

Interactive comment on “Multiple-factor controls on terrestrial N₂O flux over North America from 1979 through 2010” by X. F. Xu et al.

Anonymous Referee #1

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This is a nice study on N₂O emissions from the North American Continent and the factors controlling its variability. It is comprehensive, well structured, clearly written and a very useful contribution to the scientific discussion on interactions between global change and trace gas emissions.

As an experimentalist, I am impressed by the precision of stated emissions (e.g. 1 % for baseline emissions). To avoid possible misinterpretation, it would be useful to add a sentence or two to section 4.5 (Uncertainty) in which the difference between precision and accuracy of the values reported is discussed. Further, the study would benefit from a comparison with N₂O emissions and their trends reported by the North American countries to the UNFCCC (National Inventory Reports). Here, the issue is not to discuss which number is more likely to be true, but to embed the values of the

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present study in a larger context.

Page 10952, line 15: "suppress", not "sppress" Page 10946, line 7: "...period resulted...", not "...period were resulted..." same on Page 10953, line 9, and on Page 10947, line 4. Page 10952, last line: "...stimulating N₂O emissions will be observed,...", do you mean "...enhanced N₂O emissions,?"?

Interactive comment on Biogeosciences Discuss., 8, 10935, 2011.