

Dear Prof. Appy Sluijs,

Thank you for careful check of the manuscript!

Below are notes on the two issues.

First, in your table S4, columns 8 and 9 are headed d12Oc. This should be d18Oc.

We are sorry for the mistake! We have corrected in the revised Table S4.

Secondly, with Dr. Breecker, I think there needs to be clear what the CO<sub>2</sub> errors derive from. Ideally, in addition to Table S4, you provide an indication which assumptions provide the basis for lines 15-18 in (the caption of) Figure 6 of the main paper.

For this suggestion, we added an error curve in Fig. 6, which are produced between  $p\text{CO}_2$  results of column 16 ( $S_{(z)}=2500$  ppmV) and 18 ( $S_{(z)}=2000$  ppmV) in Table S4. Additional detail is also added in the Fig. 6 caption, where the largest uncertainty  $S_{(z)}$  is further noted. The new error curve in Fig. 6 and extra details for the caption are added as below.

Discrepancies (errors) are produced from the  $p\text{CO}_2$  subtraction of column 16 ( $S_{(z)}=2500$  ppmV) from column 18 ( $S_{(z)}=2000$  ppmV) in Table S4, indicating that the largest uncertainty for the estimate of  $p\text{CO}_2$  is the  $S_{(z)}$ . The highest difference of  $p\text{CO}_2$  is 965 (3463-2498) ppmV (Sample J1Z-18-01 at depth 182.6 m), the lowest is 245 (1226-981) ppmV (Sampe J1Z-12-01 at depth 148.9 m), and the mean is ~ 360 ppmV.

Thank you for time!

Yours sincerely,

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