

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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I am very interested in such kind of extreme precipitation event. However, there is not any information on vertical structure related to precipitation and it is not clear how much the lower boundary condition affect the lifting of lower moist air up to the level of free convection.

Why not the authors show the vertical profile of cloud liquid water, water vapor flux, or equivalent potential temperature? Those are available from WRF output data and post-processing tools. May be the horizontal distribution of the lifting condensation level and

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level of free convection for surface air particles (and wind vector at those levels) also significant whether the convective cell evolves windward, leeward or just around of the top of the mountain.

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