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Discussions

Interactive comment on "Processing of water level derived from water pressure data at the Time Series Station Spiekeroog" *by* L. Holinde et al.

Anonymous Referee #1

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"general comments"

The idea of the paper is interesting, the text is clear and well written but the level of analysis and information provided by the authors needed to be largely improved to make this time serie more useful for the scientific community. It seems from my understanding that the authors are not used with the "classical" sea level time serie analysis generally used to retrieve physical parameters (for example : tidal harmonical analysis). I suppose that it came from the background of the authors (?) and the basic purpose of the TSS Spiekeroog. Although nothing is new in the data nor the methods, but due to the importance of the time serie and due to the effort it should have been to maintain the TSS station in these condition I really encourage the authors to improve the paper and give more information that describe the dataset and its limitation. Basi-

cally I would say to limit the analysis of the data and to extend the metadata information to let potential futur users to do their own analysis.

"specific comments" There is in my opinion not enough information given in the paper on the settling of the TSS station and the description of the instruments. As it is a data paper, it should be exhaustive about the way the data were collected. The authors should give technical information on the instrumentation : type en sensor, brand, how this sensor were calibrated, raw sampling, integration time of the sensor, is it the same sensor all along the period ? is there a permutation between different pressure gauge ? how this particular station is insert in the national network ? is there more water level gauge around ? what is the particularity of these one ? ... I think you have done a good job by settling and maintaining this station so please tell us the full story.

I disagree with some of the treatment applied to the time serie. 1) The trend : as mentioned by the authors by removing a linear trend you cannot use this dataset for sea level trend estimation and secondly you probably remove some real signal. I then suggest not to detrend the data (or just for the temporary purpose of identifying outliers) but just to try to characterize them by comparing the daily or weekly mean (or after a running-mean filter) with neighbouring station to see if the observed trend is due to a local/regional sea level variability or to a drift in the pressure sensor. Then providing a simple table with date of maintenance, estimated trend during the inter-maintenance period and the possible explanation of the observed trend (drift, fouling, sea level variability, ...) will really add value to the dataset. 2) Removal outliers : ok 3-4) Calculation of supporting point and interpolation : Why do you need to fill the gap if you have less than 5% of the data. By doing this you merge fake data with true data. My opinion is to let the data gap has they are. The potential users will fill the gap or not depending on their needs. 5) Fast Fourier Transform is not a quality control in itself. And I don't understand why you have such difference in Figure 6 between the original and processed data. If you want to give information about the tide do perform a real tidal analysis with a dedicated software (t-tide, task, ...)