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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Extreme wave events in Ireland: 2012–2016" *by* Laura O'Brien et al.

F. Ardhuin

ardhuin@ifremer.fr

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Data from floating buoys should be taken with a grain of salt: attached is an example of buoy records in 20 m depth off "Truc Vert" beach (see context in paper by Senechal et al. 2011 DOI: 10.1007/s10236-011-0472-x).

Indeed, buoys only measure accelerations, and a double integration provides displacement. Also the buoy sensor in the case of a usual Datawell is gimballed in the buoy and can produce spurious large values if the buoy is rotated. I would suggest that the author go back to the raw data archived in the datalogger and not the data transmitted via HF, it should not have the clipping at +/- 20 m.

Also a spectral analysis of the record can be used to check for unrealistic long periods at the time of the extreme waves. The pattern of waves plotted in figure 11 and 12 look suspicious. What is the depth of the buoy? How was the data retrieved? If obtained

via HF transmission, was the data QC flag at 0?

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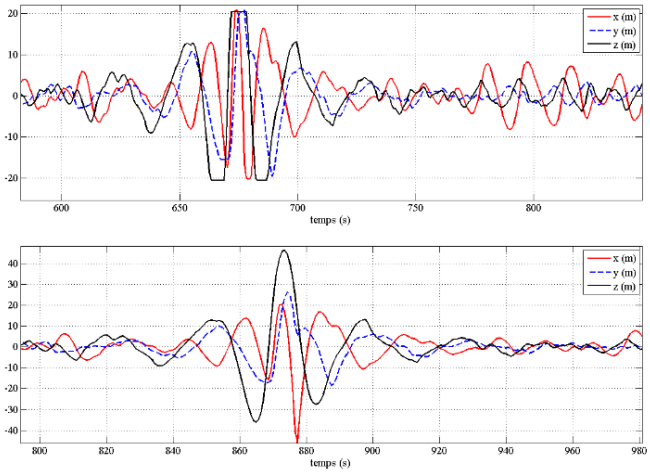

Figure2: Another example of bad signal in the 2008/03/11 01:00 record. Note that the vertical scale is in meters. Top panel is the HF transmission record and bottom panel is the datalogger record. It is rather surprising that the HF link functioned properly in these conditions.

Fig. 1. Example of Datawell bad data