

**Dear Karen J. Heywood (Ocean Science, editor) and  
Dear reviewers (#1 and #2)**

We are grateful for the important suggestions made by both the editor and the reviewers. The editorial decision to 'reconsider after major changes' has motivated us to refocus and thoroughly address the necessary corrections. Especially because we consider our results to be a relevant contribution in the way of using hyperspectral reflectance of the ocean surface in phytoplankton monitoring, particularly on harmful algal blooms.

#### **General comments on the revision/correction**

The improvements we have made are undoubtedly a major revision of the manuscript. A panoramic view of the text with corrections will give the impression of a major intervention that could be difficult to understand. We have followed your observations and recommendations and believe we have substantially improved the manuscript. The general guidelines followed in the revision, along with correcting several minor details, were related to highlighting the centrality (focus) of the contribution of the work, improving the fluency of its reading and better ordering the results. Once these corrections were completed, a professional revision of the written English was carried out, as suggested. Please note that the final version of the manuscript differs from the version with the author's changes (Author's track-changes file), as the former includes the corrections in English.

Following these guidelines, we have made corrections in each section of the manuscript. In the introduction, we sought to eliminate redundancies and better order the background information in order to highlight the focus of the paper. In addition to minor corrections, in materials and methods, the information in table 1 was supplemented and clarified, and we decided to send it to supplementary material, and it is now Table S1.

The biggest modifications occur in the results. We highlight here a change of order. In the results of the new version of the manuscript, the first section (3.1) now corresponds to the description of the reflectance patterns in relation to phytoplankton, while the second section (3.2) describes briefly the oceanographic variables and their relation to reflectance. This last section (formerly 3.1 and now 3.2) was significantly shortened. Following expertise suggestions, the oceanographic data were summarised in a scatterplot, so the previous figures 3, 4 and 5, as well as table 5, were substituted. Consequently, we focused just on a brief description of site context from the scatterplot (figure 7, in new manuscript).

Finally, the discussion and conclusions were reordered and simplified (eliminating redundancies) to make them easier to read focusing on the results and their relevance.

#### **Specific responses**

##### **Response to Editor**

Regarding to your specific recommendation, all the figures were re-dimensioned to make them as large as possible according to the journal format. Thanks to your suggestion, the bathymetry in first figure has also been corrected. Following your advice, the Table 1 has

been reviewed, and we included date and depth information, as well as correcting Chaparano name not just in table but also in all manuscript.

### **Response to reviewer #1**

As you will see, following your recommendations and those from the editor, corrections have included the reduction of redundancies, the tidying up and strengthening of background citations, and a professional revision of the English language. In doing so, we believe we have improved the clarity and fluency of the manuscript. In response to your specific suggestions, we comment on the following:

Line 55 (now on line 50-53). Following your suggestion, we have sought to provide greater clarity to the statement.

Line 58 (now in line 49). The full name of PACE has been included.

Line 59. The sentence has been deleted in the context that the paragraph has been reworded, eliminating redundancies. (See the paragraph in the lines 37- 53)

Line 61. As indicate before, the paragraph has been reordered and/or rephrased in order to clarify. (See the paragraph in the lines 37- 53)

Line 62: Although the paragraph has been reworded, you still can find the change of the word “register” by “detect” in the text, as you suggest.

Lines 75 and 80: This sentence has been deleted here and the topic resumed in the discussion. When CDOM is mentioned for the first time on the manuscript is referred as “Coloured dissolved organic matter” as suggested. In fact, all acronyms were revised and defined at first appearance. (See the line 361)

Line 91: This sentence has been reviewed and improved. (now in the lines 69-72)

Line 126: This suggestion has been incorporated (now in the line 106).

Line 146: This requirement has been considered, and the local time was indicated in the text. (now in the line 123)

Line 251: Thanks for this comment. We have standardised the format of Chl-a throughout the manuscript to ensure that it matches in all cases..

About Availability Statement: The data base has been registered in zenodo.org and the pertinent DOI have been given.

### **Response to reviewer #2**

Many thanks to you to sheer your concerns about the lengthy Section 3.1. As you will see in the new manuscript the most significant changes have been done in this section. Most of the information was synthesised in a scatterplot, describing the site context from this figure.

Again, many thanks to all of your contributions to improve the manuscript. We hope that we have responded not only to your observation but also to your expectations and demands.

A kind regard

Daniel Varela