Manuscript ID: acp-2014-78
Review of: *Land surface spinup for episodic modeling*
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Journal: Atmospheric Chemistry and Physics, BLLAST special issue
Recommendation: Accepted after major revisions.
April 11, 2014

In this work a soil-initialization spin-up method is proposed to improve the soil moisture and the representation of the surface layer of a set of mesoscale simulations during the BLLAST experimental field campaign. The manuscript is very well organized and the objectives and methodology are clearly stated. However, some issues (listed below) need some clarification to better understand the improvements of the new method. I recommend this paper for publication but considering the following points:

1 section 2, first paragraph. I suggest to include some information about the length of the domains. Which area do they cover? Is the inner domain (3km) corresponding to the area in Figures 2, 3, 7 and 8? If this is the case, please indicate it in the text. Besides, indicate that only the results for the inner domain are used in the plots.

2 The length of the cycle is one month and the best results (when compare against available observations) are found for the cycle 2 (2 months). However, during cycle 2 the improvement is smaller than the one made using cycke 1. Therefore, it is expected that cycle 3 won't improve the results so much. Have you checked this? Are the results dependent on the duration (length) of the cycle? or in the starting of the cycle? or in the number of cycles?

3 The effect of using soil moisture spin-up is clearly seen in Figure 6. Without spin-up there is a larger (0.3) soil moisture than the observations (0.2) for the period of interest (end of June). Have you test if doing a mesoscale run (without cycles) but reducing the soil moisture a factor of 1.5 in every gridpoint the same results as cycle 1 or 2 are found?

4 It is not clear in the text why the authors have used the soil moisture and the temperature in the second layer. Using the first layer is more linked to the surface flux (H) of Figure 7.

5 Nothing is said about the 2m temperature or the 10m winds. Are the cycle 2 run improving these fields in the Lannemezan region?

6 Figure 5 is not needed and the location of the SMOSMANIA stations can be indicated in Figure 2, for instance.

7 Are all the SMOSMANIA stations considered in Figure 6 behaving in the same way? Some of them seem that they are closer to the mountain slopes and some others at the river plain.

8 Figure 7. It would be more interesting to see the temporal evolution (as in Figure 4a) of H instead of the horizontal fields and also plot the temporal evolution of LE. With this proposed new plot it is possible to evaluate how far H and LE are from the observations from Lannemezan.

9 Figure 1. Although these days were IOP, the ambient conditions were different. Is there any particular day/conditions that the model is producing better (closer to the profiles) results? If this is the case, why? From the averages in Figure 1 it is not possible to have this estimation.

10 Figure 2 and 3. Please, add the topography lines to better understand these patterns. Beside, include in the text or in the caption that the cross is the Lannemezan site (right?) and the units of the fields. What is happening in the fields of Figures 2 and 3 (top) in the left side? Is there any problem related to the interpolation of these fields?

11 The improvements of the potential temperature profiles when using cycle 2 are shown in Figure 9. Do you have similar results for the rest of the simulated days (included in the plot in Figure 1)?