

Interactive comment on “Sensitivity of the WRF model to the lower boundary in an extreme precipitation event – Madeira Island case study” by J. C. Teixeira et al.

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In previous works for the same event Luna et. al. (2011) and Grumm (2010) have detailed the conditions in which the event occurred. Moreover, Luna et. al. (2011) show several vertical profiles for the same model configuration that we have used. We intended to focus on model sensitivity to a better resolved topography dataset. However, I am open to either making a clearer reference to the previously mentioned works or even adding the horizontal distribution of the lifting condensation level and level of free convection and their difference fields between the different simulations so that the paper becomes more comprehensive in its characterisation of the atmospheric

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conditions at the time of the event.

Grumm, R.: The Madeira Island Floods of 20 February 2010, National Weather Service of the United States of America, <http://cms.met.psu.edu/sref/severe/2010/20Feb2010.pdf>, 2010.

Luna, T., Rocha, A., Carvalho, A., Ferreira, J., and Sousa, J.: Modelling the extreme precipitation event over Madeira Island on 20 February 2010, Nat. Hazard. Earth. Sys., 11, 2437–2452, 2011.

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