Biogeosciences Discuss., 6, C3964–C3965, 2010
www.biogeosciences-discuss.net/6/C3964/2010/

Biogeosciences Discussions

Interactive comment on "Effects of long-term high CO_2 exposure on two species of coccolithophores" *by* M. N. Müller et al.

Anonymous Referee #2

Received and published: 14 January 2010

They use often "generation time", but how do they define it? They should define it to gain attention from all scientists in a field of biogeoscience.

It may be obvious for algal physiologists but they should give a reason why they used f/20 medium because they discussed nitrate limitation latter in the Discussion.

It may be too detail to mention but it is critical. As algal physiologist, I can not understand what the growth rate means. What time interval do they consider in their calculation in the section of 2.4 Cell counts on p.10968. Without any time unit, nobody understand what does it mean. And suddenly unit of per day appeared in the section of 3.1 Emiliania huxleyi on p.10969! They talked about Fig.2B. They showed 15 data points during the period of 98 days of experiment. Although they mention a duplicate of semi-continuous culture, how did they collect samples to calculate the growth rate?

Although they mention a duplicate of semi-continuous culture, why do they have only one data for open circles?

On p.10973 they should provide how to estimate why 88 micro-mol per liter (?) is sufficient for the species of E. huxleyi. If all 88 micro-mol nitrate was converted to cellular nitrogen, how many cells of E. huxleyi can they estimate? The statement of "POC:TPN ratios of about 10 and higher were observed in E. huxleyi under nitrogen limitation" is conflicting with the statement of "the maximal growth rates under nutrient replete, similar temperature and light conditions". They are not talking about the same idea in the two statements. It would be much convincing if they showed the direct measurement of nitrate in f/20 medium.

In 5 Conclusions, how can they draw the concluding paragraph at the end from the preceding paragraph? It is too general.

They should run appropriate statistical analysis to talk about any difference.

Interactive comment on Biogeosciences Discuss., 6, 10963, 2009.