Second review of:

A full year of continuous net soil and ditch CO2, CH4, N2O fluxes, soil hydrology and meteorology for a drained fen in Denmark
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After my first review of this paper, I see that the authors have done an excellent job in improving the paper. Important ancillary information on the soil profile and water chemistry of the site has been added, which improves the usefulness of the greenhouse gas measurements considerably. The drawbacks of the measurement system and the procedure of vegetation removal have been discussed properly, albeit that the effects of vegetation removal still cannot be quantified due to the lack of a control experiment, as is admitted by the authors. However, such a quantification was not the goal of their measurements. Representing greenhouse gas measurement data from a novel chamber measurement system is in itself a very useful contribution to the research field.

A few smaller matters remain, which could be tackled by minor revisions.

- Effect of vegetation removal on CH_4 emission (reply by authors, page 18, point 4; revised text, line 459 – 465). Here, the authors first state that the effect of vegetation removal on the CH_4 flux might not be very strong because of root growth from outside into the collars, and second, the lack of labile carbon supply would not have a large effect during periods of lower water table. However, the labile carbon supply to methanogens is hampered mainly by green vegetation removal, root mass effects are secondary. Photosynthesis is the actual source of labile carbon products, which may be transferred to the soil via the roots in a matter of hours to a couple of days. This has been proved by carbon labeling experiments, see e.g. King and Reeburgh, 2002 (King, J. Y., & Reeburgh, W. S. (2002). A pulse-labeling experiment to determine the contribution of recent plant photosynthates to net methane emission in arctic wet sedge tundra. Soil Biology and Biochemistry, 34(2), 173-180). So, by removal of green vegetation inside the collars you will inevitably cut off an important labile carbon source. Neither does the argument of lower water table hold. Roots of wetland plants such as sedges and *Juncus* can penetrate quite deeply and still add labile carbon to completely saturated soil, fuelling methanogenesis. In addition roots and stems will continue to transport some of the CH_4 towards the atmosphere, bypassing oxidation within the unsaturated topsoil. Therefore, the effect of vegetation removal on the fluxes will be considerable, and may occur even in drier periods with lower water tables.

- 7-day period of green vegetation removal (reply by authors, page 19, top paragraph). “Furthermore, we never observed net CO_2 uptake in the growing season indicating that the vegetation removal was effective.” This is flawed reasoning. To my experience there can be a significant regrowth of vegetation in a few days during the growing season, resulting in a measurable CO_2 uptake that reduces the measured net flux. The fact that you never observed net CO_2 uptake, does not mean that your CO_2 fluxes are not influenced by photosynthesis of the small amount of leaf and shoot regrowth that may occur within seven days. This photosynthesis might not be able to overcome the soil CO_2 flux, but still will result in a reduction of the measured total flux. This should be mentioned in the text.

- Temperature measurements inside the chamber (reply by authors, last reply on page 19). I agree with the authors that in this case significant effects of a temperature rise in the chambers are unlikely. However, the conversion from ppm to moles will still be improved by adding a temperature sensor.