

egosphere-2025-6418

I am satisfied with the authors' revisions. In particular, the advantages of the SeaBird ECO sensor compared to other sensors are now clear. The paper effectively demonstrates both the strengths and weaknesses of the method. Although the SeaBird ECO sensor uses three excitation wavelengths, the results show that phytoplankton community structure can be roughly identified using the particulate backscattering coefficient and beam transmissometer. Therefore, I recommend this manuscript for publication in Biogeosciences after the following minor revisions are addressed:

L89: *Synechococcus*, *Trichodesmium*, and *Prochlorococcus* must be italicized. Please check this throughout the entire manuscript.

L90: "Kodama and Taniuchi" should be "Kodama et al."

L155 & L157: Chlorophyll a: Pigment names (e.g., chlorophyll) should start with lowercase letters as they are not proper nouns. Also, the "a" must be italicized.

L156: Use the full names for first mention: 19'-hexanoyloxyfucoxanthin (19'-HF) and 19'-Butanoyloxyfucoxanthin (19'-BF).

L240: As this is the first mention of pigment names in the main text, please define all abbreviations here (similar to Table 1).

L254: Please specify which software was used for the statistical analyses.

L299: Section 2.5.2 is missing or incorrectly referenced.

L324: The calculation for "impurity" is unclear. Please provide a brief description or formula

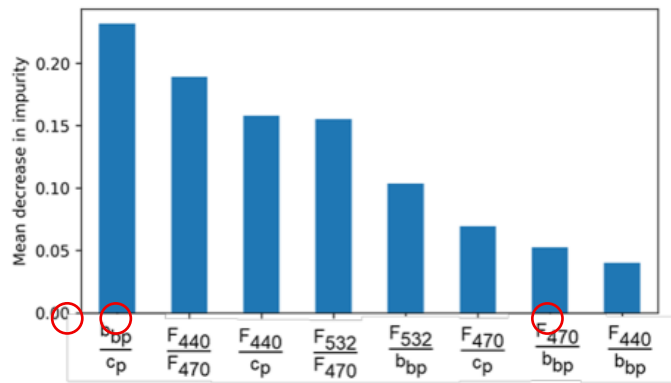
.L416 & L542: Use the abbreviations for fucoxanthin and alloxanthin consistently.

L500: Are the y-axis labels in Figure 4 correct? As currently shown, the precision scores appear extremely low. Please verify. Please check Figure 6 as well.

cp should be c_p .

Here, the authors used a paired t-test, but they should adjust the p-value using the Bonferroni method or use ANOVA.

.L530 (Figure 5): There are rendering issues in my environment (see the red-circled parts in the attached). Please fix these. Additionally, since these are mean values, please add error bars (standard deviations).



Before the next submission, please check the entire manuscript. The contents are good but there are several errors in the text. I pointed out that I noticed, but this is the author's responsibility, not a reviewer's.