

Biogeosciences Discuss., author comment AC2
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Reply on RC2

Marie Barbeau et al.

Author comment on "Biological production in two contrasted regions of the Mediterranean Sea during the oligotrophic period: an estimate based on the diel cycle of optical properties measured by BioGeoChemical-Argo profiling floats" by Marie Barbeau et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-123-AC2>, 2021

Dear Editor and Reviewers,

We are very grateful to both Reviewers for their detailed review and constructive comments and recommendations. We hope that we have provided satisfactory response to their comments and proposed appropriate revisions in the manuscript. Our main revisions can be summarized as follows:

-We have clarified and corrected the presentation of the sampling scheme of the profiling floats deployed in the Ligurian and Ionian regions. We have also clarified the method we applied to quantify the daily variations in the optical properties and estimate community production.

-We provide additional examples of the diel cycle of the optical properties in different layers of the water column for both study regions.

-We have clarified the method for quantifying daily (sunrise to sunrise the next day) variations in optical properties and incorporated results of the diel (sunrise to sunset) variations of the optical properties.

-We have provided additional information on the factors responsible for diel variations in the optical properties.

-We have complemented the description and discussion of the characteristics and mechanisms underpinning the two contrasted (Ligurian and Ionian) SCM systems and provided the PAR vertical distribution over the considered time series.

-We have reduced the Conclusion by about one third.

Our detailed responses can be found in the attached document.

Thank you for your time and consideration of our manuscript.

Sincerely,

Julia Uitz on behalf of all co-authors

Please also note the supplement to this comment:

<https://bg.copernicus.org/preprints/bg-2021-123/bg-2021-123-AC2-supplement.pdf>