

Interactive comment on “Coccolithophore surface distributions in the North Atlantic and their modulation of the air-sea flux of CO₂ from 10 years of satellite Earth observation data” by J. D. Shutler et al.

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We thank Alberto Borges for his helpful comment. His short comment is shown below in *italics* and is followed by our response.

The authors rightly mention that besides by calcification, coccolithophores also affect carbonate chemistry and air-sea CO₂ fluxes by gross primary production (at community scale this will be further modulated by community respiration) (Page 5834 L 15-24). It might be worth mentioning that this has actually been confirmed by field observations

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in the Bay of Biscay of calcification, primary production (14C incubations), net community production (mass balance), in parallel to the description of several variables of the carbonate chemistry including pCO₂(Harlay et al. 2010; 2011; Suykens et al. 2010).

As suggested we will reference these papers in the discussion and explain that the processes have been observed by field observations.

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