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9, C1756-C1757, 2013

Interactive Comment

Interactive comment on "¹⁰Be in last deglacial climate simulated by ECHAM5-HAM – Part 1: Climatological influences on ¹⁰Be deposition" by U. Heikkilä et al.

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The authors tackle the problem of a climate influence on the 10Be deposition onto polar ice sheets, particularly for times beyond the Holocene. I (Horst Fichtner, hf@tp4.rub.de) consider the study as sound and publishable by CP, but have a few comments that the authors should consider for the preparation of a revised version:

Major:

(1) What is the reason to include both cases "10k" and "11k" for the simulations, given that their characteristics as provided with Table 1 are almost identical? From those

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values one would certainly not expect to find any significant differences in the corresponding 10Be simulations, which appears to be confirmed by the results described.

(2) In the last sentence (page 14) it is stated that "the reconstructed snow accumulation rate [...] adds some uncertainty". It would be helpful to a reader to quantify this uncertainty.

Minor:

- (a) The title would better (?) read "10Be in the last deglacial...".
- (b) A few abbreviations (EOF, SLP, SAM, NH, SH) appear to be undefined or to be defined too late in the manuscript. Although their meaning might be obvious, a manuscript should be self-contained. The abbreviation "GHG" is introduced on page 4 but not strictly used in the following text.
- (c) Shouldn't the sentence "... sea ice cover to be described." (page 3) better read "... sea ice cover to be prescribed." ?
- (d) The x- and y-axes in Figure 2 and the x-axis in Figure 3 need labels.

Interactive comment on Clim. Past Discuss., 9, 3681, 2013.

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