

## ***Interactive comment on “Synergy between satellite observations and model simulations during extreme events” by Anne Wiese et al.***

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Based on the performed reviews this paper should emphasize what is actually novel and that is the satellite data assessment using a wave model. In a comparison the difference between wind fields as driver for the resulting wave fields should be analysed in terms of objective parameters. For instance running the meteorological model or sampling a given wind field at different grid sizes. This objective comparison trying to modify only one element at a time within the whole comparison process would add value to the paper and increase the strength of the essential message which should be related to the quality of satellite data and its limitations.

Dear Editor,

We would like to thank the three reviewers for their valuable comments about our manuscript. They have raised important points that helped us to improve the clarity and the understanding of the study. The revised manuscript reflects these comments and a point-to-point response to them is provided below. The changes can be checked in the track changes document. We have now revised the manuscript and emphasized what is the novel. In particular, we have now made our manuscript much clearer, following the reviewers' suggestions and added more analyses and discussion of the different wind data used. Also more detailed analyses on the comparisons have been made and the limitations of the satellite data and methods used have been identified.

The robustness of the Sentinel-3A data should be emphasized, stressing the importance of data quality regardless of flight direction or wind direction.

Authors: Thanks for this comment, which we believe is important for our work. As mentioned above we have rewritten the statement emphasizing on the importance of the new Sentinel-3A data quality regardless of flight direction or wind direction.

Finally the title should be reconsidered since it does not reflect the wave model validation effort which is one of the main components of the paper.

Authors: Following also the comments of two reviewers, the title of the revised manuscript has been modified, accordingly.

We hope that this submission answers the comments and questions of the reviewers.