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Geoscientific Model Development Discussions

Interactive comment on "Ice-sheet configuration in the CMIP5/PMIP3 Last Glacial Maximum experiments" *by* A. Abe-Ouchi et al.

Anonymous Referee #2

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I agree with the previous reviewer that the paper by Abe-Ouchi and 10 others on dealing with ice sheet boundary conditions in CMIP5/PMIP3 LGM experiments is useful. Being rather technical in nature, GMD should be a well-suited forum for the paper, and it deserves being published after some minor modifications.

My main criticism is that, in some places, the paper reads as if its main intention were to be a guide for dealing with the presence of ice sheets in further CMIP5/PMIP3 experiments. For instance, the very first sentence in the abstract: "We describe the creation of boundary conditions ... for use in LGM experiments ... as part of ... CMIP5 and ... PMIP3". However, with the publication of the IPCC AR5 in 2013/2014, CMIP5/PMIP3 is essentially history, and the community is now heading towards CMIP6 (including a further stage of PMIP). So I suggest to be more outspoken on this point, change

the manuscript accordingly and, in section 5 (Discussion and conclusions), discuss in some more detail the perspectives for future work.

Minor issues:

"Eurasian Ice Sheet" vs. "Eurasian ice sheet" etc.: Both forms are OK (with a slightly different touch). However, capitalisation or non-capitalisation should be done uniformly.

I suggest to replace "altitude" by "elevation" throughout the manuscript. Altitude is more commonly used for heights above some reference for points or objects _above_ the ground (e.g., airplanes), while elevation is the preferred term for heights above sea level of locations _on_ the ground (e.g., the surface of an ice sheet).

Page 4313, line 23: "observation margin" -> "observed margin".

Page 4314, line 21: "Jun'ici" -> "Jun'ichi" (I suppose).

Table 1: The notation for the latitude and longitude intervals is strange. Rather add square brackets, e.g., "-89.5, 89.5" -> "[-89.5, 89.5]". Further, the units are missing for all latitudes and longitudes.

Table 2: "Implied changes" -> "Implied changes (LGM - present)".

Table 3: In all three "change" columns, the units are missing. As for the last column (resulting change in temperature Delta_tas), exactly what temperature is that? BTW, "tas" is a strange symbol for temperature.

Figures 6-9: Units missing.

Interactive comment on Geosci. Model Dev. Discuss., 8, 4293, 2015.