Atmospheric
Chemistry
and Physics
Discussions

Interactive comment on "Tropical deep convection and density current signature in surface pressure: comparison between WRF model simulations and infrasound measurements" *by* L. Costantino and P. Heinrich

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First of all, we want to really thank referee#2 for its reactivity and rapid feedback.

"On 3d vs 2d simulations (page 15999) could add reference to Petch et al. 2008:" Yes, I do agree this is an important reference that has been added to the text.

"page 16005: "the computational domain is three-dimensional" => it is really two dimensional, I don't think there will be any three-d motion in this model." Yes, there is

no 3d motion in this simulation as there is no asymmetry (no y-dependence) in the input parameters in the y plane (as explained later on). I just wanted to specify (all) the technical aspects of my 2D WRF simulation.

"Page 16006 sensitivity to changes in delta(Lambda): won't CAPE change as well, so you might not be looking solely at effect of changes in lapse rate." Yes, I agree that the CAPE is (intrinsically) changing according to the change in the lapse rate.

"Summary and conclusion second paragraph: Do 2d model details really need to be repeated here ?" We agree with referee#2 that these details may be redundant. They have been suppressed.

"page 16029: Says smallest grid has a horizontal resolution of 1km when earlier on it said 3km" Yes, it is actually 3 km resolution. This error has been corrected.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 15993, 2013.