

BG-2019-504 Responses to Editors' comments

Deadline for revision: 16 april 2020

Co-Editor-in-Chief

The manuscript could be significantly improved and shortened by checking the language. I have taken the liberty of making suggestions on the attached annotated manuscript up to line 219 (beginning of section 3. Results) and would urge the authors to have the final version checked by an English native speaker.

Thank you very much for your thorough reading and comments on the manuscript. They have been taken into account in the present revised version, and “propagated” after the section 3. Unfortunately, we did not have the possibility to go further given the short deadline and the particular working dispositions that we all encounter in these days. However, in response the comment of the reviewer 2, several parts of the manuscript have been shortened and rephrased during the previous round.

Associate Editor

The abstract still needs some work to properly highlight “the main results, their novelty and implications” as requested rightly by reviewer 2. Indeed, in its present form, the abstract, very similar to the previous version does not present clearly enough what is highlighted in the work presented: what are the main messages?

The abstract has been rewritten in order to highlight the main messages (L.12-28).

There is one important point raised by rev2 about the role of the biological carbon pump for LIW fertilization. Although you provided new interesting figures to explore the mechanism of remineralization using AOU, you are defending your choice not to develop that aspect in the revised ms. I agree that this would probably extend too much the text that is already quite dense, and this is not central for the present work. But considering the work that you have done to answer to this comment, I recommend that you present more explicitly than is currently the case, this interesting follow up, at the end of the conclusion.

A sentence has been added at the end of the conclusions (L.645-648).

Nitrate dataset: need to mention (section 2.2) that there are 2 sets of analysis and that this study is focusing on high concentrations below the SML (just to be consistent with the data set presented in the introduction paper).

Done (L.136-139)

L23: remove “s” at “floats” “Nitrate profiles collected by the floats” (only one float with SUNA data)

This sentence has been removed from the abstract.

L243 replace “by the way” by “it has to be noted”

Done