

Response to Anonymous Referee #1

First, we would like to thank the referee 1 for its positive comments. Below we address the few technical remarks of the referee.

Technical Corrections

1. p.2, l.2: “most useful tools”?

We changed in the revised version.

2. p.3, l.24: “proxies”

We changed in the revised version.

3. p.7, l.11: “obtained”

We changed in the revised version.

4. p.8, l.3: “preventing high elevations”

We changed in the revised version.

5. p.11, l.17: “has been found”

We changed in the revised version.

6. p.12, l.4: Fig. 8a shows mostly just the North Atlantic Ocean, so I suggest deleting “and the South Atlantic Ocean”

We deleted “and the South Atlantic Ocean” in the revised version.

7. p.13, l.13: “Younger Dryas” (capitalized)

We changed in the revised version.

8. p.13, l.24: “too sparse” (rather than “rare”)

We changed in the revised version.

9. p.15, l.8,9: “could constitute an interesting tool for mapping”

We changed in the revised version.

10. p.30, Fig. 7 caption: “The exclusion of these points”

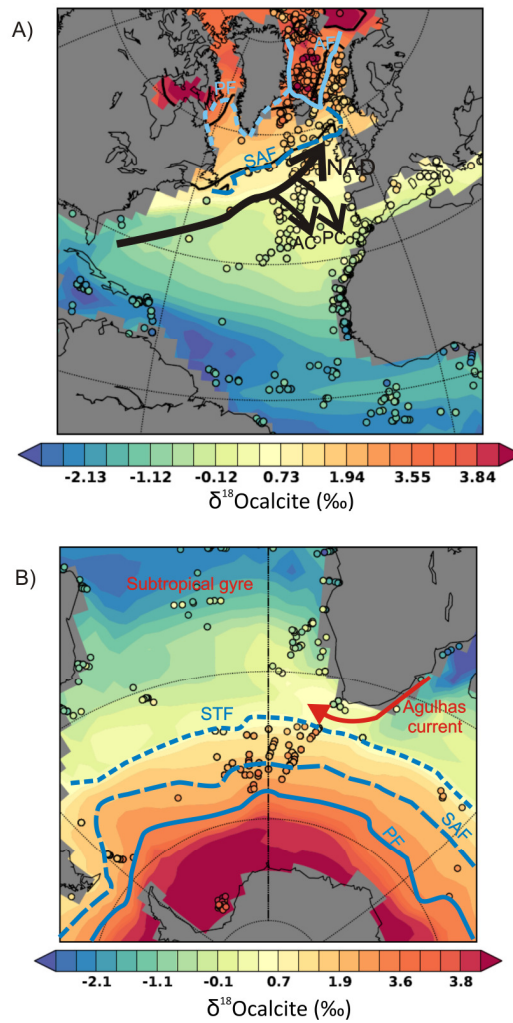
We changed in the revised version.

11. p.31, Fig. 8a: The delta O-18 contours associated with the Arctic Front (AF) and the Atlantic inflow (as discussed in the text on p.12) are not clear in the figure/from the caption - can this be remedied?

We added black contours for the $\delta^{18}O_c$ on Figure 8a to highlight the oceanographic fronts and Atlantic inflow in a clearer manner.

Figure caption have been changed: “Regional comparison between simulated ocean calcite $\delta^{18}O$ (0-50m) for the present day with iLOVECLIM and calcite $\delta^{18}O$ measurements on various shallowest dwelling foraminifer species (Waelbroeck et al., 2005, extended by 62 points: Table S2) for A) The North Atlantic Ocean: the North Atlantic Drift (NAD), major boundary return currents (PC, Portugal Current; AC, Azores Current) (Sverdrup et al., 1942; Crowley, 1981; Dickson et al., 1988) and major hydrographic fronts are indicated. *Black lines indicate the position of hydrographic fronts*

as described in the text with the calcite $\delta^{18}O$ signal: PF, Polar Front (3.94‰); AF, Arctic Front (2.93‰); SAF, Subarctic Front (1.13‰) and blue lines indicate the position described in Dickson et al. (1988). B) The South Atlantic Ocean: major hydrographic fronts are indicated: PF, Polar Front; SAF, South Antarctic Front; STF, SubTropical Front (Peterson et Stramma, 1991). Note that the legend is non-linear.”



New Figure 8A

12. p.31, Fig. 8 caption: It should be noted that the legends are non-linear

We added in the Figure captions 4, 8 and 9: “Note that the legend is non-linear”.