

Earth Syst. Sci. Data Discuss., referee comment RC1  
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## **Comment on essd-2021-150**

Thomas M. Cronin (Referee)

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Referee comment on "A review of last interglacial sea-level proxies in the western Atlantic and southwestern Caribbean, from Brazil to Honduras" by Karla Rubio-Sandoval et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-150-RC1>, 2021

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Rubio-Sandoval review

### **A review of Last Interglacial sea-level proxies in the Western Atlantic and Southwestern Caribbean, from Brazil to Honduras**

General. This is a useful summary, but I am bothered by the one main conclusion in the abstract: that nothing but future research ideas came of the compilation. How about some of the more high-quality SL reconstructions? None with stratigraphy and chronology are informative? I would think the data in Table 3, with a few assumptions, could be very revealing for MIS 5 SL. And the Caribbean sites certainly have a sea level-tectonics signal, maybe GIA too.

Given the large literature from for ex. Brazil, isn't there a relative SL record from the best studied and dated areas? Could such reconstructions be re-illustrated, re-interpreted in this paper?

On what basis is the white line along the coast in Figure 1 presumed to have relict shorelines? It seems like it just follows the coast? Related to this, the compilation really [and admittedly] uses a whole lot of different shoreline indicators, each having varying quality and methodology. See Tables 1 and 2.

Moreover, without adequate chronology and mapping, who knows if some are deposits or geomorphic features are not early Pleistocene? Pliocene, even Miocene?

As you read the text on regional studies, there seems inconsistency about selection criteria to be included in WALIS, some areas with undated features are included, some with dates only have some included.

Finally, it seems unusual not to have discussions of GIA and tectonics, which is likely found in parallel papers from other coasts in the MIS 5 sea level volume

Specific

Line 13. I'm not sure what this means: "assigned to one or more geochronological constraints"

Line 18. Or this, "to identify sea-level index"

Or line 29-30: "to insert standardized sea- level points for several areas"

Line 53 says: "we extracted 50 sea-level index points" but abstract says 55, are these synonymous?

Figure 1. The "white dashed line" is really a series of small dots? Confusing with the circles.

Line 92 what is a "used a total station to measure"

Line 103 reword: "For which concerns the geographic positioning of sites"

Line 123 reword: "thanks to stratigraphic similarities"

Line 224. Fix this, you mean 94 ka right? "94,504 ka"

Figure 6 seems out of place in this data compilation paper.

Line 520. Aren't there many studies of Neogene [possibly with Quaternary terraces] along the Caribbean coast of Costa Rica?

Line 558. Rewrite this: "For which concerns the Holocene"