

## ***Interactive comment on “WRF-Chem simulations in the Amazon region during wet and dry season transitions: evaluation of methane models and wetland inundation maps” by V. Beck et al.***

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Application of the seasonal cycle in the wetland inundation area (sect. 2.5.3) to changes in the emissions is done without discussion on possible mechanism of the variation in the emissions. Reader is left to guess that some area changes from dryland to wetland and back. Presumably, anaerobic methanogens also are assumed to survive aerobic conditions. If such mechanism is included in models by Walter and Kaplan a reference would be sufficient, if not – a discussion is recommended

A discussion addressing this topic is now included in sect. 2.5.3

C13979

Technical comments: Page 22837, line 16 Suggest replacing the reference to “the wetland inundation map with inundated area changing in time” by more definitive description such as (for example): “wetland inundation map based on microwave remote sensing data”

Corrected as suggested

Page 22837, line 24 Suggest to add definition to what area the mean emission corresponds, like: Amazon basin mean, or mean for wetlands in Amazon basin

Corrected correspondingly

Page 22841, line 27 “1 km LANDSAT data” sounds unusual for those who expect 30 m resolution when LANDSAT is cited, a reference to the dataset or a description is missing from the text, while notice in the corresponding Table is short and not informative.

References for the 1km LANDSAT dataset are now included

Page 22846, Section title and text refers to “Kaplan wetland inventory”, while in Line 10 on the same page it is referred as “model”, please consider renaming the “inventory” to “emission model” if that is more accurate.

“Kaplan wetland inventory” replace by “Kaplan wetland emission model” throughout the document

Page 22869, Line 3 States “current generation transport models inadequately represent: :”, is better to limit the statement to the models used in the simulations.

Updated accordingly

Suggested corrections to references: Page 22871, Line 9 Bousquet, P., et al. – need to expand authors list

Complete author list included

Page 22873, line 25 Emissions -> emissions

C13980

Corrected accordingly

Page 22874, line 1 receptororiented -> receptor-oriented

Corrected accordingly

Page 22876, line 12 Honicke -> Thonicke

Corrected accordingly

Comments on figures Fig. 2, 5, 6 are low resolution, some characters on axis titles are blurred, so higher resolution should be provided.

All figures will be provided in high resolution

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 22835, 2012.

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