Interactive comment on “Significant long-term increase of fossil fuel CO₂ uptake from reduced marine calcification” by A. Ridgwell et al.

A. Ridgwell et al.

Received and published: 23 June 2007

The Referee lists a number of specific comments, which we have addressed as follows:

> Page 1765, line 12: We have expanded on the description and added additional equations for completeness as requested.

> Page 1766, 1st par: We have re-written the description of the fitting procedure.

> Page 1766, line 9: “At values 0 < n < 1 as given in the table the smallest value gives the strongest sensitivity near OHMEGA=1.” We have not addressed this because the referee’s point is completely unclear.

> Page 1766, line 17: We have expanded on the reference to the EnKF method and added the reference suggested.
> Page 1767, line 5: We have made available the parameter values of all 54 ensemble members as electronic information. We have also clarified which parameters are calibrated and added a new table (#2) to summarize these.

> Page 1767, line 22: The omission of sediment interaction has been clarified.

> Page 1768, line 15: Organic carbon export value has now been quoted and some discussion of this added.

> Page 1769, line 9: Wording altered as requested.

> Page 1771, line 11: We have added some additional discussion regarding the feedback implications of bulk POC production vs. ecosystem composition (potentially affecting POC penetration).

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