

***Interactive comment on “Interhemispheric gradient of atmospheric radiocarbon reveals natural variability of Southern Ocean winds” by K. B. Rodgers et al.***

**C. Hatté (Editor)**

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Dear authors

Based on the three reviews and on my own reading, I would recommend moderate to major changes in the manuscript before being publishable in *Climate of the Past*.

Specifically I would recommend a re-writing of the introduction to fulfill its role. It should provide a comprehensive state-of-the-art by reviewing all similar studies and a pertinent description of the model, including its already known deficiencies. The discussion would thus be easy to follow.

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It would be also interesting to address the sensitivity of the model to the gas exchange parameterization as highlighted by reviewer #2.

Moreover the point mentioned by reviewer #1 on GCM nudging and flux correction is a corner stone of the paper and should be addressed. What can be done with the GCM to account for subsurface water masses?

As often as possible, please specify your mind and the calculations. Reviewer #3 highlights numerous points that would require clarifications and consequently would benefit to your manuscript.

Finally, we would appreciate an editing work to finalize the paper. There are a lot of typographical errors.

all the very best

Christine Hatté

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Interactive comment on *Clim. Past Discuss.*, 7, 347, 2011.

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