Biogeosciences

Discussions

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Interactive comment on "Regulation of inorganic carbon acquisition in a red tide alga (*Skeletonema costatum*): the importance of phosphorus availability" *by* Guang Gao et al.

Anonymous Referee #2

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This manuscript reports results of experiments which aim to investigate the link between P availability and the C uptake by S. costatum diatoms. While apparently interesting interactions were observed, insufficient detail is provided about the methods, and I have reservations about the suitability of the statistical analysis employed.

Major Comments

The introduction would benefit from adding hypotheses.

The methods section has a rather low amount of detail for each of the methods presented, with details of instrument manufacturers and models, and references frequently missing. In particular, there is no mention of how cells were counted, and normalising

this is an important aspect of many of the measurements.

I am also not convinced that 3 replicates of each treatment is sufficient, at least not for the parametric statistical testing that is employed.

The results section does not report what the actual values of the measured parameters were, only the results of statistical tests for differences between treatments.

There is rather limited discussion of the mechanisms behind each of the effects observed.

Minor Comments

Not all of the figures are referred to in the text, or at least not in the correct order (there is no Fig. 3 reference between the first reference for Fig. 2 and that for Fig. 4).

Line 10: Define rETR the first time it is used.

Line 43: This should say 'limiting', not 'limited'.

Line 48: Give the name in full the first time it is used, and where it is used at the start of a sentence.

Lines 54-60: Please define all these acronyms the first time they are used.

Line 88: I don't think the units given here for irradiance are correct (micromoles per m squared).

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2017-475, 2017.