

Review of Hoegler et al. (2026)

I was asked to review the manuscript from Hoegler et al. for the second time. First of all, I would like to apologize for the late review. In general, I think my concerns have been mostly addressed by the authors. This time I only have a few minor, technical comments left.

Line 21:  $p\text{CO}_2$ , p should be italic.

Line 60: Write out ODP here, not in line 79, and refer to your Fig. 1.

Line 71: Which reconstruction?

Line 80: AAC?

Line 82: Expansion of zones, migration of fronts

Line 83: The amplitude of SST in Bard and Rickaby (2009) is about 4-6°C. Regarding the latitudinal migration, maybe it is better to include some more recent publications.

Line 90, Figure 1: Should Agulhas Leakage eddies be clockwise or counter-clockwise? I think they are counter-clockwise.

Figure 2: You can move it upward into the introduction part.

Table 1: You are using UK'37 in the table while Uk'37 in the main text. Please make it consistent, preferably K.

Line 170: In my opinion, it better to describe the method as unsaturation-saturation separation.

Line 172: GC-FID instead of \_, check throughout.

Line 175: 2  $\mu\text{L}$  insert?

Line 276, Figure S6: I would plot two age models together in one panel.

Line 318-324: Is there a figure showing all these regressions?

Line 344, Figure 4: With “analytically meaningful” you mean the absence of C37:4? Please be clear here. Also, please consider adding some denotations in Figure 4 to support “little to no indication of anomalously cold events at ODP Site 1090 uniquely preceding iNHG”. What are the proxies used for U1313 and 846 and what are the references (also for Lines 367-368)?

Line 374: Reference.

Lines 393-394: The phrasing of “sensitivity” is a bit problematic. I think here you only mean there is higher power in the precession band, instead of the sensitivity of the proxy (SST) to precession. Please refer to Levy et al. (2019) for the method of sensitivity test, otherwise you can simply rephrase. In addition, I would suggest a wavelet/evolutionary spectral analysis to investigate if there was a change in the periods through time, in which time interval obliquity signal is stronger and if they are synchronous globally. But I will leave this to the authors to decide.

Reference:

Levy, R. H., Meyers, S. R., Naish, T. R., Golleger, N. R., McKay, R. M., Crampton, J. S., DeConto, R. M., De Santis, L., Florindo, F., Gasson, E. G. W., Harwood, D. M., Luyendyk, B. P., Powell, R. D., Clowes, C., and Kulhanek, D. K.: Antarctic ice-sheet sensitivity to obliquity forcing enhanced through ocean connections, *Nature Geosci*, 12, 132–137, <https://doi.org/10.1038/s41561-018-0284-4>, 2019.