**Biogeosciences
Discussions**

Interactive
Comment

Interactive comment on "Significant non-linearity in nitrous oxide chamber data and its effect on calculated annual emissions" *by* P. C. Stolk et al.

Anonymous Referee #2

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Specific comments

P 118 L27 evaluate is perhaps not the right word, I think that test met better the context, because no criteria are defined for this test

P122 L10 Please check the equation for the adjusted r^2 the denominator normally is n-p-1 and also $(Ct-Ct)^2$ is a denominator

P126 L11/12 Is the non-linearity determinates by a significant better adjusted r^2 for the exponential model or for the quadratic model? This must be having an important influence of the amount of non-linear cases and following for the impact of non-linearity on annual fluxes.

P129 L 5 ff Leakage through the soil can be minimised by optimation the ratio between

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measurement area and border line. Two ways are possible, first to change the geometry of the chamber (round has a better ratio than quadratic chamber by the same area) or second to increase the area, this will be decrease the ratio and following the probability of leakage.

P131 L15 Please check this is the correction not the article, is this right?

P132 L 2 this article is published now please added the missing information

P134 Please check the table, especially value for the adjusted r^2

P141 For checking the impact of the different calculation methods on the flux the different time spans should be independent. The similarity of the relative fluxes is not surprising, because this is a running average. "Year" 1 and "year" 2 based to more then 2/3 on the same data, and even "year" 1 and "year" 4 overlapped. If the variation in the ratios between linear and quadratic calculation (caused by the different climatic and environmental condition) will be estimated, I think this must be change to independent half year time spans. The actual presentation can be helpful to find the best day in the Year to start a one year measurement but not more.

Interactive comment on Biogeosciences Discuss., 6, 115, 2009.

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