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Interactive comment on "Inverse modelling of European CH_4 emissions during 2006–2012 using different inverse models and reassessed atmospheric observations" *by* Peter Bergamaschi et al.

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The manuscript of Bergamaschi et al. received opposing reviews. That was also true for the submitted revised version. The remaining critics focused on three aspects of which the main points are listed below

The "wetland hypothesis": The wetland CH_4 emissions are thought to be the main cause of the interannual variability. Compared with the WETCHIMP project (Melton et al., 2013), the inversion retrieves a reduced annual cycle in North-

ern Europe where the largest wetland emissions take place and an increased annual cycle in the three other parts. The model-to-model difference is large, in other words, the uncertainty on the natural emission rates is rather large. This uncertainty also present in the WETCHIMP project (Melton et al., 2013).

I see no reason to reject the publication of these model results.

Description of the participating models: The lacking information of description of the paticipating models was criticised. Details of the models can of course be found in the cited model papers and in the appendix. However, a short overview of the characteristics of the models should be in the main text.

Therefore I asked for add more details about of the models in the main text of the paper such that the reader would get an overview of the diversity of the participating models.

Method for intercomparison: The mathematical method of comparison was criticised in the review in a detailed way. It seems to me that here was a mis-understanding, as the main scientific point was, that the models are compared to independent observations that were not contributing to the inversion.

A point-to point reply of the authors to these arguments is found in the supplement

Please also note the supplement to this comment:
https://www.atmos-chem-phys-discuss.net/acp-2017-273/acp-2017-273-EC1-supplement.pdf

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