



*Supplement of*

## **Parallelisms between sea surface temperature changes in the western tropical Atlantic (Guiana Basin) and high latitude climate signals over the last 140 000 years**

**O. Rama-Corredor et al.**

*Correspondence to:* J. O. Grimalt (joan.grimalt@idaea.csic.es)

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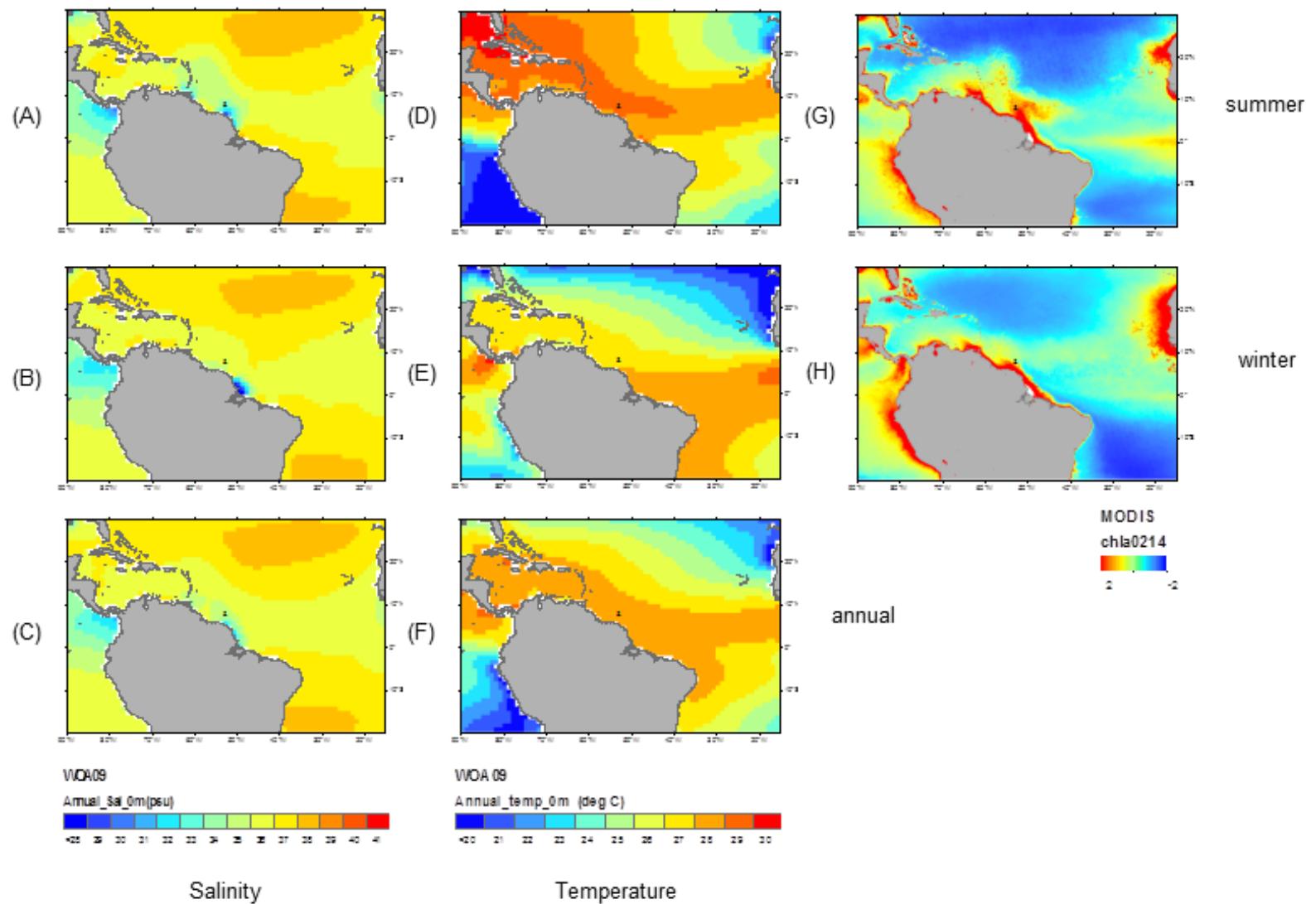


FIGURE S1 - Map of annual and seasonal salinity and SST and seasonal chlorophyll. (A) Salinity in summer, (B) Salinity in winter, (C) Annual salinity mean, (D) Summer SST, (E) Winter SST, (F) Annual SST mean, (G) Summer Chlorophyll, (H) Winter Chlorophyll. Data obtained from: [https://www.nodc.noaa.gov/OC5/WOD09/pr\\_wod09.html](https://www.nodc.noaa.gov/OC5/WOD09/pr_wod09.html)

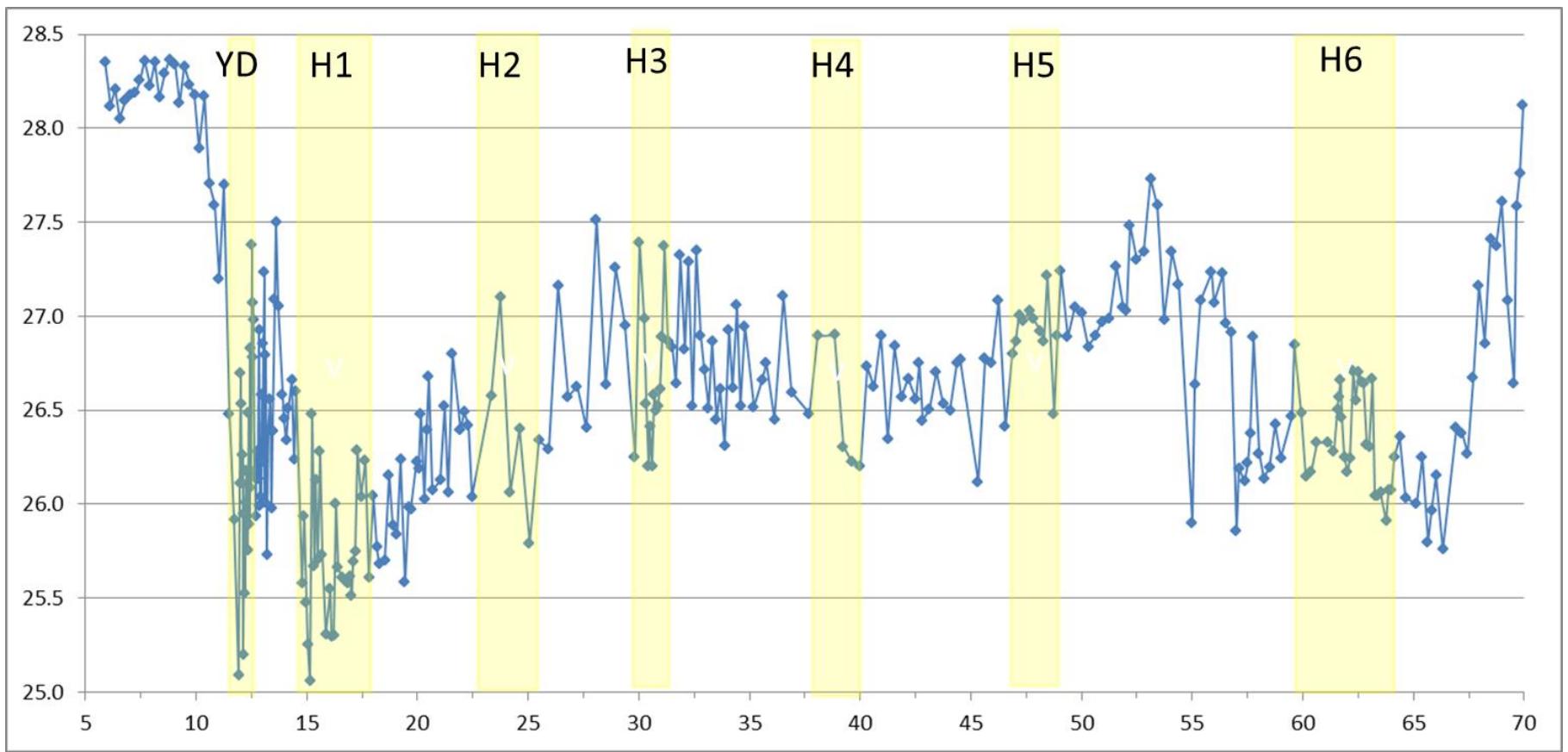


FIGURE S2 –  $U^{37}k$ -SST measurements in core MD03-2616 in the interval between 5 and 70 ka.

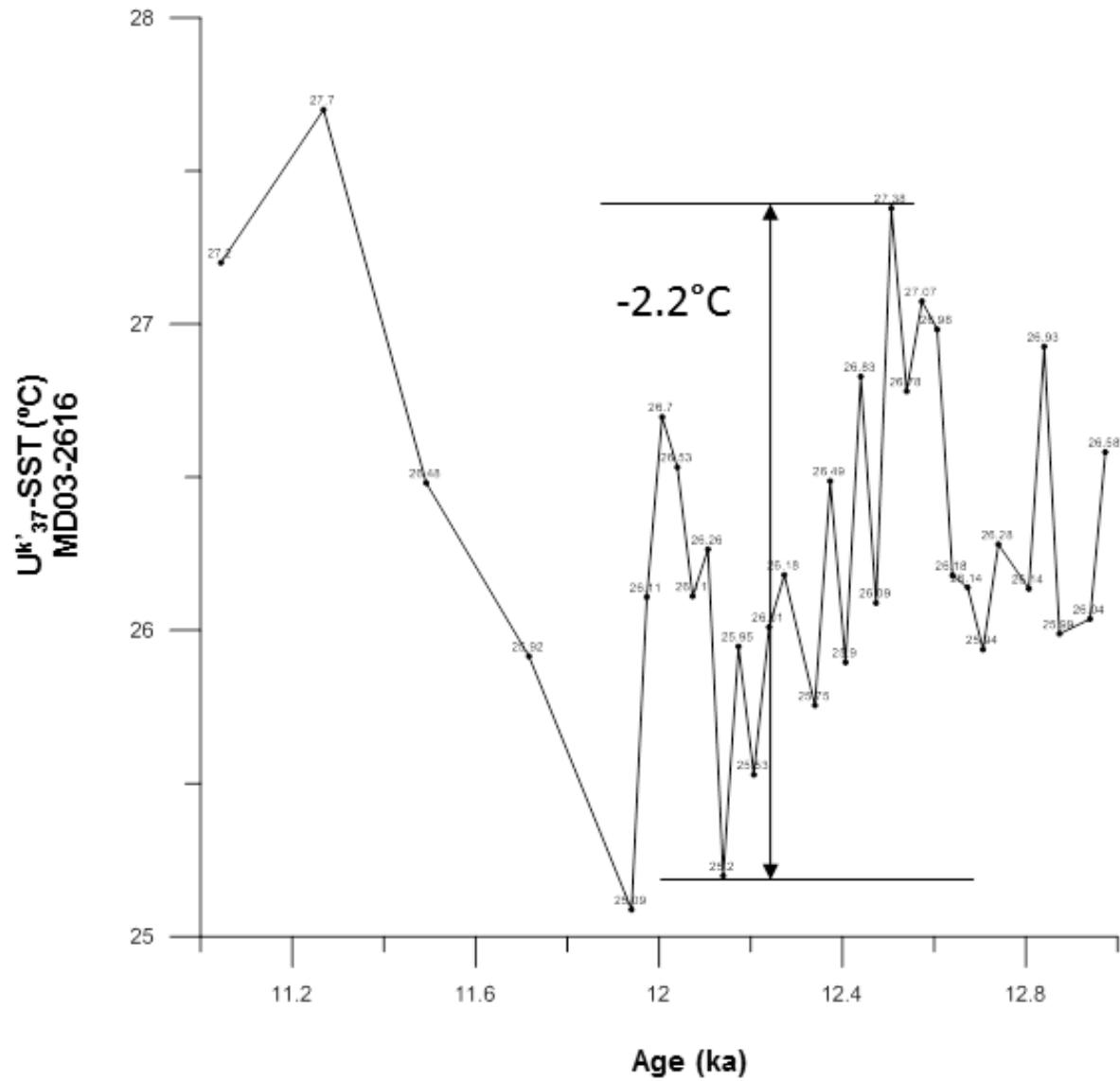


FIGURE S3 - Changes of temperature in event 1 in the cooling section and mentioned in the text in section (Table 3). This event is described in section 5.1 of the manuscript.

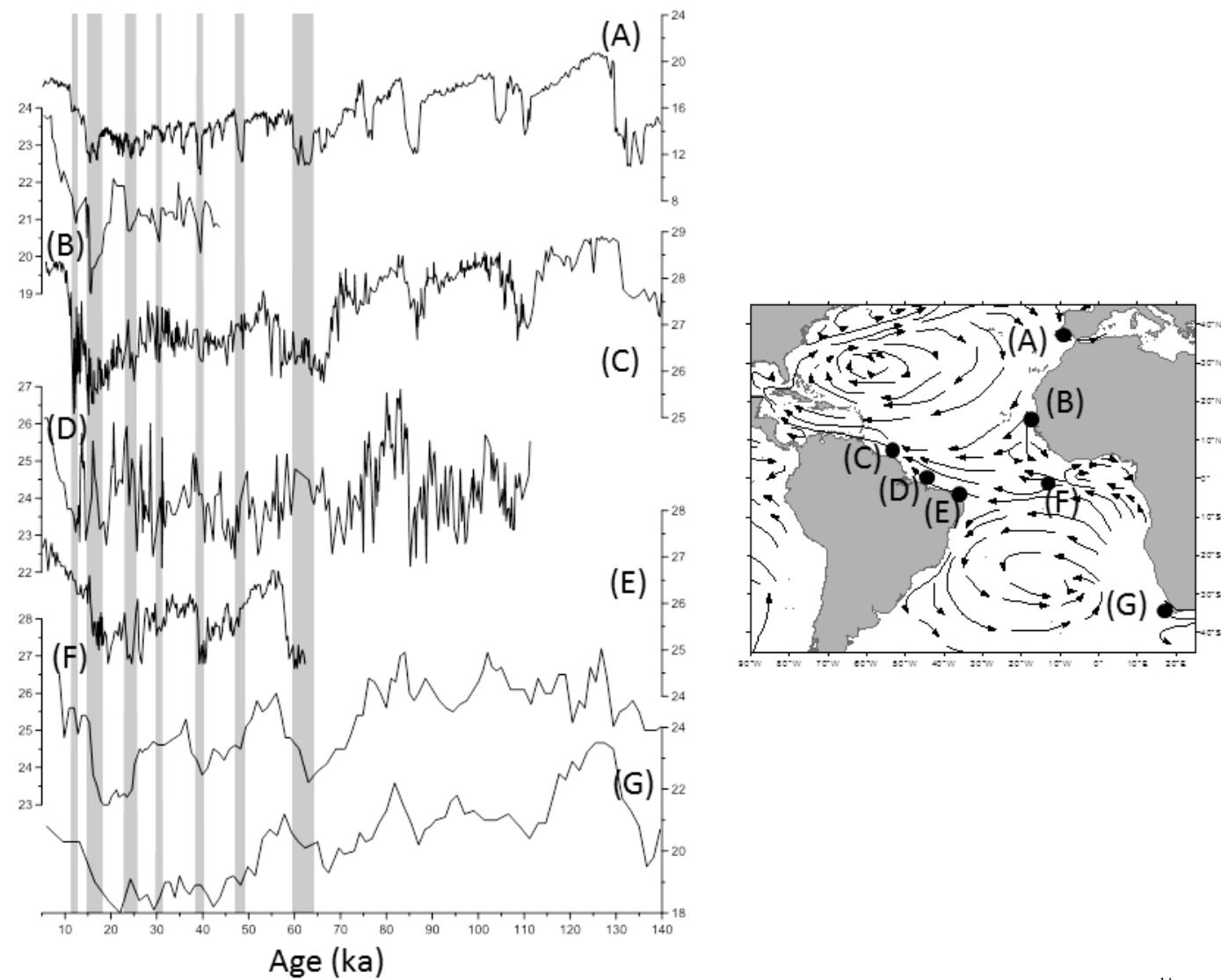


FIGURE S4 – SSTs evolution in areas under the impact of currents that can influence Guiana Basin (SEC and NEC current). (A)  $\text{U}^{k'}_{37}$ -SST MD01-2343,4 (Martrat et al. 2007), (B)  $\text{U}^{k'}_{37}$ -SST GeoB9508-5 (Niedemeyer et al. 2009), (C)  $\text{U}^{k'}_{37}$ -SST MD03-2616 (This study), (D) Mg/Ca-SST CDH86 (Nace et al. 2014), (E)  $\text{U}^{k'}_{37}$ -SST GeoB3910-2 (Jaesche et al. 2007), (F)  $\text{U}^{k'}_{37}$ -SST GeoB1105 (Schneider et al. 1996), (G)  $\text{U}^{k'}_{37}$ -SST GeoB 3603 et al. 1999).

## References

- Jaeschke, A., Röhleman, C., Arz, H., Heil, G., and Lohmann, G.: Coupling of millennial-scale changes in sea surface temperature and precipitation off northeastern Brazil with high-latitude climate shifts during the last glacial period, *Paleoceanography*, 22, PA4206, doi:10.1029/2006PA001391, 2007.
- Martrat, B., Grimalt, J. O., Shackleton, N. J., De Abreu, L., Hutterli, M. A., and Stocker, T. F.: Four climate cycles of recurring deep and surface water destabilizations on the Iberian margin, *Science*, 317, 502-507, 2007.
- Nace, T.E., Baker, P.A., Dwyer, G.S., Silva, C.G., Rigsby, C.A., Burns, S.J., Giosan, L., Otto-Bliesner, B., Liu, Z., and Zhu, J.: The role of North Brazil current transport in the paleoclimate of the Brazilian Nordeste margin and paleoceanography of the western tropical Atlantic during the late Quaternary, *Palaeogeogr. Palaeoclimat. Palaeoecol.* 415, 3-13, 2014.
- Niedermeyer, E. M., Prange, M., Mulitza, S., Mollenhauer, G., Schefuss, E., and Schulz, M.: Extratropical forcing of Sahel aridity during Heinrich stadials, *Geophys. Res. Lett.*, 36, 10.1029/2009gl039687, 2009.
- Schneider, R.R; Müller, P.J., Ruhland, G., Meinecke, G., Schmidt, H., and Wefer, G.: Late Quaternary surface temperatures and productivity in the east-equatorial South Atlantic: response to changes in trade/monsoon wind forcing and surface water advection. In: Wefer, G; Berger, W H; Siedler, G & Webb, D (eds.), *The South Atlantic: Present and Past Circulation*, Springer, Berlin, Heidelberg, 527-551, 1996.
- Schneider, R.R; Müller, P.J., Acheson, R: Atlantic alkenone sea-surface temperature records: Low versus mid latitudes and differences between hemispheres. In: Abrantes, F & Mix, A C (eds.), *Reconstructing Ocean History: A Window into the Future*. Proc. 6th Internat. Conf. On Paleoceanography, August 1998, Lisbon, Kluwer Academic/Plenum Publishers, New York, 33-55, 1999.