Not accounting for thermokarst ponds leads to overestimation of tundra carbon uptake

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Dear Andreas Ibrom,

thank you again for your very fast reply. We are happy to address your additional points. Additionally, we also carefully screened the text and hope that language and style are improved. Please see our point-by-point reply below.

Please clarify in the methods part, whether or not you filtered the data for wind direction before gap filling (I assume you did).

We filtered for wind directions and added the following descriptions in the method section:

In the model input, we exclude CO_2 fluxes with an absolute value of more than 4 g m^{-2} d^{-1}. We additionally exclude CO_2 fluxes from the wind direction (WD) of the merged polygonal pond (30°< WD <150°) from the training dataset to obtain a dataset consisting of as much semi-terrestrial tundra as possible.

please comment on the bimodal nature of the probability distributions in Fig. 3. Is this due to two distinct seasonal behaviour?

Unfortunately, we are not certain what you mean with bimodal behavior in Fig. 3. We spend some more time describing the distribution by adding the following sentence:

We also find that low air temperatures are mostly associated with low respiration rates.

When you describe sectors, e.g. for the case ">30° & <150°" consider the notation 30°< WD <150°.

This is a very good suggestion. We adopted the notation.

We hope that these changes are satisfactory.

Best regards,
Lutz Beckebanze and Zoé Rehder on behalf of the authors.