

Interactive comment on “On the wind stress formulation over shallow waters in atmospheric models” by P. A. Jiménez and J. Dudhia

H. Weller (Editor)

h.weller@reading.ac.uk

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Many thanks for your clear responses to the reviewer’s comments. I would like to encourage a resubmission based on your responses. I would like to emphasise a few points made by the reviewers and I have a couple of my own:

1. The reviewers are particularly keen that you provide additional information on your simulations, analysis and on the data. I am very supportive of these requests and happy to see the article increase in length as necessary.
2. Two of the reviewers asked about sensitivity to vertical resolution and I was disappointed that you propose not to address these concerns. Surely this would be a straightforward thing to do? You say that you do not want the lowest level at much less

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than 15m. So could you increase the vertical resolution just a little? You could also decrease the vertical resolution in order to check the sensitivity.

3. You said that you "use the wind at the nearest grid point to FINO1 to compare with observations". Could this be giving a systematic bias? Presumably there are 3 other grid points close to FINO1. What happens if you use these other 3? Are your results robust?

4. In response to reviewer 2, I am not convinced by your slightly strange phrase: "A value of 0.01 m is reached at 20 m/s giving a 10 m drag coefficient greater than 0.003 (blue, Fig. 2a) what would be considered high for a water surface."

5. In response to the short comments concerning the reliability of the FINO1 data, I am happy with your responses describing why the problems may not be so severe and saying that you will acknowledge the problems with the FINO1 data. I am keen that you acknowledge these problems prominently in your revised draft; in the introduction, in a sub-section describing the observational data and in the conclusions.

Interactive comment on Geosci. Model Dev. Discuss., 7, 9063, 2014.

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