

Message by the editor:

dear authors,

Could you please double check the figures, and more specifically the axis labels. Some don't have any at all (fig 2) or the units are missing. Figure 5 has f on the a) panel and $f(1/ka)$ on the b) panel. It is very possible that for some there is no unit or the values are 'arbitrary' or the value are normalized. Could you please let the reader know as well.

There is no 'data availability' section in the manuscript. Could you include where the NGRIP, the LR04, any other data are available? Are some of your models available somewhere? Or any other available data resources.

Regards

Answer by the Authors:

Dear Editor,

We would like to thank you again for the effort you put into handling the review process of this manuscript and for accepting the current version of the manuscript.

With regard to your comments, we have implemented a few last minor changes:

- We have added the following sentence to the caption of Fig. 2:

the abscissa is time in years, the ordinate is temperature anomalies in ° C, with respect to a 30-year climatological average for 1951–1980.

Fig. 2 is reprinted from another publication and the original version does not have axis labels. In order not to change the original figure, we refrained from adding labels to the axes.

- In Fig. 5 we have changed the x-axis label in panel a) from ' f ' to ' $\log(f[[1/ka]])$ '. Furthermore, we have corrected the citation. The figure is adapted from Le Treut et al. (1988) and not from Le Treut and Ghil (1983) as indicated mistakenly before.
- In the caption of Fig. 12 we replaced

FHN model fit to the NGRIP $\delta 18\text{O}$ data.

by

FHN model fit to the NGRIP $\delta 18\text{O}$ dataset of 20-year means, as published as a supplement to Seierstad et al. (2014) (see also Rasmussen et al. (2014)).

Originally, the North Greenland Ice Core Project members (2004) reported a 50-year-mean dataset.

in order to unambiguously indicate the origin of the data.

- The caption of Fig. 13 was supplemented by the text in green, to clearly indicate the origin of the data:

Glacial-interglacial cycles simulated by the modified Daruka and Ditlevsen model of Eqs. (29, 31): (a) June 21 insolation $F(t)$ at 65°N , normalized to have mean zero and unit standard deviation over the last 1 000 kyr, according to Laskar et al. (2004). (b) Slowly changing parameters $\alpha(t)$ and $\beta(t)$ introduced to give rise to the MPT. (c) Simulated glacial-interglacial cycles $\delta 18\text{O}$ model (red) in comparison with the benthic $\delta 18\text{O}$ data (blue); the latter dataset, provided by Lisiecki and Raymo (2005), is also known as the LR04 stack.

- Finally, the ‘code and data availability’ statement was extended by the following information in green:

All code used to generate the figures presented in this article is available from the authors upon request. NGRIP $\delta 18\text{O}$ and the historical CO_2 data shown in Fig. 12 are available from <https://www.iceandclimate.nbi.ku.dk/data/> (last accessed: 2. September 2021) and as a supplement to Seierstad et al. (2014), respectively. The benthic $\delta 18\text{O}$ data shown in Fig. 13 have been obtained from <https://lorraine-lisiecki.com/LR04stack.txt> (last accessed: 2. September 2021) and the June 21. insolation at 65°N can be downloaded from <http://vo.imcce.fr/insola/earth/online/earth/online/index.php> (last accessed: 9. March 2022).

We refrained from uploading the code used to generate the figures presented in the manuscript, for the following reasons:

All necessary equations are given in the manuscript and thus the presented results are reproducible. Also, we do not present *methods* intended for repeated application to different datasets. Instead, our computations (and our code) are tailored to very specific applications. Of course, the code will be made available upon request.