Biogeosciences
Discussions

Open Access

EGU

BGD

Interactive
comment

Interactive comment on "Quasi-tropical cyclone caused anomalous autumn coccolithophore bloom in the Black Sea" *by* Sergey V. Stanichny et al.

Anonymous Referee #2

Received and published: 3 August 2020

There are quite a few studies on the changes of phytoplankton caused by tropical cyclone. The innovation of this research is the coccolith bloom induced by the tropical cyclone, which will be very interesting to the readers. I went through the paper and I have the following main questions.

1. The change of phytoplankton in the article is shown in Figure 4, which looks not consistent to Figure 2 (representing coccolith). The authors believe that the change of the Rrs555 represents the change of coccolith. But in my opinion, the change of Rrs555 may also be caused by non-algae particles. I didn't see how the authors excluded the high Rrs555 in the high value area (southern area) in Figure 2 because it was caused

Printer-friendly version

Discussion paper

by non-algae particles. I also didn't see the detailed explanation on the spatial and temporal difference of phytoplankton and coccolith. 2. The author believes that this quasi-tropical cyclone caused coccolith to increase for 1.5 months. How long did this quasi- tropical cyclone last in the Black Sea area? The MODIS true-color composite picture in Figure 1 was on September 27. The temperature, wind field, and Ekman velocity were also within two days of the typhoon. But why should Sea level and flow velocity be on October 10 and 9? Why not choose sea level or flow velocity on a certain day at the end of September? If the authors want to use flow velocity to show that current transfers nutrients and phytoplankton to the east. The author should add the average flow rate during this period, but not a certain day. 3. In Figure 4, the author chooses the images on September 10th, October 4th, why not September 18th and September 26th? What is the principle for the authors choosing the image?

―――――――――――――――――――