

Interactive comment on “Variations of oceanic oxygen isotopes at the present day and the LGM: equilibrium simulations with an oceanic general circulation model” by X. Xu et al.

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This author's comments consist of the revised figures and relative texts related to the previous author comment. The LGM sediment core data are replaced by the new data collected from divers sources published in past decades. The details are presented below.

1. The second paragraph in 2.4 (page 4890, line 22-25) is changed as: ‘The LGM observational data is obtained from the reconstructions based on the glacial sediments in past decades. The details of the oxygen isotope data are listed in the Table S1-Table S4 in the supplementary.’

2. The description of Figure 12 in the third paragraph in 3.3 (page 4897, line 3-13) is replaced by: 'As shown in Fig.12, the simulated $\delta^{18}\text{O}_{\text{c}}$ values for *G. ruber*, *G. sacculifer*, and *N. pachyderma* are comparable with the observations. They are well correlated with the sediment data (*G. ruber*: 0.89, *G. sacculifer*: 0.75, *N. pachyderma*: 0.71), and the corresponding NRMSEs are 17.1%, 22.2%, and 22.1%, respectively. For *G. ruber* and *N. pachyderma* most simulated $\delta^{18}\text{O}_{\text{c}}$ values are relatively higher than the observed values. The highest $\delta^{18}\text{O}_{\text{c}}$ values reach up to +6‰ in the simulation for *N. pachyderma*, while the observation range between +3‰ and +5‰. As with the present day simulation, only *N. pachyderma* shows a slightly higher correlation (0.73) at 100m depth. For *G. bulloides* the deviations between observed and modelled $\delta^{18}\text{O}_{\text{c}}$ values show a larger spread with a NRMSE of 39.1% than for the other foraminifera species.'

3. The new versions of Figure10, Figure12, Figure13, and Figure14 are uploaded.

4. The tables of the LGM observations and relative references are added in the supplementary.

Please also note the supplement to this comment:

<http://www.clim-past-discuss.net/8/C1914/2012/cpd-8-C1914-2012-supplement.pdf>

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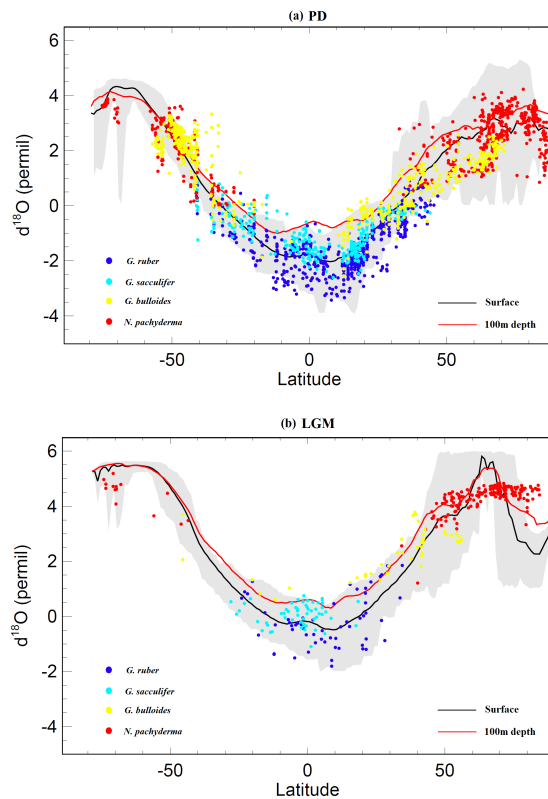
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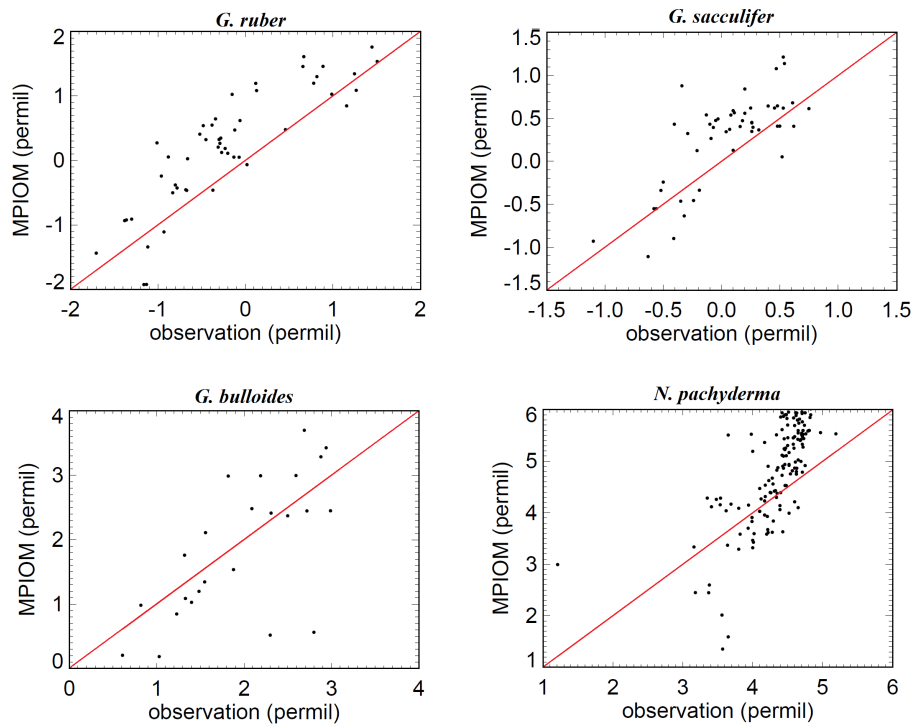
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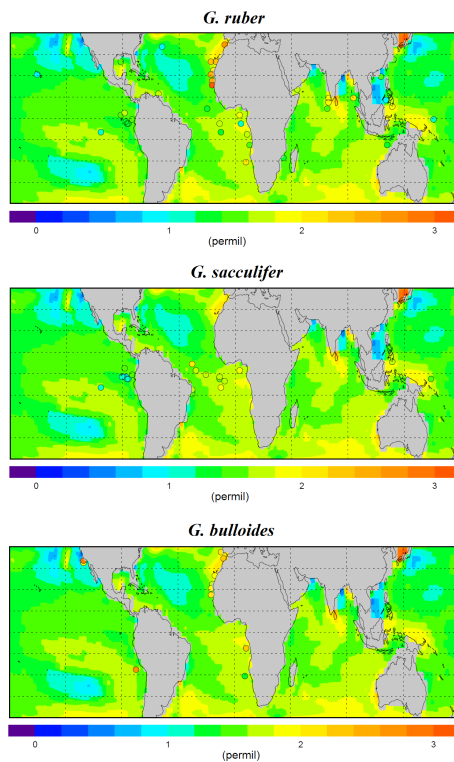
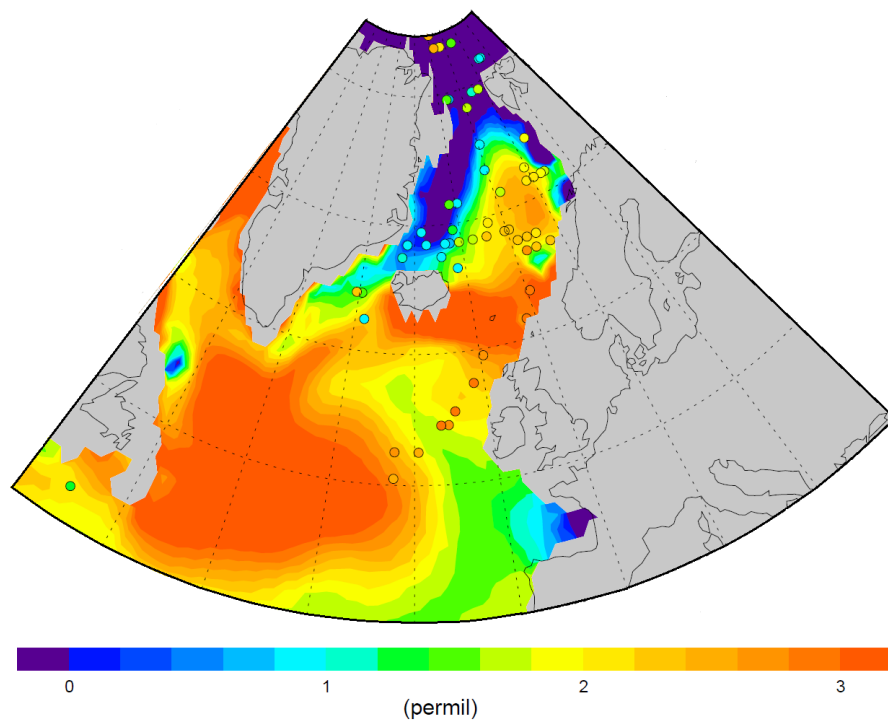


Fig. 3.

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Comment](#)[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)**Fig. 4.**

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