

Interactive comment on “Global marine plankton functional type biomass distributions: *Phaeocystis* sp.” by M. Vogt et al.

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Overall comments

This is a nice paper that should be accepted with only minor revision. It describes the global distributions of *Phaeocystis* biomass. Given the key roles of *Phaeocystis* playing in the biochemical cycling, the implications of these results are important. The paper is well-written justified and readable. I think these data is very clear and useful although more data is required.

Specific comments

1. The abstract adequately summarize the whole ms. The abstract is easily understood even without reading the entire manuscript. But I don't think the conference “Menden-

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Deuer and lessard, 2000” should to be listed in the abstract section.

2. The Introduction The Introduction clearly explains why the authors perform the study and write a manuscript. It’s very good. In line 6, page 409, suggest inserting (Medlin et al. 1994 and/or Medlin and Zingone 2007) after colonies.

3. Method The data and biomass conversion are scientifically sound. Especially I like the methods to determine the top and bottom limitation using treating the unspecified Phaeocystis cells.

4. Results The results are clear, the analysis of the data are well executed. In line 25, Page 415, one of “winter” should be deleted. Here is my question: In the table 2, I note the colony diameter of *P. globosa* ranged from 10-30,000 μm . To my knowledge, the giant colonies were only observed along the coast of East Asian (eg. China, Vietnam), but in the figure2, 5, 7 and 9 why I can’t observe the distributions of giant *P. globosa* in Asian ocean?

5. Discussion Its very nice. As authors pointed, the data is not enough to describe fully the global biomass distribution of Phaeocystis. Given the uncertainty in the Phaeocystis colony structure, counting method and life cycle, I can’t tell how make it better.

6. Tables and figures All the tables and figures are easily understandable, and illustrate the important features of the results.

7. Presentation quality As a non-English native speaker, I’m unable to make any comments on this aspect, but it’s very easy for me to read and well understand.

In my option, this manuscript is well worth of publication. I hope that my comments are of value. I have no objection to being identified as the referee.

Yours sincerely,

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