

## ***Interactive comment on “Organic matter composition and stabilization in a polygonal tundra soil of the Lena-Delta” by S. Höfle et al.***

**Anonymous Referee #1**

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I believe this paper only requires minor edits. Overall I believe the conclusions are sound. The data justify the conclusions. It is well written, has a good amount of introduction and discussion, and is a proper length. The only changes I would make to the paper are the following:

Page 12346, line 10/11: By using the word 'here', it sounds as if you are discussing the results of the current paper. Please change. Also, in this same paragraph, it is improper to say the 'active layer of the permafrost soils'. You could say active layer of permafrost regions or active layer soils of northern latitude soils. But to say permafrost soil means the actual frozen part of the soil, not the active layer.

M&M: How many samples and what is the level of replication? If no replication and no statistical comparisons, this needs to be stated and the message might need to be

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tempered somewhat.

Section 3.1. How representative is this soil of other northern latitude soils? What is the soil type? Is there cryoturbation? If not representative, please calibrate the message given in the conclusion to reflect that this is only one location.

Define pMC.

Page 12355, Line 7. Is the change in concentrations of fatty acids significant? What is the statistical test and the statistical result?

Line 12360, line 13. Replace 'considerable' with 'small but significant', or is it actually significant?

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Interactive comment on Biogeosciences Discuss., 9, 12343, 2012.