

Dear Koji,

We are very glad to hear from you. Thank you for your arduous work and very useful comments. Your comments not only improve this manuscript, but also favor the improvement of our paper writing in the future. We have revised the manuscript carefully according to your comments. Here are the answers to the specific comments:

It is a great pleasure now to accept your manuscript for publication in Biogeosciences. Thank you for responding to the reviewer's comments carefully. Before it is published, please consider my editorial comments below:

L22: Not "The Medium", but "the Medium".

Reply: We have changed "The Medium" to "the Medium".

L25 and thereafter: Please rewrite the sentences regarding the matters the authors conducted or someone reported into the past tense. For your reference, below are instructions about this issue from Scitable by Nature Education:

<http://www.nature.com/scitable/topicpage/effective-writing-13815989>

- Using the right tense

In your scientific paper, use verb tenses (past, present, and future) exactly as you would in ordinary writing. Use the past tense to report what happened in the past: what you did, what someone reported, what happened in an experiment, and so on. Use the present tense to express general truths, such as conclusions (drawn by you or by others) and atemporal facts (including information about what the paper does or covers). Reserve the future tense for perspectives: what you will do in the coming months or years. Typically, most of your sentences will be in the past tense, some will be in the present tense, and very few, if any, will be in the future tense.

Reply: Thanks a lot. We have went through our manuscript and revised the tenses carefully.

Best wishes,

Shilin Tang