

Interactive comment on “Wave model verification based on measurements in the Wadden Sea” by Cordula Berkenbrink et al.

Anonymous Referee #2

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The paper compares hydrodynamic and wind wave data collected in the East Frisian Wadden Sea coast with numerical results obtained using Delft3D and SWAN. The manuscript seems conceived much more like a “short” internal report rather than a scientific paper. The numerical models are only mentioned while they are not presented and discussed. Although Delft3D and SWAN are well-established models in the scientific community the authors should, at least, discuss on the parameters they use when performing their simulations. In principle, the reader should be able to perform the same computations by himself but, in this case, the lack of information makes this unfeasible. Very few details the authors provide also for the data. The agreement between numerical results and measured data is not good in many cases and the discussion about the reasons for these discrepancies is only superficial. It is not clear to me the “scientific” message of this contribution apart from “The need for several further

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investigations” as the authors clearly state in the conclusion section. Furthermore, I cannot say the paper is well written and English is often poor. Concluding I cannot recommend the manuscript for publication in OS in the present form. All the same, I provide a set of comments and suggestions.

SPECIFIC POINTS:

Page 1 line 8: “a wave measuring programme is operationally run”. Which is the program? It is COSYNA that you mention later in the abstract?

Page 1 line 12: “COSYNA” is an acronym. You define it later in the text (Page 2 Line 1) but you should define it the first time you use it.

Page 1 line 19: Coastal Research Station should be identified more clearly.

Page 2 line 3: I suggest mentioning fig 1 here.

Page 3 line 7: “the wind forecast differs from the recorded values”. Given that you are simulating an event from the past, why don’t you use hindcasting reconstruction to force your model? Page 3 line 11: “during the maximum water level period the stationary and one-way coupled wave model approach is considered sufficiently realistic, since current velocities during the storm surge peak drop to very small values”. This statement should be supported in a quantitative way.

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