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Supplement of

Distinct phytoplankton responses to dust in the Chinese marginal seas: role of synoptic circulation and air–sea heat exchange

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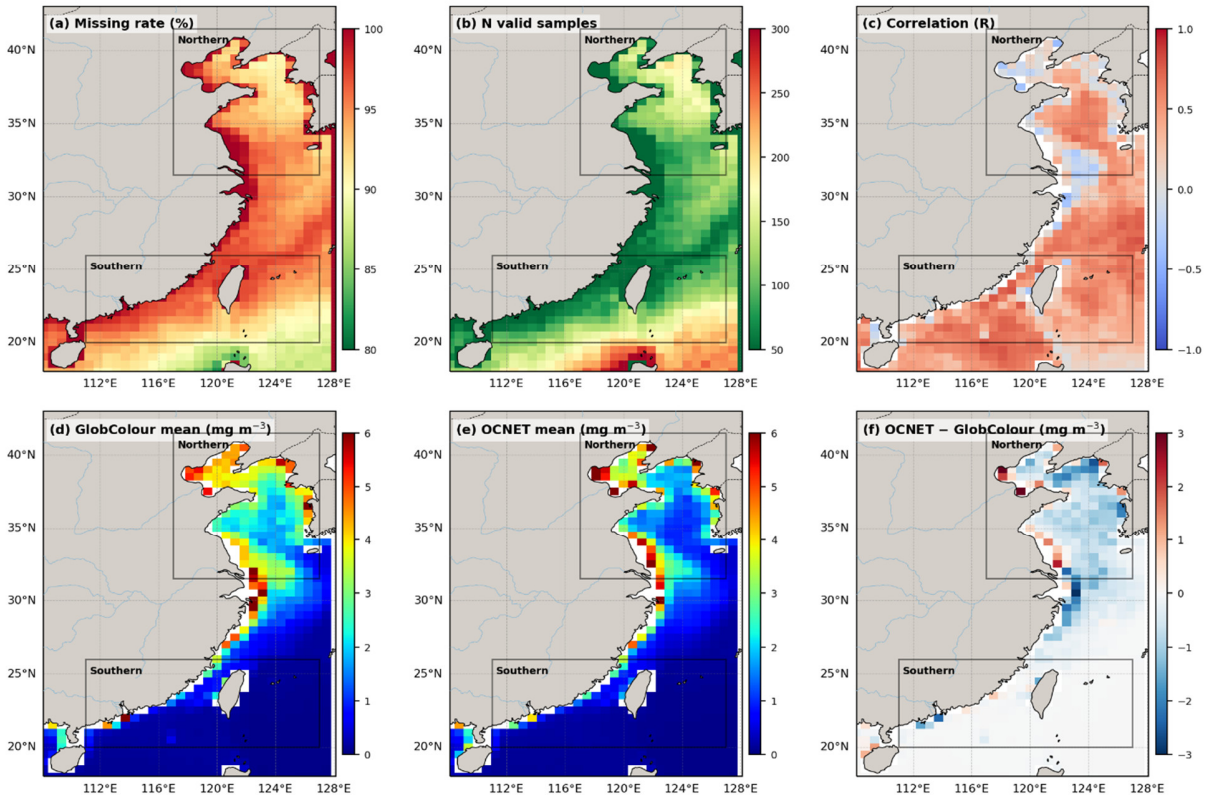

Figure S1. Spatial comparison between the GlobColour daily Level-3 merged chlorophyll-a product and the reconstructed OCNET chlorophyll-a product over the Chinese marginal seas. (a) Missing rate of the GlobColour observations during the study period. (b) Number of collocated valid daily samples used for comparison between GlobColour and OCNET. (c) Spatial correlation coefficient (R) between the two products based on collocated observations. (d) Climatological mean spring chlorophyll-a derived from GlobColour. (e) Climatological mean spring chlorophyll-a derived from OCNET. (f) Mean difference between OCNET and GlobColour (OCNET − GlobColour).

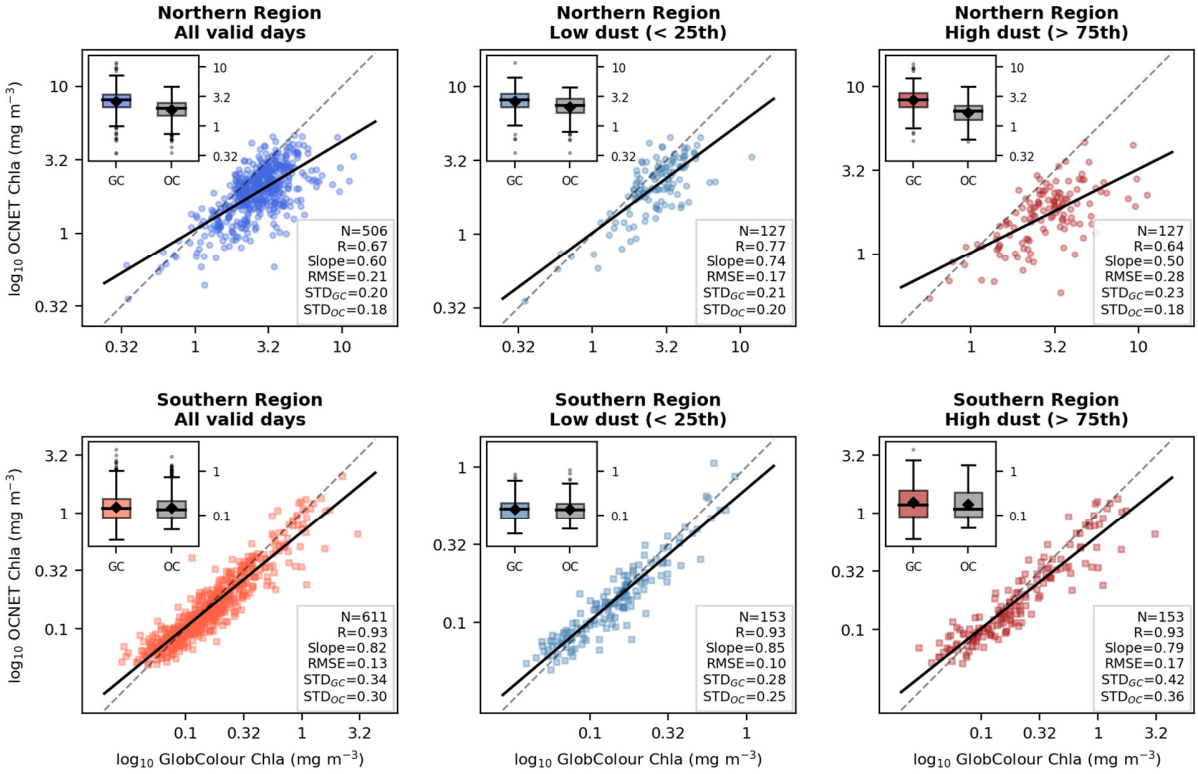

Figure S2. Comparison of chlorophyll-*a* between OCNET and the GlobColour observations using collocated valid samples over the northern (upper panels) and southern (lower panels) Chinese marginal seas under all observations, low-dust conditions, and high-dust conditions. The dashed line represents the 1:1 relationship, and the red line denotes the linear regression fit. Insets show boxplots of chlorophyll-*a* distributions for GlobColour (GC) and OCNET (OC). The corresponding statistics, including the number of collocated samples (N), correlation coefficient (R), regression slope, root-mean-square error (RMSE), and standard deviation (STD), are shown in each panel. To ensure sufficient sample size for statistical comparison, low- and high-dust conditions were defined as the 25th and 75th percentiles of daily DOD calculated from the collocated valid samples, respectively.