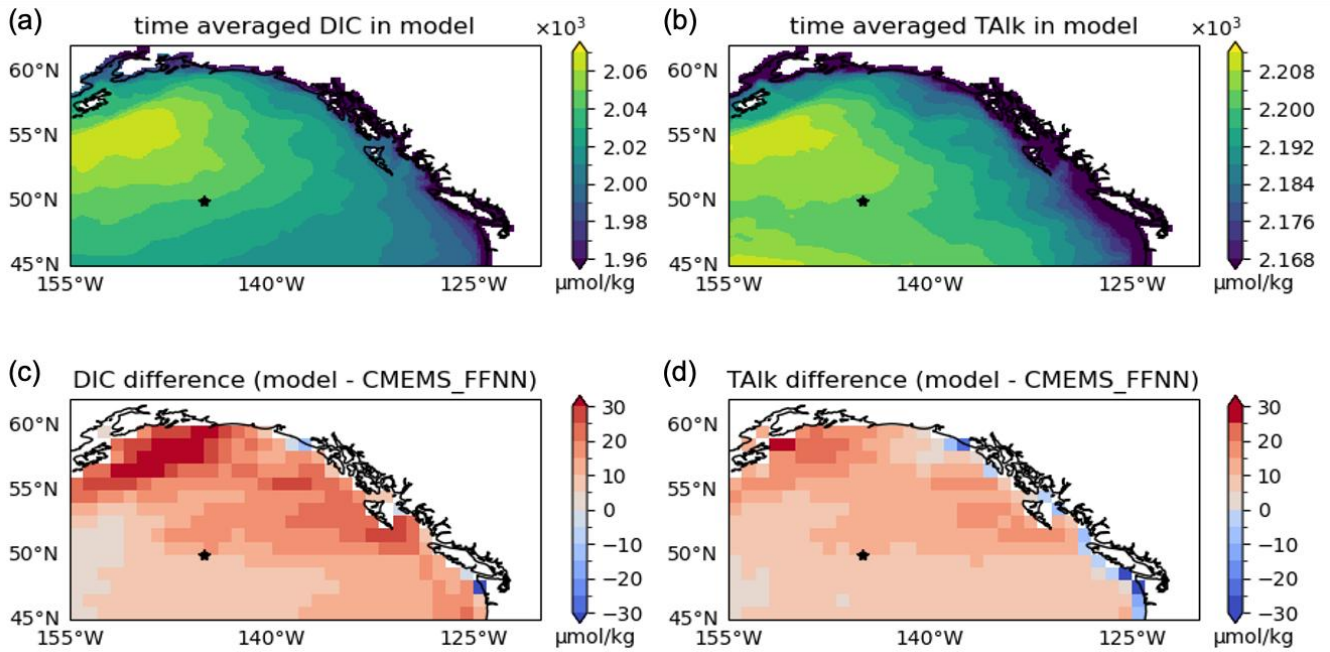


Figure S1: Comparison of surface distributions of (a, c) DIC and (b, d) TALK, averaged over 2010–2017, between the model and CMEMS_FFNN, one of the SeaFlux products. The star in each panel indicates the location of OSP.

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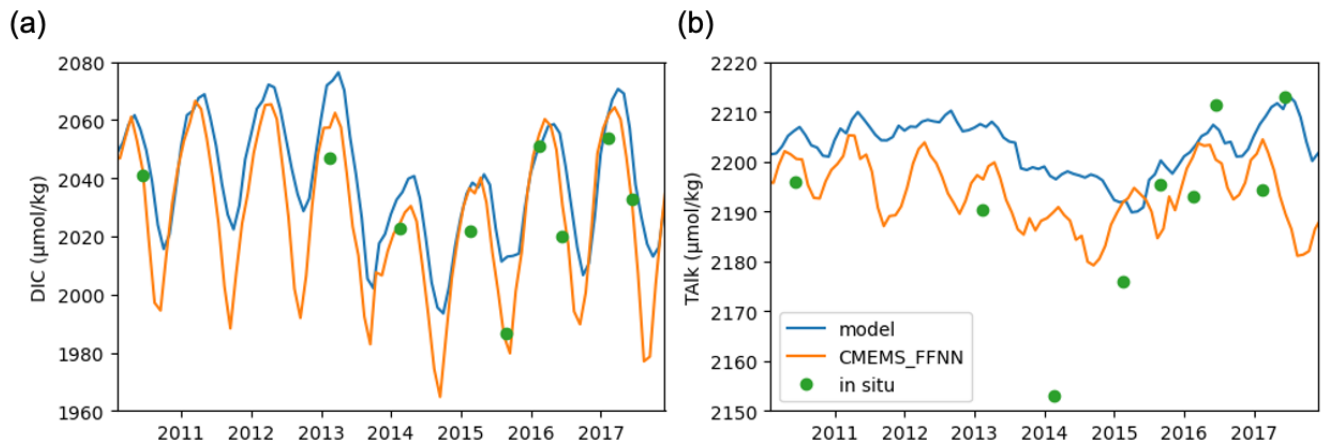
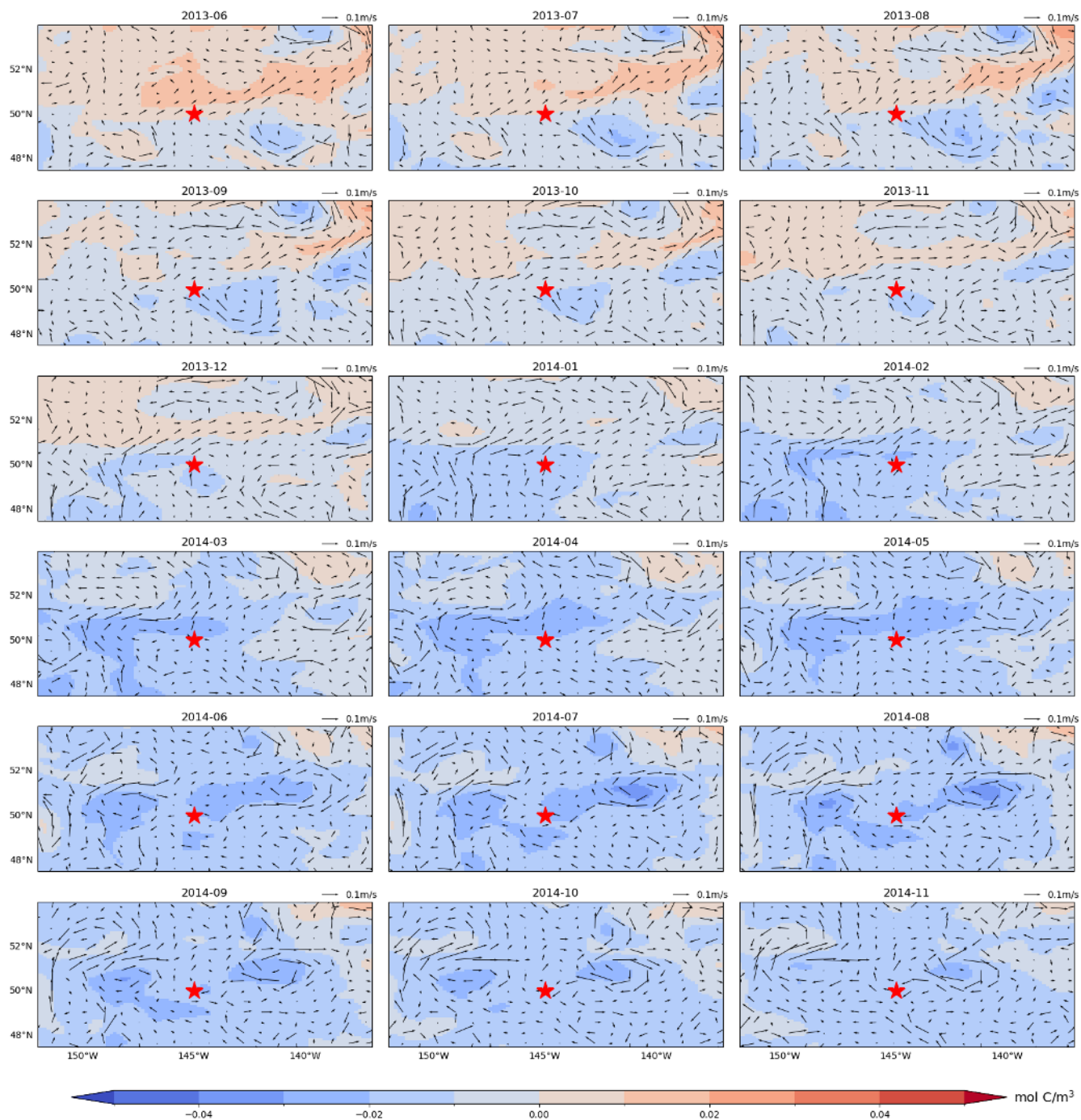
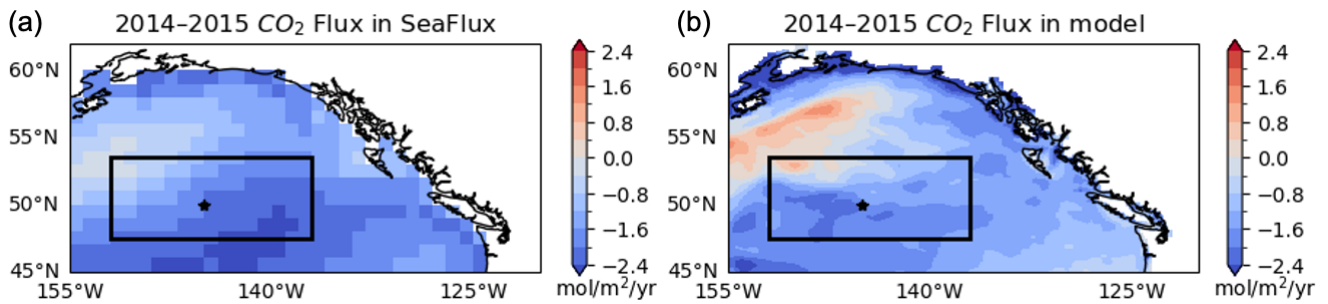


Figure S2: Comparison of the time series of surface (a) DIC and (b) TALK at OSP between the model and CMEMS-FFNN, one of the SeaFlux datasets. Green dots in both panels represent in situ observations (Franco et al. 2021) averaged over the upper 10 m depth.

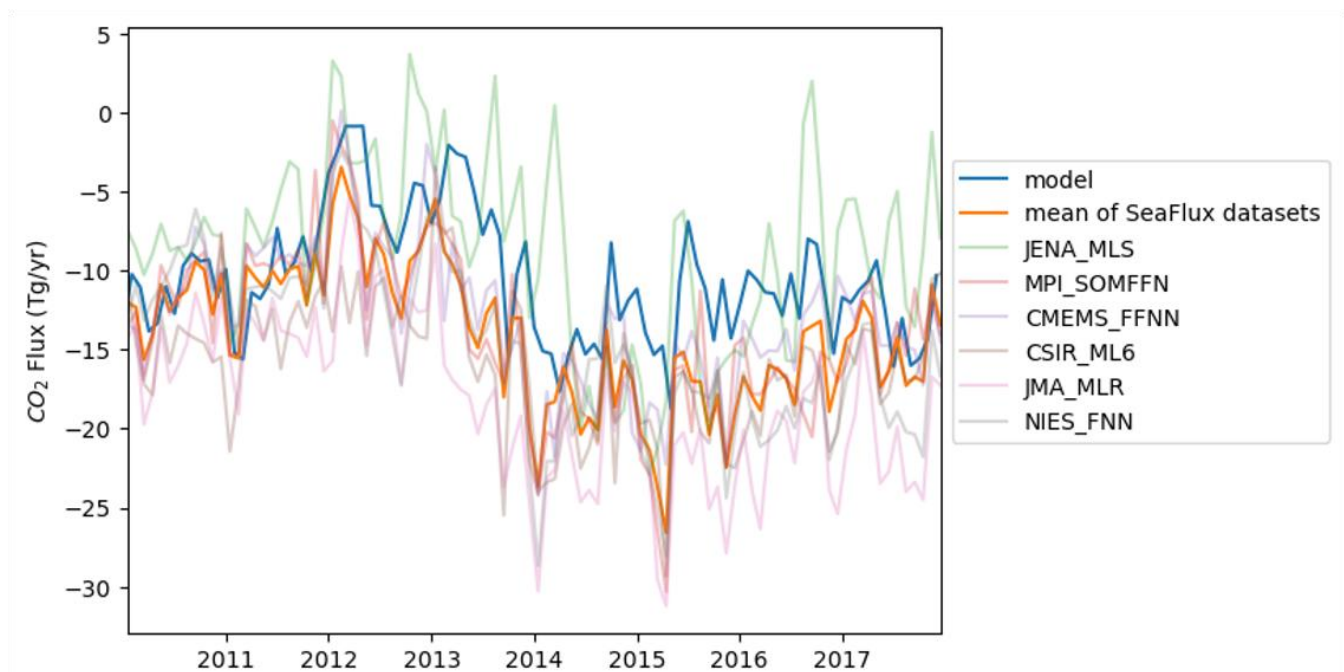


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Figure S3: Surface velocity (vectors) and DIC (colored shading) anomalies relative to 2010–2017, from June 2013 to November 2014. All variables have been detrended and deseasonalized. Velocities are smoothed using a 3-month moving average. The red star indicates the location of OSP.



15 **Figure S4: Comparison of the spatial distributions of annual CO₂ Fluxes averaged over 2014–2015 for (a) the ensemble mean of the SeaFlux products and (b) the model. Negative values indicate oceanic CO₂ uptake. The star in each panel marks the location of OSP. The black box (47.5–53.5°N, 208–223°E) in (b) indicates the central GOA area, same as in Fig. 7.**



20 **Figure S5: Time series of integrated CO₂ Flux over the central GOA. The SeaFlux ensemble mean is shown in orange, with individual ensembles indicated by thin lines with different colors, while the model is shown as a blue line.**