

## ***Interactive comment on “The Usumacinta-Grijalva beach-ridge plain in southern Mexico: a high-resolution archive of river discharge and precipitation” by Kees Nooren et al.***

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Received and published: 8 June 2017

This an excellent, well-researched paper with a huge volume of sound research data and a wealth of appropriate references. Excellent illustrations. Three major points of criticism: (1) The value used for ancient sea level position, foreshore-eolian interface elevation above MSL (0.5 m) seems to be arbitrary. It is not clearly shown how the MSL is independently established in a given drillcore section inland from the present Gulf shore. How was MSL identified in a given drillhole before plotting on the cross sections? (2) No indication that an attempt was made to use/show textural statistical data, ratios between (utilizing kurtosis, skewness, sorting, etc.) of sand samples to dis-

C1

tinguish, draw the horizontal boundary between the facies. There have been numerous papers on the subject in the literature. At least those should be used to show at least why such a potentially promising approach does not work. (3) The paper reject the idea L.6that tropical cyclones or other processes play/played any role (L. 684-688) in (occasionally, under favorable conditions very significant) landward sand transfer from shelf sources across the inner shelf. Some of these sands may have been first swept out from shore/nearshore sites, then swept back by the same or another cyclone. Certainly, this must/may have happened on the cited shore sector as well. Non-storm fair weather landward sand migration from offshore, inner shelf or nearshore sources is, additionally shown by their cited landward shifting then welding swash bars. Apart from this, only the erosional aspects of hurricanes are noted - even then you should have written briefly something about local hurricane history, recurrence, magnitude, years of major impact, etc.

A few typos, style errors: Line 72 instead of "strong reduction...etc." write: significant slowing/deceleration (or reduction) in the rate of sea level rise L.86 played important role "to"(?)... "in" would be better L. 409 it is not Sint, but Saint George or St. George Island L. 251 "hardly harmed" sounds funny and not geological, write something like angular, non-rounded, with irregular outline

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Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2017-23>, 2017.

C2