

Interactive comment on “Nitrogen balance of a boreal Scots pine forest” by J. F. J. Korhonen et al.

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The paper by Korhonen et al on the nitrogen balance of a boreal Scots pine forest is a great read and provides a wealth of measuring data and a very felicitous synopsis. The major short-come – which cannot be resolved easily – is the lack of an idea about N₂ losses due to denitrification. As it stands now, it seems that the system is accumulating nitrogen at a rate of approx. 7 kg N ha⁻¹ yr⁻¹. I think that this estimate is uncertain since N₂ emissions may easily be in this range. It would be good if this is directly mentioned in the abstract too. Also Fig. 4 should be amended accordingly, indicating that no information on N₂ fluxes (fixation as well as denitrification losses) are available. As it stands now the Fig. is incomplete. If possibly it would also be good to see some uncertainty estimates. Fig. 2 would be a good place for this. This manuscript is highly

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valuable due to the integrated provision of N flux and pool data for a boreal forest ecosystem. It is an outflow of a long-term monitoring and measurement program and this work may stimulate other LTER site managers to draw such budgets too.

Sincerely yours

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