Clim. Past Discuss., 6, C888–C892, 2010
www.clim-past-discuss.net/6/C888/2010/

Climate of the Past Discussions

Interactive comment on "Sea-surface salinity variations in the Northern Caribbean Sea across the mid-Pleistocene transition" *by* S. Sepulcre et al.

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The answer to Reviewer #1 is provided as a supplementary file in pdf.

Please also note the supplement to this comment:
http://www.clim-past-discuss.net/6/C888/2010/cpd-6-C888-2010-supplement.pdf

Interactive comment on Clim. Past Discuss., 6, 1229, 2010.

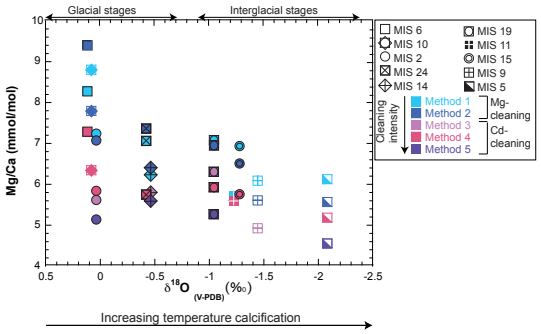

Figure S1: Comparison of cleaning efficiency for Mg/Ca on *Globigerinoides ruber* (250-350 µm) as a function of the $\delta^{18}O$ of the same specie as a proxy for calcification temperature. The different colours indicate the increasing intensity of the cleaning: 1) "Classical" Mg-cleaning method with several ultra-sonical cleanings in methanol and ultra-pure water, followed by the oxydative step and a final leaching with diluted nitric acid; 2) Same as 1), more steps of ultra-sonical cleaning. 3) to 5): Cd-cleaning method of increasing intensity derived from Boyle (1985). 3) Same as 1) including a reductive cleaning with a diluted reagent as a supplementary step; 4) Same as 3) with supplementary steps of ultra-sonical cleaning in methanol and ultra-pure water; 5) Same as 4) with concentrated reductive reagent (see Barker *et al.* (2003), Rosenthal *et al.* (2004) and Barker *et al.* (2005) for detailed procedures).
The different symbols express the period of each sample.

Fig. 1. Mg/Ca of Globigerinoides ruber.

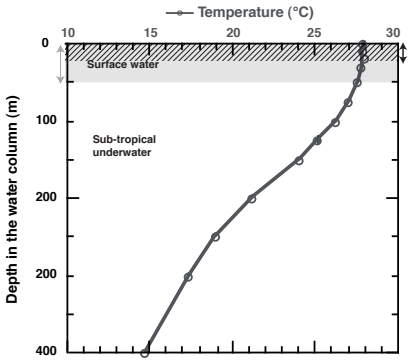

Figure S2: Depth profiles of present-day annual temperature (gray line and open symbols) at 17.5°N 77.5°W [LEVITUS, 1994]. Surface and suburface water masses flowing at the core site are also reported. Gray and shaded areas: living depths of coccolithophorids (Kameo *et al.*, 2004) and of planktonic foraminifera *Globigerinoides ruber* (Schmuker and Schiebel, 2002), respectively.

Fig. 2. Temperature profile in the water column.

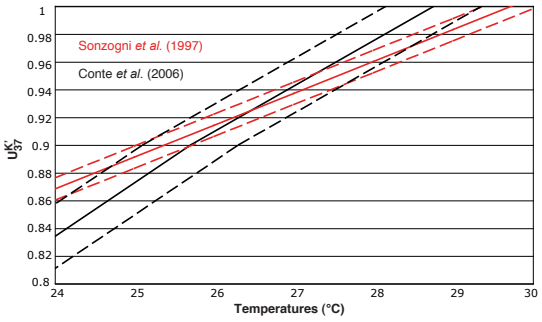

Figure S3: Comparison between the temperature calibrations of the alkenone unsaturation index ($U^{K'}_{37}$) of Sonzogni *et al.* (1997, red lines) and Conte *et al.* (2006, black curves) for high temperature range (>24°C).

Fig. 3. Comparison between different alkenone calibrations.

Table 1: Replicate $\delta^{18}O$ measurements on *Globigerinoides ruber*

Depth (cm)	Age (kyr)	$\delta^{18}O$ (‰) VPDB	$\Delta\delta^{18}O$ (‰) VPDB
10.5	2.2	-2.037	0.097
		-2.134	
15.5	2.7	-1.824	0.109
		-1.934	
80.5	10.4	-1.087	0.098
		-1.185	
377.5	130.9	-1.901	0.003
		-1.898	
383.5	132.7	-0.837	0.026
		-0.863	
389.5	134.5	-0.447	0.035
		-0.413	

Fig. 4. Table S1: replicate measurement of the oxygen stable isotope composition of Globigerinoides ruber.