

## ***Interactive comment on “Seasonal to interannual variability of Chlorophyll-*a* and sea surface temperature in the Yellow Sea using MODIS satellite datasets” by Chunli Liu et al.***

### **Anonymous Referee #1**

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This manuscript examined the spatio-temporal variability of satellite-derived chlorophyll and temperature in 2003-2015 in the Yellow Sea. EOF, Morlet wavelet transform and wavelet coherence analyses were used in the data processing. Results and conclusions were also shown clearly. However, there are still several big problems in the manuscript structure and discussion part, which question the quality of this study. Therefore, I cannot recommend this paper to be published in OS until major improvement.

First, the sections of results and discussion are confused. Results part presented in this manuscript should be simplified, and figures 3-6 should be redrawn to show clear and important information. These figures could be easily got from satellite data without

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DINEOF method. The advantage of DINEOF should be shown, instead. Discussion part presented should be treated as the major results of this study, i.e. EOF analysis, CWT and so on.

Second, there are not enough discussions after the results analysis, for example, the interactions between physical processes (YSCWM, YSWC) and seasonal phytoplankton blooms in the YS.

Third, some conclusions lack reasonable explanation, for example, the negative cross-correlation between CHL and SST. “Lags of 4 months suggested that the CHL reached the maximum value 4 months after the SST got the minimum value in the YS” means June vs. February? These conclusions should be discussed detailed with enough scientific evidence.

Minor points:

Line 44, “affect human life” is improper here.

Line 48, “light and nutrient loads of CHL”, phytoplankton instead.

Page 19, Fig. 8 b & d labels of x-axis should be years.

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