

Reply to the Topic Editor

We thank the Topic Editor of the manuscript for its careful revision and thoughtful comments and suggestions. We have considered all of their suggestions and responded below (in blue) to each individual comment (in black). We hope that we have been able to solve all technical issues suggested in our revised text.

Comments to the Author:

The authors have adequately addressed the issues/concerns of the reviewers. I only have a few minor technical corrections for the authors to consider.

Minor Suggestions

line 83 "We refer Chl-a to here as the direct sum of these two compartments, and it will be used as a proxy for primary production." change to "Here we ascribe Chl-a as the direct sum of these two compartments, and it will be used as a proxy for primary production."

Line 90 "that on-line coupling means here one-way forcing .." change to "that on-line coupling is a one-way forcing ..."

Line 175 "The observation data set..." change to "The observational data set ..."

Line 177 "that consist on daily-accumulated ..." change to "...that consist of daily-accumulated ..."

Line 182 "(Data from SeaWiFS," change to "(data from SeaWiFS,"

Line 376 "... to simulate using an holistic modelling system..." change to "...to simulate using a holistic modelling system..."

Line 411 "In this regard, it is important to notice that our multivariate analysis scheme allows corrections on five nutrients, ..." change to "In this regard, it is important to notice that our multivariate analysis scheme allows corrections of five nutrients, ..."

Line 480 "As shown throughout the text, the assimilated system has brought us promising results." change to "As shown, the assimilated system has provided promising results."

Precedent suggestions have been taken into account and modified accordingly in the new version of the manuscript.

Line 511. "...prospects of BIO-Argo floats ..." Check, these float are now more commonly referred to as BGC-Argo, <https://biogeochemical-argo.org/>. Suggest change to "...prospects of BGC-Argo floats ...", here and elsewhere.

As suggested, BIO-Argo is now referred to as BGC-Argo throughout the text following the most commonly used term.