

Interactive comment on “A monthly tidal envelope classification approach for semi-diurnal regimes with variability in S_2 and N_2 tidal amplitude ratios” by Do-Seong Byun and Deirdre E. Hart

Anonymous Referee #2

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The paper is basically acceptable, and Figures 1b, 1c, and 6 are useful. Most of the paper is devoted to trying to find the numerical delineations between spring-neap and perigean regimes, and that is a little tedious, as the boundaries are bound to be fuzzy and perhaps not applicable everywhere, even in purely semidiurnal regimes. (For example, the moderating role of K_2 , which likely causes variations throughout the year, isn't brought up. This, however, isn't fatal, since this whole exercise is merely to produce rough rules of thumb.)

I didn't spot anything that is clearly in error, just minor issues, listed below. Some of these issues involve odd, almost off-the-cuff remarks in the introductory material rather

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than in the technical material.

Numbers below refer to Line Numbers in the paper.

24 - Neither the Egbert nor Stammer papers have anything to do with sea level change or gravimetry.

41 (also Table 1): Is it a sidereal month or a tropical month?

47: "Far less attention" - There is a good reason for that, as the major tides are obviously most important for prediction. And why specify "modern" in this context? It's always been the case.

216 "having common ways of describing different types of tidal envelope is essential for living safely and productively..." – ESSENTIAL, really? That seems overblown. In fact, I consider a full-up tide prediction to be far more essential.

Along the same lines, is it really necessary to have similar statements in the Abstract? The first and last sentences of the Abstract seem to me to be quite a stretch in trying to justify the work.

60: what plates NZ sits on is rather irrelevant to the subject.

88: I'm not sure why "sidereal" is used in reference to K_1 and O_1 . "Declinational" or just "diurnal" seems more apt.

173: "moderating" is an odd way to refer to M_2 .

Table A1. It should state these are Greenwich phase lags (which I believe to be the case), since lower-case "g" is often used to denote a local phase. One could also argue that the F value based on "Equilibrium Theory" ought to be a function of latitude.

Is Table 4 really necessary? Aren't Tables 2 and 3 and Figure 6 sufficient?

And finally a point on names. Presumably the government of New Zealand has not (yet?) changed the country name to Aotearoa. Is there a reason to use (what I assume

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is) Maori throughout this paper – including even for the Pacific Ocean and Tasman Sea? I suspect that indigenous Australians have a different name for these. Why not use those? Why not use Korean as well? I don't really see the point of using an obscure indigenous name for the Pacific Ocean.

Interactive comment on Ocean Sci. Discuss., <https://doi.org/10.5194/os-2019-122>, 2019.