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3, S1074-S1075, 2007

Interactive Comment

## Interactive comment on "Significant long-term increase of fossil fuel CO<sub>2</sub> uptake from reduced marine calcification" by A. Ridgwell et al.

A. Ridgwell et al.

Received and published: 23 June 2007

Many of the comments surround the place of the carbonate production feedback in the wider Earth system picture as well as in the context of other interlinked feedbacks. However, in an initial revision we found that too much discussion of the myriad feedbacks related to marine carbon cycling in the Earth system tended to hinder rather than illuminate. We have thus not gone 'over-board' in our revision and expansion of the Introduction.

We have re-written and added to the text to help address our being too "insufficiently detached from their specialization", although fundamentally, our work on constructing and applying an ensemble of Earth system models to quantifying the carbon cycle implications of reduced marine calcification must inevitably contain specialized elements ... Specifically, we have explained in more detail and simpler terms the parameter val-

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ues and equations used and discussed in the paper, such as in explicitly addressing the requests: "Why do I have to wait for the end of the paper to find an explanation (hardly a definition) of n? Why aren't you a little more helpful with explaining k ('an overall scaling constant'). Why do you explain only one page later why OHMEGAhas to be subtracted by 1? What are the 54 members of p. 4?"

Interactive comment on Biogeosciences Discuss., 3, 1763, 2006.

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