

## ***Interactive comment on “LA Megacity: a High-Resolution Land-Atmosphere Modelling System for Urban CO<sub>2</sub> Emissions” by Sha Feng et al.***

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Received and published: 6 April 2016

A tremendous work for the CO<sub>2</sub> simulation over LA megacity has been well reported. While reading, I am so interested in it, and I would like to add some comments for further improvements.

Line 18-23: The authors wrote that WRF-Chem was modified without detail description, and they only referred to Mahadevan et al. (2008), in which only VPRM is described. Would you please add more detail about the modification of WRF-Chem?

In addition, WRF-VPRM would be very sensitive to its VPRM parameters especially for nighttime respiration as Pillai et al. (2009) also showed. I wonder authors made

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or modified new parameters for each vegetation class over the study domain. They may want to explain it. A table containing VPRM parameters could be good, and it will surely be a very useful for the future studies done by others. If the values were modified comparing with the default numbers, please explain the method to get the parameters.

Some figures must be corrected as below: Figure 8(d) has no dashed line for Vulcan 4km. Is it overlapped? Figure 12: Subtitles of each panel seems wrong. There are two "WRF-Hestia 4km"s. Figure 13(e): How come WRF-VPRM 1.3 km shows less temporal resolution? Please double check the legend and describe the reason please.

Thanks for the good work.

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Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-143, 2016.

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