

Interactive comment on “The 8.2 ka cooling event related to extensive melting of the Greenland Ice Sheet” by H. Ebbesen et al.

H. Ebbesen et al.

Received and published: 16 December 2008

1. Blaauw and Reimer commented on a missing explanation of the calibration procedure (Table 1). We are aware of the misunderstanding and will change the text regarding Table 1 and remove the 400 yrs text so there will be no misunderstandings in this respect.
2. Regarding the deltaR in the area we have chosen to exclude it, since we believe that as far as accurate information is available, the relative difference in deltaR for various coring sites is not significant with regard to our overall interpretation and conclusion.
3. Possible changes in the reservoir corrections over time are of course an important issue, but in our case potential changes must have affected all sites in the same way during the relatively limited time window we focus on, as all coring sites are underlying

(subsurface) Irminger Sea Water masses. Within this context it can be stated that there is no evidence for major mixing/ventilation changes in the Irminger Sea basin during the time involved. More generally, assuming a 400 yrs reservoir age as was also applied for previously dated South Greenland cores has been justified by other stratigraphic information as reported by Jensen et al. (2004)*

4. Blaauw and Reimer point out the fact that two of the marine cores have a very low dating resolution. We agree that this is not optimal for the study and the age models but this was the core material and information presently available. In spite of the low resolution we decided to add them in our study as the records provide relevant foraminiferal and magnetic susceptibility data suggesting the same conditions as inferred from the other core records. For the future we plan additional work for improving the resolution of the two cores.

The detail comments: The calibrated ranges of core DA00-06 have been taken from the paper of Lloyd, 2005. In that case the intcal98 was used instead of intcal04. This mistake will be corrected in the paper. The difference between intcal98 and intcal04 results is very small and therefore there will be no changes of any significance in our interpretation. The reference of Lloyd, 2005 will be added in the reference list of the paper. Plant material from core PO243-451 was marine and therefore the marine calibration curve was used. This comment will also be added in table 1.

*) Jensen, K.G., Kuijpers, A., Koc, N., Heinemeier, J., 2004. Diatom evidence of hydrographic changes and ice conditions in Igaliku Fjord, South Greenland, during the past 1500 years. *The Holocene* 14 (2), 152-164

Thank you for the constructive comments.

Interactive comment on *Clim. Past Discuss.*, 4, 1219, 2008.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)