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Ocean Science Discussions

Interactive comment on "Predictability of Non-Phase-Locked Baroclinic Tides in the Caribbean Sea" *by* Edward D. Zaron et al.

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Editor comments on "Predictability of Non-Phase-Locked Baroclinic Tides in the Caribbean Sea" by Edward D. Zaron

This area of modelling in tidal science is not my thing at all. However, it seems to me that the three reviewers made a number of detailed suggestions which the author has mostly taken on board for a revised version of the paper. I was not clear what R1 meant by 'further analysis' - if he means geographically that is obviously outside the scope of the paper.

I have only a few extra comments below and I look forward to seeing the revised ver-

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sion.

Philip Woodworth

abstract line 2 - AMSEAS acronym perhaps needs defining

line 5 ... sea level anomalies (SLAs) ..

figure 1 caption. what does 'arbitrary representative date' mean? This sounds very jargonish. Also I take it that 2013-02-01 means 1 Feb, but dates expressed like this are always ambiguous. Could you go through the paper and check you make it clear where you have dates? Perhaps have a footnote upfront to say what date format is being used.

5 - certainly define AMSEAS here

figure 3 has different lat/lon annotation and style to figures 1 and 4 and uses east and not west longitude. And has no longitude (deg E) x/y caption etc.

4 - is Torres and Tsimplis 2012 an appropriate reference here? That is about the seasonal cycle. Maybe their 2011 paper?

p5, 4 - .. internal gravity waves and, specifically, the baroclinic tide.

p6, 10 - why five?

16 - southern coast –> South American coast

p7, 1-2 - why?

Figure 6 - These plots are all for 2013-02-01 again? Add to caption.

p9, 16 - some readers will now know what the T convention is for date/time, and in fact T does not tell you anything. It would be better to spell it out a bit more e.g. 1200 hours (UT) on 2013-02-01 or whatever.

Figure 7 - ditto as for figure 6

Figure 9 has fcst. in lower plot and forecast in upper

p15, 3 - sieches –> seiches

Also a more recent reference for the Puerto Rico seiches could be (not essential if you don't want): Woodworth, P.L. 2017. Seiches in the eastern Caribbean. Pure and Applied Geophysics, 174(12), 4283-4312, doi:10.1007/s00024-017-1715-7.

p17, Appendix A title. 'predicted' is the same as 'modelled', isn't it? You have predicted in the title and text on this page and 'mod' in Table A1.

phase should be phase lag

line 9 would better read The amplitude and Greenwich phase lag of the observed and modelled [or predicted] AMSEAS sea surface heights are listed.

I was a bit disappointed by the time I got to Table A1. These M2 values are all simply lifted from data centres and papers when there is a vast amount of new Caribbean data in, for example, the IOC sea level station monitoring facility.

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