Ocean Science

Supplement of

Can assimilation of satellite observations improve subsurface biological properties in a numerical model? A case study for the Gulf of Mexico

Bin Wang et al.

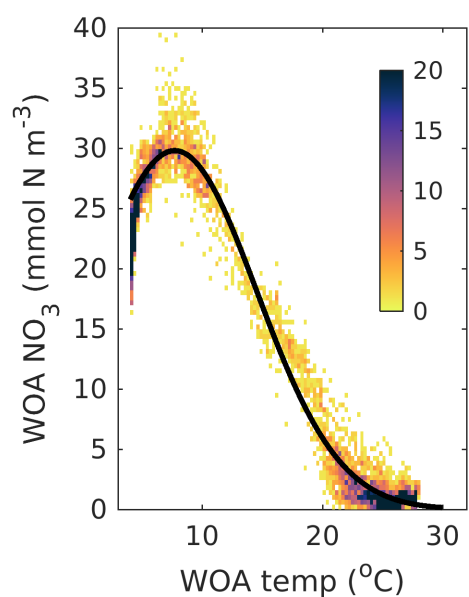*Correspondence to:* Bin Wang (bin.wang@dal.ca)

Figure S1. Empirical relations of temperature-NO3 derived from World Ocean Atlas in the Gulf of Mexico. Colors indicate the number of observations within each bin.
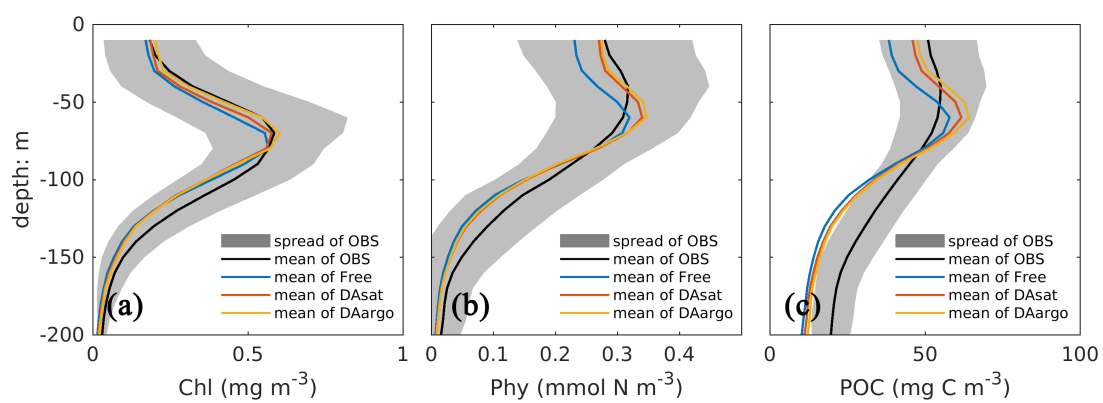

Figure S2. Vertical profiles of chlorophyll (a), phytoplankton (b), and POC (c) from BOEM floats and model experiments.
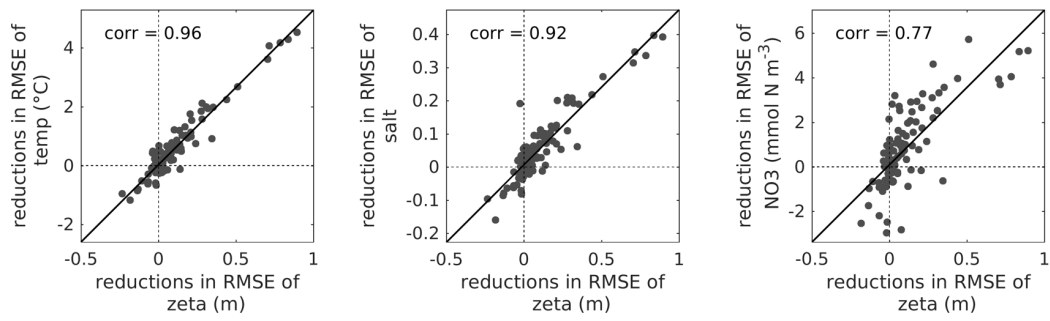
Figure S3. Correlations of improvement between zeta and temperature, salinity, and NO3
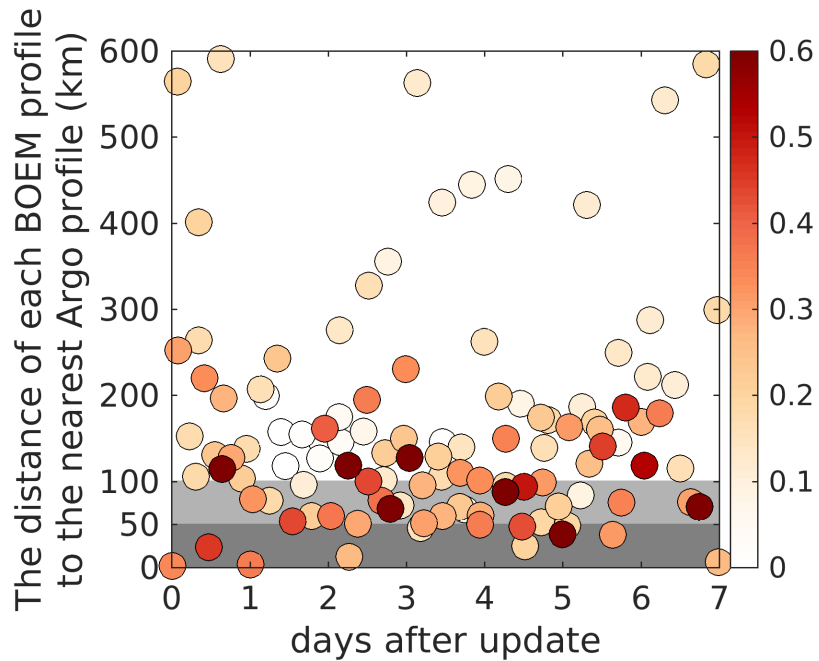

Figure S4 The root-mean-square-difference (RMSD) of temperature from each BOEM profile between two data assimilative runs, DAsat and DAargo (indicated by the color). The x-axis represents days of each BOEM profile after each data assimilation cycle and the y-axis represents distance to the nearest Argo profile