

Interactive comment on “Carbon and greenhouse gas balances in an age-sequence of temperate pine plantations” by M. Peichl et al.

Anonymous Referee #2

Received and published: 30 July 2014

sorry I made a mistake in my previous review post. I used the wrong page and line numbers. Here are my comments again with the correct references:

The manuscript is overall very clear and well written. It discusses the GHG balance of a chronosequence of 4 pine forests in Southern Ontario, Canada. With the addition of the non-CO₂ fluxes to the carbon balance the authors present a very valuable contribution to the research field. I recommend this manuscript for publication in Biogeosciences.

Here are a few minor comments:

- 1) P8233L20: give more detail on the site history, (eg recent thinnings if the sites were thinned).
- 2) P8233L17: I don't understand how you can collect litter at a bi-annual interval with

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litter traps without the risk that part of the litter decomposes in between the collection dates. Please explain.

- 3) P8234L3: Explain how you measured the woody debris pools.
- 4) P8234L25: Give the measurement frequency for the DOC concentrations
- 5) P8234L18: Explain in more detail how you have calculated the biometric GPP estimates.
- 6) P8240L25: Is this only an effect of the water balance or do you also see differences in DOC concentration between the stands
- 7) P8241L22: This is not true (see fig 4), in both young and mature forests the contribution of non-CO₂ fluxes is higher.
- 8) P8242L12: True, but this is mainly because of the lower NEP and not because of the higher contribution of non-CO₂ components. I think you should clearly state this.
- 9) P8243L2: Again here you should add that this is mainly because of the lower NEP values.

Interactive comment on Biogeosciences Discuss., 11, 8227, 2014.