

Interactive comment on “Impacts of temperature and soil characteristics on methane production and oxidation in Arctic polygonal tundra” by Jianqiu Zheng et al.

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We thank the reviewer for her or his helpful comments and queries. To address concerns from both reviewers, we prepared a new figure illustrating the experimental workflow for a representative core (from a flat-centered polygon). This attached figure illustrates the homogenization of 10-cm core segments and soil distribution in sealed microcosms with either oxic or anoxic headspaces (left panel). Nine replicates of each condition were incubated for a single temperature. Three of these replicates were continuously monitored for CO₂ and CH₄ production (middle panel). Three other replicates were opened after 10 days incubation and subsampled for methane oxidation poten-

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tial measurements, illustrated at the panel on the right. Three more replicates were opened after 20 days incubation for methane oxidation potential measurements, after the gas production commenced in the microcosms.

Detailed responses to the reviewer's comments are included in the attached PDF.

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2017-566/bg-2017-566-AC1-supplement.pdf>

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2017-566>, 2018.

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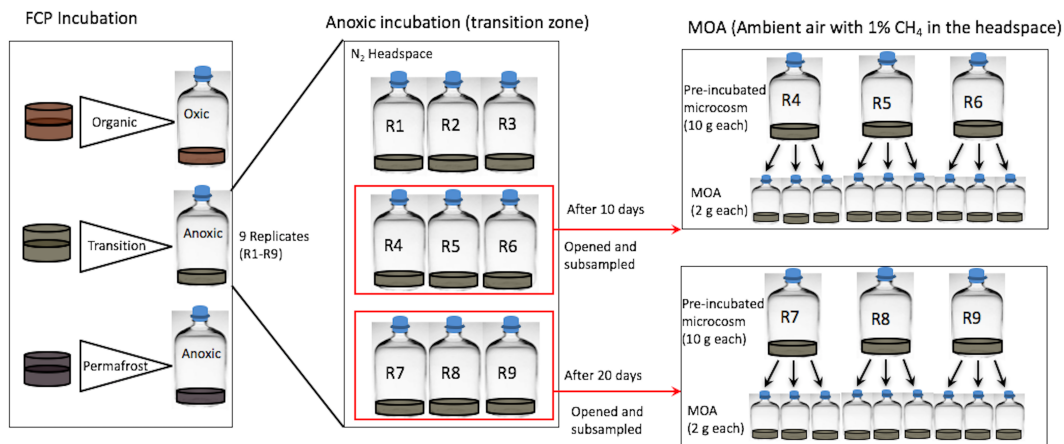


Fig. 1.