

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

**V. Masson-Delmotte (Editor)**

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Dear authors,

Based on the two reviews and two short comments received for your manuscript, your manuscript is not suitable in the present form for publication to Climate of the Past. The main interpretations are not fully supported by the available data. While some of the suggestions could be faced with major revisions (adding more explanations, describing the uncertainties...), others require more work on the datasets themselves.

Due to the strong interest to document changes in early Holocene Greenland glacial meltwater, and the potential demonstrated here, I recommend to the authors to deploy further efforts to take the best advantage of their sediment cores, to improve the reso-

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lution / temporal coverage, to improve the dataset and the manuscript, and resubmit a revised manuscript to Climate of the Past.

The authors are encouraged to improve the following aspects : - providing details regarding the chronological issues which are essential for the interpretation of the data; - improving the temporal resolution of the datasets making possible the discussion of "centennial events"; - providing longer Holocene context to place the described variability in a longer context and detect "unusual" versus "usual" events; - improving the description of the hypotheses regarding the interpretation of the data (in particular the links between the magnetic susceptibility and silt); - in general, providing a fair evaluation of the uncertainties associated with the dating, the identification of "events" (detection versus background variability), and with the proxies.

Minor corrections have also been listed by the reviewers, including suggestions for key references related to the reaction of the Greenland ice sheet, changing the title, providing all the datasets listed in the figures (one figure seems to be missing 2 panels). I suggest that the new manuscript could have more than 2 text sections and could include sections on the material and method, results, discussion and conclusion.

Sincerely,

Valerie Masson-Delmotte.

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

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