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CPD

3, S186–S187, 2007

Interactive Comment

Interactive comment on "Synchronization of ice core records via atmospheric gases" *by* T. Blunier et al.

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The two reviews make it clear that this paper, after some revision, should become publishable in CP, and I strongly urge the authors to submit a revised version to CP. This should take account of/answer all the comments of the reviewers.

I recognise that there is one comment (asking for a 15N measurement) that, while suggesting a very interesting and desirable measurement, may be impractical within the time constraints of this paper. If the authors can do something, then great. But I would accept just a discussion (expanded from what is mentioned in the conclusions) of the potential for further improving timescales in the Antarctic in this way.

I would like to particularly emphasise to the authors to re-write the section about the



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model "ss09sea..fitted to the counted time scale" on page 369, and the part following about porting the delage between GRIP and NGRIP. I personally found that, despite several re-readings, I could not follow what had been done. This should be explained more clearly.

The paper should also mention more explicitly the issues about possible errors in delage that are raised in the companion Loulergue et al paper, which has many of the same authors. Of course the same material should not be re-written, but this paper should make it clear that some uncertainties about the whole basis of the delage calculation do remain.

Finally, I think it would be useful to mention the way in which the methane synchronisation to GICC05 was used in the timescales EDC3 and EDML1 used elsewhere in this special issue. I believe that the most recent two markers (start of B/A and end of YD) were used as age controls on the modelled timescale, and one of them was also used as an exact correction to the age scale (see Parrenin et al paper).

I look forward to seeing the revised paper and the responses to the review comments.

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Interactive comment on Clim. Past Discuss., 3, 365, 2007.